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HISTORICAL REFERENCE RANGES

Test Name: 11-Desoxycortisol
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Compound S, 11-Deoxycortisol
Reference Ranges:

11-Desoxycortisol, Serum ***ng/dL*** (SI: nmol/L = 0.0289 x ng/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 14Mar01 - present:
1Y-10Y: 20 – 155
19Y-150Y: 12 – 158

Effective 19Sep94 - 14Mar01: No ranges available

Performed at SmithKline Beecham, Van Nuys CA
Effective until 18Sep94: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: 17-Hydroxy Corticosteroids
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: 17-OH, 17OH
Reference Ranges:

17-Hydroxy Corticosteroids *mg/24 hour* (SI: mg/24 hour)
Perfromed at National Institutes of Health, Bethesda MD
Effective 17Jul80 - present:
Male: 3-10
Female: 2-6

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 16Jul80:
Male: 4.5 – 12
Female: 2.5 – 10

HISTORICAL REFERENCE RANGES

Test Name: 17-Ketogenic Steroids, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: 17-KGS
Reference Ranges:

Test no longer performed as of 08Jan/03
17-Ketogenic Steroids ***mg/24hr*** (SI: umol/d = 3.47 x mg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 08Jan03:
0Y-10Y 0.1 - 4.0
11Y-14Y 2 - 9
Males >=15Y 4 - 14
Females >=15Y 2 - 12

Performed at SmithKline Beecham, Van Nuys CA
Effective 20Dec86 - 18Sep94:
Child 2.3 - 3.3
Male 5 - 23
Female 3 - 15

Effective 01Jan79 - 20Dec86:
Male
0Y-1Y 0 - 1
2Y-10Y 0 - 5
11Y-70Y 5 - 23
>=71Y 3 - 12
Female
0Y-1Y 0 - 1
2Y-10Y 0 - 5
11Y-70Y 3 - 15
>=71Y 3 - 12

HISTORICAL REFERENCE RANGES

Test Name: 17-Ketosteroids
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: 17-KS
Reference Ranges:

17-Ketosteroids ***mg/dL*** (SI: umol/d = 3.47 x mg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
0Y-10Y 0.1 - 3
11Y-14Y 2 - 7
Males >=15Y 6 - 21
Females >=15Y 4 - 17

Performed at SmithKline Beecham, Van Nuys CA
Effective 16Mar94 - 18Sep94:
2Y - 17Y 0.8 - 8.1
Male >=18Y 7 - 20
Female >=18Y 5 - 15

Effective 20May91 - 18Sep94:
5Y-8Y 0 - 2
9Y-12Y 1 - 5
13Y-15Y 2.5 - 10
Adult Female 5 - 15
Effective 01Jan79 - 18Sep94: Adult Male 9 - 22
Effective 04Jan89 -19May91: Adult Female 6 - 15

Effective 01Jul85 - 03Jan89: 5 - 15
Effective 01Jan79 - 30Jun85: 6 - 15

Test Name: 17-OH Pregnenolone, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: HYPL
Reference Ranges:

17-OH Pregnenolone, Serum ***ng/dL***
Performed at Esoterix Endocrinology, Calabasas Hills CA
Effective 08Jan03 – present:
PREMATURE INFANTS:
26-28 Weeks, Day 4 375 - 3559 (Mean=1402)
31-35 Weeks, Day 4 64 - 2380 (Mean=1107)

FULL-TERM INFANTS:
3 Days 10 - 829 (Mean=246)
1-6 Months 36 - 763 (Mean=224)
6-12 Months 42 - 540 (Mean=69)

PREPUBERTAL CHILDREN:
1-10 Years 15 - 221 (Mean=56)

PUBERTAL AGE GROUP: 44 - 235 (Mean=56)

ADULTS: 53 - 357 (Mean=124)

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HISTORICAL REFERENCE RANGES

Test Name: 21-Hydroxylase Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Adrenal 21-OH
Reference Ranges:

Adrenal 21-Hydroxylase Antibody ***U/mL***
Performed at Esoterix Endocrinology, Calabasas Hills CA
Effective 08Jan03 – present: 0.0 - 0.9
Reference ranges represent adult values.

HISTORICAL REFERENCE RANGES

Test Name: 5'Nucleotidase
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

5'Nucleotidase *U/L* (SI: U/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 09Jul03 – present: 4.0 – 11.5

Performed at ARUP Laboratories, Salt Lake City UT
Effective 02May03 – 08Jul03: 0.0 - 15.0

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 01May03: 4.0 – 11.5
Effective 22Jul92 - 18Sep94: 2.5 – 13
Effective 20May91 - 21Jul92: 2 – 15
Effective 04Jan89 - 19May91: 0 – 13
Effective 01Jul85 - 03Jan89 : 2.5 – 13
Effective 01Jan79 - 30Jun85 mU/mL (SI = U/L x 1): 2.2 – 15

Test Name: 5-Flucytosine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Flucytosine, 5-Fluorocytosine, 5-FC
Reference Ranges:

Flucytosine *µg/mL* (SI = µg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 16Jun00 – present:
Therapeutic 50 – 100
Toxic >100

Performed at National Institutes of Health, Bethesda MD
Effective 02Apr92 – 15Jun00:
Therapeutic 50 – 100
Toxic >100

Test Name: 5-Hydroxyindolacetic Acid
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: 5HIAA
Reference Ranges:

5-Hydroxyindolacetic Acid ***mg/24hr*** (SI = 5.2 x umol/d)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present: <=6.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 20May91 - 18Sep94: <9.0
Effective 04Jan89 - 19May91: <5.7
Effective 01Jul85 - 03Jan89: 0.0 - 15.9
Effective 01Jan79 - 30Jun85: 1.0 - 7.0

HISTORICAL REFERENCE RANGES

Test Name: Acetaminophen
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Tylenol
Reference Ranges:

Acetaminophen *mg/L* (SI: umol/L = 6.62 x mg/L) (mg/L = ug/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 31May95 - present:
Therapeutic <50 mg/L
Toxic >=120 mg/L
Half-life <4 hours
Toxic half-life >4 hours
The toxic level is dependent on half-life. When the half-life is 4 hours, hepetatotoxicity generally is not seen until the concentration is greater or equal to 120 mg/L. The level at which toxicity occurs decreases with increasing half-lives until it is encountered at values as low as 50 mg/L when the half-life reaches 12 hours.

Performed at American Medical Labs, Chantilly VA
Effective 02Apr92 - 30May95:
Therapeutic 10-30 mg/L
Toxic >20 mg/L

Performed at MetPath Labs, Rockville MD
Effective until 01Apr92:
Therapeutic 10-30
Toxic >20

HISTORICAL REFERENCE RANGES

Test Name: Acetylcholine Receptor Binding Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Acetylcholine Receptor Binding Antibody ***nmol/L*** (SI = nmol/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present: 0.00 - 0.02

Performed at SmithKline Beecham, Van Nuys CA
Effective 02Dec92 - 18Sep94: 0.0 – 0.4

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HISTORICAL REFERENCE RANGES

Test Name: Acid Phosphatase, Total
Department: Laboratory Medicine
Lab Area: Quest Diagnostics
Synonyms:
Reference Ranges:

Acid Phosphatase, Total ***U/L*** (SI = U/L)
Performed at Quest Diagnostics, San Juan Capistrano CA
Effective 26Apr04 – present: 3.1 – 7.0
Effective 13Nov02 – 25Apr04: 2.3 – 5.0

Performed at American Medical Labs, Chantilly VA
Effective 12Jul00 - 12Nov02: 0.0 – 5.7

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 - 11Jul00: 0.0 – 0.4

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HISTORICAL REFERENCE RANGES

Test Name: Activated Protein C Resistant
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: APCR
Reference Ranges:

Activated Protein C Resistant
Performed at National Institutes of Health, Bethesda MD
Effective 13Jun01 - present:
Male: 2.2 - 3.7
Female: 2.2 - 3.4

HISTORICAL REFERENCE RANGES

Test Name: Acute Care Panel
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Acute Care Panel

Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 - present:

Sodium		135-144 *mmol/L*
Potassium		3.3-5.1 *mmol/L*
Chloride		99-107 *mmol/L*
Total CO_2(Bicarbonate)		21-31 *mmol/L*
Creatinine	Male:	0.9-1.4 *mg/dL*
	Female:	0.7-1.3 *mg/dL*
Glucose		70-115 *mg/dL*
Urea Nitrogen		8-22 *mg/dL*

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HISTORICAL REFERENCE RANGES

Test Name: Adenovirus 40/41
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Adenovirus 40/41
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan85 – present: Negative for Adenovirus 40/41 by EIA

Test Name: Adenovirus Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Adenovirus Antibodies
Performed at Mayo Medical Labs, Rochester MN
Effective 21Jul03 - present:
Adenovirus Ab IgG <1:10
Adenovirus Ab IgM <1:10
A fourfold or greater rise in paired sera titer indicates recent infection.

Effective 19Sep94 - 20Jul03: Normal = Negative
A fourfold or greater rise in paired sera titer indicates recent infection.

Test Name: Adenovirus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Adenovirus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep - present: No virus isolated

Performed at American Medical Labs, Chantilly VA
Effective until 18Sep94: No virus isolated

Test Name: Adenovirus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Adenovirus Culture
Performed at the National Institutes of Health, Bethesda MD
Effective 19Sep94 - present: No virus isolated

Performed at American Medical Labs, Chantilly VA
Effective until 18Sep94: No virus isolated

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HISTORICAL REFERENCE RANGES

Test Name: Adenovirus EIA
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Adenovirus EIA
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan85 – present: Negative for Adenovirus by EIA

HISTORICAL REFERENCE RANGES

Test Name: ADH / Arginine Vasopressin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Antidiuretic Hormone
Reference Ranges:

Arginine Vasopressin ***pg/mL*** (SI: 1.0 x pg/mL = ng/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 01Oct02 - present: (>=16Y) <1.7

Performed at ARUP Laboratories, Salt Lake City UT
Effective 01Aug01 - 30Sep02: 0.0 – 4.7

Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 19Sep94 - 31Jul01: 1.0 – 13.3

Performed at SmithKline Beecham, Van Nuys CA
Effective 25Mar88 - 18Sep94: <2.0 (Serum Osmol: <285)
2.0 - 12.0 (Serum Osmol: >290)

HISTORICAL REFERENCE RANGES

Test Name: Adrenal Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Adrenal Antibodies

Performed at Quest Diagnostics, San Juan Capistrano CA
Effective 24Jul02 - present: If positive, a titer will be performed.

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HISTORICAL REFERENCE RANGES

Test Name: Adrenocorticotropic Hormone
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: ACTH
Reference Ranges:

Adrenocorticotropic Hormone *pg/mL* (SI: pmol/L = pg/mL x 0.22)
Performed at National Institutes of Health, Bethesda MD
Effective 20Sep00 – present: 9 – 52

Performed at Mayo Medical Labs, Rochester MN
Effective 24Jan00 – 19Sep00:
1D-15Y Not Established
>=16Y 10 – 60
Effective 27Apr98 – 23Jan00: 0 - 23
Effective 19Sep94 – 26Apr98: 0 – 60

Performed at SmithKline Beecham, Van Nuys CA
Effective15Jul91 – 18Sep94: 9 – 52
Effective 22Jan88 – 14Jul91: < 70
Effective 01Oct87 – 21Jan88: 0 - 80

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HISTORICAL REFERENCE RANGES

Test Name: Alanine Aminotransferase
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: ALT, SGPT
Reference Ranges:

Alanine Aminotransferase *U/L* (SI: U/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 - present: 6-41
Effective 01Jan79 - 30Nov88: 3-44

Test Name: Albumin Quotient, CSF & Serum
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms:
Reference Ranges:

This test is included in the IgG Index. Can not be ordered as a separate test.

Albumin Quotient
Performed at National Institutes of Health, Bethesda MD
Effective 17Jul85 – present: 3.2 - 9 ratio

CSF Albumin *mg/dL*
Performed at National Institutes of Health, Bethesda MD
Effective 17Jul85 – present: 10 - 31

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HISTORICAL REFERENCE RANGES

Test Name: Albumin, CSF
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms:
Reference Ranges:

CSF albumin *mg/dL*
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present: 12 - 33
Effective 17Jun85 – 10Jun03: 10 - 31

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HISTORICAL REFERENCE RANGES

Test Name: Albumin, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Albumin, Fluid

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 - present: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Albumin, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Albumin ***g/dL*** (SI: g/L = g/dL x 10)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 - present: 3.7-4.7
Effective 01Jan79-30Nov88: 3.8-4.9

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HISTORICAL REFERENCE RANGES

Test Name: Aldolase
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Aldolase *U/L* (SI: U/L)
Performed at National Institutes of Health, Bethesda MD
Effective 03Jul96 - present: 1-6
Effective 01Jan79 - 02Jul96: 1-7

HISTORICAL REFERENCE RANGES

Test Name: Aldosterone, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Aldosterone, Serum ***ng/dL*** (SI: 0.0277 x ng/dL = nmol/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
Upright 0D-30D: 16.5 - 154
Supine 1M-11M: 6.5 - 86
Supine 1Y-10Y: 3.0 - 39.5
Upright 1Y-10Y: 3.5 - 124
AM peripheral vein >=11Y 1.0 - 21.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 20May91 - 18Sep94:
(Normal Na Intake 100-200 mmol/d)
Upright: 4 - 31
Supine: <16

Effective 01Dec87 - 19May91:
(Na Intake 10 mmol/d)
7AM Fasting, Recumbent: 12 – 36
9AM, Fasting, Upright: 17 – 137
(Na Intake 100-200 mEq/d)
7AM Fasting, Recumbent: 3 – 9
9AM Fasting, Upright: 4 – 30
Adrenal vein: 200 – 400

HISTORICAL REFERENCE RANGES

Test Name: Aldosterone, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Aldosterone, Urine ***ug/24hr*** (SI: 2.77 x ug/24hr = nmol/d)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
0.7 - 11.0 (0-30 days)
0.7 - 22.0 (1-11 months)
2.0 - 16.0 (>= 1 year)

Performed at SmithKline Beecham, Van Nuys CA
Effective 20May91 - 18Sep94:
2 - 19 *(Normal Sodium Intake : 100-200 mmol/24hr)*

Effective 15Jan90 - 19May91:
20 - 80 *(Sodium Intake : 10 mmol/24hr)*
3 - 19 *(Normal Sodium Intake : 100-200 mmol/24hr)*
2 - 12 *(Sodium Intake : >200 mmol/24hr)*

Effective 14Jan88 - 14Jan90:
2 - 19 *(Normal Sodium Intake : 100-200 mmol/24hr)*

HISTORICAL REFERENCE RANGES

Test Name: Alkaline Phosphatase
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: alk phos
Reference Ranges:

Alkaline Phosphatase *U/L* (SI: U/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 - present:
Male and Female >18Y 37 - 116
Effective 18Dec01 - present:
Male:

1D-30D	75 - 316
31D-365D	82 - 383
1Y-3Y	104 - 345
4Y-6Y	93 - 309
7Y-9Y	86 - 315
10Y-12Y	42 - 362
13Y-15Y	74 - 390
16Y-18Y	52 - 171

Female:

1D-30D	48 - 406
31D-365D	124 - 341
1Y-3Y	108 - 317
4Y-6Y	96 - 297
7Y-9Y	69 - 325
10Y-12Y	51 - 332
13Y-15Y	50 - 162
16Y-18Y	47 - 119

Specimen type for children <=18 years was plasma and/or serum.

Effective 01Jan79 - 30Nov88:
Male & Female: >18Y 36 - 124

Test Name: Alkaline Phosphatase, Heat Stable
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Alkaline Phosphatase, Heat Stable
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
<20 percent residual activity suggests bone isoenzymes.
25-55 percent residual activity suggests liver and/or intestinal isoenzymes.

Test Name: Alkaline Phosphatase, Bone specific
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Alkaline Phosphatase, Bone specific *µg/L* (SI: µg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 14Nov01 - present:

Male	0 – 20 µg/L
Premenopausal	0 – 14 µg/L
Postmenopausal	0 – 22 µg/L

Effective 12Jul01 - 13Nov/01:

Male Adult	5.9 – 22.9
Premenopausal	3.9 – 15.1
Postmenopausal	6.4 – 24.4
2M-24M	25.4 - 124
2-9 yrs	24.1 – 89.5
Tanner I-II	19.5 – 87.5
Tanner III-IV	19.5 – 156

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HISTORICAL REFERENCE RANGES

Test Name: Alpha-1 Antitrypsin
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: A-1, AAT
Reference Ranges:

Alpha-1 Antitrypsin ***mg/dL*** (SI: g/L = 0.01 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present: 89 – 199
Effective 05Oct94 – 10Jun03: 114 – 275
Effective 06Jan93 - 04Oct94: 80 - 194
Effective 03May91 - 05Jan93: 115 - 315
Effective 21May87 - 02May91: 85 - 213

Performed at American Medical Labs, Chantilly VA
Effective 01Jul85 - 20May87 85 - 213
Effective 23Dec82 - 30Jun85: 140 - 330
Effective 28Feb80 - 22Dec82: *mg/L* 210 - 500
Effective 01Jan79 - 27Feb80: *g/L* (SI: g/L)
Female: 1.0 - 2.44
Male: 0.8 - 1.94

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HISTORICAL REFERENCE RANGES

Test Name: Alpha-fetoprotein
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: AFP, a1
Reference Ranges:

Alpha-fetoprotein *ng/mL* (SI: µg/L = 1 x ng/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 10Mar04 - present: <11.0
Effective 07Feb91 - 09Mar04: < 9.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 04Jan89 - 07Feb91: < 9.0
Effective 04Aug86- 03Jan89: 0 – 8.5
Effective 01Apr85 - 03Aug86: 0 – 10
Effective 01Jan79 - 31Mar85: 0 – 25

HISTORICAL REFERENCE RANGES

Test Name: Alpha-Fucosidase, Fibroblasts
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Alpha-Fucosidase, Fibroblasts ***U/g of cellular protein*** (SI: U/g)
Performed at Mayo Medical Labs, Rochester MN
Effective 09Oct96 to present: 1.30 – 3.60

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HISTORICAL REFERENCE RANGES

Test Name: alpha-Neuraminidase, Fibroblasts
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer performed
alpha-Neuraminidase, Fibroblasts
Performed at E. K. Shriver Center (operational until Sept. 2001)
Lysosomal Storage Diseases Lab, Waltham MA
Effective 09Oct96 – 25Sep01: Normal control noted on report.

Test Name: Alpha-Subunit of Pituitary Hormones
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Glycoprotein, a-subunit PGH HCG TSH FSH LH

Reference Ranges:

Alpha-Subunit of Pituitary Glycoprotein Hormones ***µg/L*** (SI: µg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 28May97 - present: 0.0 – 1.1

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HISTORICAL REFERENCE RANGES

Test Name: Alpha 2 Antiplasmin
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: a2-Antiplasmin, A2-PI
Reference Ranges:

Alpha 2 Antiplasmin ***%*** (SI: fraction = 0.01 x %)
Performed at National Institutes of Health, Bethesda MD
Effective 20Jan99 - present: 82 – 123
Effective 18Mar98 - 19Jan99: 78 – 113

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HISTORICAL REFERENCE RANGES

Test Name: Alpha 2 Macroglobulin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: a2M
Reference Ranges:

Alpha 2 Macroglobulin ***mg/dL*** (SI: 0.01 x mg/dL = g/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 12Oct00 - present: 100 – 280
Effective 30Jul97 - 11Oct00: 115 – 225

HISTORICAL REFERENCE RANGES

Test Name: Alpha Amino Nitrogen, Urine
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Alpha Amino Nitrogen, Urine ***mg/24hr*** (SI: mmol/d = 14.28 x mg/24hr)
Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 28Jul87: 50 – 200

Test Name: Amebiasis Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: E. Histolytica Antibody
Reference Ranges:

Amebiasis (E. Histolytica Antibody)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 to present:
Negative; If positive, results are titered.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94:
Active or recent infection: >=1:128
Current infection: 1:256 - 1:2048
No invasive disease: <1:32
Grey zone (suggest retest): 1:32 - 1:64

Performed at American Medical Labs, Chantilly VA
Effective 02Mar86 - 31Aug90:
Active or recent infection: >=1:128
Current infection: 1:256 - 1:2048
No invasive disease: <1:32
Grey zone (suggest retest): 1:32 - 1:64

Performed at the Center of Disease Control, Atlanta GA
Effective until 01Mar86:
Active or recent infection: >=1:128
Current infection: 1:256 - 1:2048
No invasive disease: <1:32
Grey zone (suggest retest): 1:32 - 1:64

HISTORICAL REFERENCE RANGES

Test Name: Amikacin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Amikacin *mg/L* (SI: µmol/L = 1.71 x mg/L)
Performed at National Institutes of Health
Effective 02Apr92 - present:
Therapeutic:
Pre <8
Post 25 - 35
Toxic:
Pre >10
Post >35

Effective until 02Apr92:
Therapeutic:
Pre <10
Post 20 - 35
Toxic:
Pre >10
Post >35

Test Name: Amino Acids Qualitative, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Amino Acids Qualitative Urine
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep94 - present:
Interpretive report is issued with any significant clinical findings.

Performed at SmithKline Beecham Clinical Laboratories, Van Nuys CA
Effective 18Mar88 - 18Sep94: Qualitative report issued.

Test Name: Amino Acids Quantitative Ion-Exchange, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Amino Acids Quantitative Ion-Exchange Urine ***µmol/24hrs*** (SI: µmol/d)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
0Y-2Y not established

Taurine
3Y-15Y 35 – 260
16Y-150Y 267 – 1290

Threonine
3Y-15Y 25 – 100
16Y-150Y 80 – 320

Serine
3Y-15Y 93 – 210
16Y-150Y 200 – 695

Asparagine
3Y-15Y 15 – 40
16Y-150Y 34 – 100

Glutamic Acid
3Y-15Y 13 – 22
16Y-150Y 27 – 105

Glutamine
3Y-15Y 150 – 400
16Y-150Y 300 – 1040

Glycine
3Y-15Y 195 – 855
16Y-150Y 750 – 2400

Alanine
3Y-15Y 65 – 190
16Y-150Y 160 – 690

Citrulline
3Y-15Y 0 – 13
16Y-150Y 0 – 11

Alpha-Aminodipic Acid
3Y-15Y 25 – 78
16Y-150Y 0 – 135

Alpha-Amino-N-Butyric Acid
3Y-15Y 7 – 25
16Y-150Y 0 – 28

Valine
3Y-15Y 17 – 37
16Y-150 19 – 74

Cystine
3Y-15Y 11 – 53
16Y-150Y 28 – 115

Cystathionine
3Y-15Y 2 – 7
16Y-150Y 0 – 47

Methionine
3Y-15Y 7 – 20
16Y-150Y 5 – 30

Isoleucine
3Y-15Y 3 – 15
16Y-150Y 4 – 23

Leucine
3Y-15Y 9 – 23
16Y-150Y 20 – 77

Tyrosine
3Y-15Y 30 – 83
16Y-150Y 38 – 145

Phenylalanine
3Y-15Y 20 – 61
16Y-150Y 36 – 90

Beta-Alanine

3Y-15Y 0 – 42
16Y-150Y 0 – 93

Beta-Aminoisobutyric Acid
3Y-15Y 25 – 96
16Y-150Y 10 – 235

Ornithine
3Y-15Y 3 – 16
16Y-150Y 5 – 70

Lysine
3Y-15Y 19 – 140
16Y-150Y 32 – 290

1-Methylhistidine
3Y-15Y 41 – 300
16Y-150Y 68 – 855

Histidine
3Y-15Y 46 – 725
16Y-150Y 500 – 1500

3-Methylhistidine
3Y-15Y 42 – 135
16Y-150Y 64 – 320

Carnosine
3Y-15Y 34 – 220
16Y-150 16 – 125

Arginine
3Y-15Y 10 – 25
16Y-150Y 13 – 64

Interpretation:
When abnormal results are detected, a detailed interpretation is given,
including an overview of the results and of their significance, a correlation to available clinical information, elements of differential diagnosis, recommendations for additional biochemical testing, and in vitro confirmatory studies (enzyme assay, molecular analysis), name and phone number of key contacts who may provide these studies at Mayo or elsewhere, and a phone number to reach one of the laboratory directors in case the referring physician has additional questions.

Performed at SmithKline Beecham, Van Nuys CA
Effective until 18Sep94: Reference ranges indicated on patient reports.

HISTORICAL REFERENCE RANGES

Test Name: Amino Acids Quantitative, CSF
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Amino Acids QN, CSF
Performed at Children's Hospital, Philadelphia PA
Effective 09Sep96 - present:
Reference ranges are issued with a written report.

Test Name: Amino Acids Quant. Ion-Exchange, Plasma
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Amino Acids QN Ion-Exchange, Plasma ***µmol/L*** (SI: µmol/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 09Dec99 - present:

	AGE GROUPS				
	Premature	1D-31D	32D-24M	25M-18Y	>=19Y
Taurine	151-411	46-492	15-143	10-170	54-210
Threonine	150-330	90-329	24-174	35-226	60-225
Serine	127-248	99-395	71-186	69-187	58-181
Asparagine	90-295	29-132	21-95	23-112	35-74
Glutamic Acid	107-276	62-620	10-133	5-150	10-131
Glutamine	248-850	376-709	246-1182	254-823	205-756
Proline	92-310	110-417	52-298	59-369	97-329
Glycine	298-602	232-740	81-436	127-341	151-490
Alanine	212-504	131-710	143-439	152-547	177-583
Citrulline	20-87	10-45	3-35	1-46	12-55
Alpha-Amino-N-Butyric Acid	14-52	8-24	3-26	4-31	5-41
Valine	99-220	86-190	64-294	74-321	119-336
Cystine	15-70	17-98	16-84	5-45	5-82
Methionine	37-91	10-60	9-42	7-47	10-42
Isoleucine	23-85	26-91	31-86	22-107	30-108
Leucine	151-220	48-160	47-155	49-216	72-201
Tyrosine	147-420	55-147	22-108	24-115	34-112
Phenylalanine	98-213	38-137	31-75	26-91	35-85
B-Alanine	0	0-10	0-7	0-7	0-12
Ornithine	77-212	48-211	22-103	10-163	48-195
Lysine	128-255	92-325	52-196	48-284	116-296
Histidine	72-134	30-138	41-101	41-125	72-124
Arginine	34-96	6-140	12-133	10-140	15-128

Performed at Mayo Medical Labs, Rochester MN
Effective 06Mar99 - 08Dec99:

	1D-2Y	3Y-15Y	>=16Y
Taurine	11-125	11-120	45-130
Threonine	21-204	67-150	92-240
Serine	79-183	93-150	56-140

Asparagine	20-74	8-37	24-79
Glutamic Acid	24-132	32-140	18-98
Glutamine	355-788	420-730	390-650
Proline	91-265	130-290	110-360
Alanine	141-503	200-450	230-510
Citrulline	7-38	16-32	16-55
Alpha-Amino-N-Butyric Acid	6-24	8-37	15-41
Valine	82-262	160-350	150-310
Cystine	9-43	19-41	30-47
Methionine	13-42	13-30	16-30
Isoleucine	19-81	37-140	42-100
Leucine	43-143	70-170	66-170
Beta-Alanine	0-21	0-49	0-29
Ornithine	22-112	44-90	27-80
Lysine	66-204	120-290	150-220
Histidine	45-102	68-120	26-120
Arginine	23-108	44-120	45-130

	1D-7D	8D-2Y	3Y-15Y	>=16Y
Tyrosine	33-122	29-108	26-110	45-74
Phenylalanine	42-124	33-71	26-86	41-68

	1D-11M	12M-35M	3Y-15Y	>=16Y
Glycine	152-375	126-321	110-240	170-330

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 05Mar99: No ranges available

Performed at SmithKline Beecham, Van Nuys CA
Effective until 18Sep94: No ranges available

Test Name: Amino Acids, QN, Random Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Amino Acids QN, Random, Urine ***nmol/mg creat*** (SI: nmol/mg creat)
Performed at Mayo Medical Labs, Rochester MN
Effective 13Feb02 - present:

Taurine
premature 5190 – 23620
1D-31D 1650 – 6220
1M-24M 545 – 3790
2Y-18Y 639 – 1866
19Y-150Y 380 – 1850

Threonine
premature 840 – 5700
1D-31D 445 – 1122
1M-24M 252 – 1528
2Y-18Y 121 – 389
19Y-150Y 130 – 370

Serine
premature 1680 – 6000
1D-31D 1444 – 3661
1M-24M 845 – 3190
2Y-18Y 362 – 1100
19Y-150Y 240 – 670

Asparagine
premature 1350 – 5250
1D-31D 185 – 1550
1M-24M 252 – 1280
2Y-18Y 72 – 332
19Y-150Y 99 – 470

Glutamic Acid
premature 380 – 3760
1D-31D 70 – 1058
1M-24M 54 – 590
2Y-18Y 0 – 176

19Y-150Y 39 – 330

Glutamine
premature 520 – 1700
1D-31D 393 – 1042
1M-24M 670 – 1562
2Y-18Y 369 – 1014
19Y-150Y 190 – 510

Alpha-Aminodipic Acid
premature 70 – 460
1D-31D 0 – 180
1M-24M 45 – 268
2Y-18Y 2 – 88
19Y-150Y 40 – 110

Proline
premature 1350 – 10460
1D-31D 370 – 2323
1M-24M 254 – 2195
2Y-150Y 0 – 0

Glycine
premature 7840 – 23600
1D-31D 5749 – 16423
1M-24M 3023 – 11148
2Y-18Y 897 – 4500
19Y-150Y 730 – 4160

Alanine
premature 1320 – 4040
1D-31D 982 – 3055
1M-24M 676 – 6090
2Y-18Y 231 – 915
19Y-150Y 240 – 670

Citrulline
premature 240 – 1320
1D-31D 27 – 181
1M-24M 22 – 180
2Y-18Y 10 – 99
19Y-150Y 8 – 50

Alpha-Amino-N-Butyric Acid
premature 50 – 710
1D-31D 8 – 65

1M-24M 30 – 136
2Y-18Y 0 – 77
19Y-150Y 0 – 90

Valine
premature 180 – 890
1D-31D 113 – 369
1M-24M 99 – 316
2Y-18Y 58 – 143
19Y-150Y 27 – 260

Cystine
premature 480 – 1690
1D-31D 212 – 668
1M-24M 68 – 710
2Y-18Y 25 – 125
19Y-150Y 43 – 210

Cystathionine
premature 260 – 1160
1D-31D 16 – 147
1M-24M 33 – 470
2Y-18Y 0 – 26
19Y-150Y 20 – 50

Methionine
premature 500 – 1230
1D-31D 342 – 880
1M-24M 174 – 1090
2Y-18Y 16 – 114
19Y-150Y 38 – 210

Isoleucine
premature 250 – 640
1D-31D 125 – 390
1M-24M 38 – 342
2Y-18Y 10 – 126
19Y-150Y 16 – 180

Leucine
premature 190 – 790
1D-31D 78 – 195
1M-24M 70 – 570
2Y-18Y 30 – 500
19Y-150Y 30 – 150

Tyrosine
premature 1090 – 6780
1D-31D 220 – 1650
1M-24M 333 – 1550
2Y-18Y 122 – 517
19Y-150Y 90 – 290

Phenylalanine
premature 920 – 2280
1D-31D 91 – 457
1M-24M 175 – 1340
2Y-18Y 61 – 314
19Y-150Y 51 – 250

Beta-Alanine
premature 1020 – 3500
1D-31D 25 – 288
1M-24M 0 – 297
2Y-18Y 0 – 65
19Y-150Y 0 – 130

Beta-Aminoisobutyric Acid
premature 50 – 470
1D-31D 421 – 3133
1M-24M 802 – 4160
2Y-18Y 291 – 1482
19Y-150Y 10 – 510

Ornithine
premature 260 – 3350
1D-31D 118 – 554
1M-24M 55 – 364
2Y-18Y 31 – 91
19Y-150Y 20 – 80

Lysine
premature 1860 – 15460
1D-31D 270 – 1850
1M-24M 189 – 850
2Y-18Y 153 – 634
19Y-150Y 145 – 634

1-Methylhistidine
premature 170 – 880
1D-31D 96 – 499
1M-24M 106 – 1275

2Y-18Y 170 – 1688
19Y-150Y 170 – 1680

Histidine
premature 1240 – 7240 n
1D-31D 908 – 2528
1M-24M 815 – 7090
2Y-18Y 644 – 2430
19Y-150Y 460 – 1430

3-Methylhistidine
premature 420 – 1340
1D-31D 189 – 680
1M-24M 147 – 391
2Y-18Y 182 – 365
19Y-150Y 160 – 520

Carnosine
premature 260 – 370
1D-31D 97 – 665
1M-24M 203 – 635
2Y-18Y 72 – 402
19Y-150Y 10 – 90

Arginine
premature 190 – 820
1D-31D 35 – 214
1M-24M 38 – 165
2Y-18Y 31 – 109
19Y-150Y 10 – 90
When abnormal results are detected, a detailed interpretation is given,
including an overview of the results and of their significance, a correlation to available clinical information, elements of differential diagnosis, recommendations for additional biochemical testing and in vitro confirmatory studies (enzyme assay, molecular analysis),name and phone number of key contacts who may provide these studies at Mayo or elsewhere, and a phone number to reach one of the laboratory directors in case the referring physician has additional questions.

Performed at SmithKline Beecham, Van Nuys CA
Effective until 18Sep94:
Reference ranges issued with each report.

Test Name: Amino Acids, Quantitative (1-5 specific)
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: AA
Reference Ranges:

Amino Acids, Quantitative (1-5 specific) ***umol/L*** (SI = umol/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 12Jun02 - present:
Reference ranges are reported with the specific amino acid(s) ordered.

HISTORICAL REFERENCE RANGES

Test Name: Aminolevulinic Acid, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Delta ALA
Reference Ranges:

Aminolevulinic Acid *mg/dL* (SI: µmol/d = 7.626 x mg/24hr)
Aminolevulinic Acid *mg/24hr* (SI: µmol/L = 76 x mg/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
0-8 months not established
9M - 5Y 0.00 – 0.66 *mg/dL*
>= 6Y 1.5 – 7.5 *mg/24hr*

Performed at SmithKline Beecham, Van Nuys Ca
Effective 01Jan79 - 18Sep94: 1.3 – 7.0 *mg/24hr*

HISTORICAL REFERENCE RANGES

Test Name: Amiodarone
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Desmethylamiodarone
Reference Ranges:

Amiodarone ***mg/L*** (SI: µmol/L = 1.55 x mg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
Amiodarone
Therapeutic concentration: 1.5-2.5
Toxic concentration: > or = 3.5
Desethylamiodarone
Therapeutic concentration: 1.5-2.5
Toxic concentration: > or = 3.5

Performed at SmithKline Beecham, Van Nuys CA
Effective 02Apr92 - 18Sep94:
Therapeutic: 0.5 – 2.5
Toxic: >2.5

Performed at MetPath Labs, Rockville MD
Effective until 01Apr92:
Therapeutic 1.0 - 2.5
Toxic not established

Test Name: Amitriptyline / Nortriptyline
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Aventyl, Pamelor, Elavil, Tricyclic Antidepressants

Reference Ranges:

Amitriptyline / Nortriptyline *µg/L* (SI: nmol/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 31May95 - present:
Total (Amitrip + Nortrip) *µg/L* (SI: nmol/L = 3.7 x µg/L)
Therapeutic: 75 - 225
Toxic: >=500
Amitriptyline *µg/L* (SI: nmol/L = 3.61 x µg/L)
Therapeutic: not defined
Toxic: >=500
Nortriptyline *µg/L* (SI: nmol/L = 3.8 x µg/L)
Therapeutic: 50 - 150
Toxic: >=500
Interpretation:
The clinical effect desired will not be achieved if the blood concentration is <75 ng/mL. Toxicity is associated with blood concentration >500 ng/mL.
Nortriptyline is unique among the antidepressants in that its blood level exhibits the classical "therapeutic window" effect. The optimal effectiveness of the drug occurs between 50-150 ng/mL. When the concentration is <50 ng/mL, the drug exhibits little effectiveness. When the drug concentration exceeds 150 ng/mL, nortriptyline will actually induce depression. Thus, therapeutic monitoring to ensure that the blood level is within the "therapeutic window" is CRITICAL to accomplish successful treatment with this drug:

Performed at American Medical Labs, Chantilly VA
Effective 02Apr92 - 30May95:
Amitriptyline *µg/L* (SI: nmol/L = 3.61 x µg/L)
Therapeutic: 120 - 250
Toxic: >500
Nortriptyline *µg/L* (SI: nmol/L = 3.8 x µg/L)
Therapeutic: 50 - 150
Toxic: >=500

Performed at Metpath Labs, Rockville MD

Effective until 02Apr92:
Amitriptyline *ng/mL* (SI: nmol/L = 3.61 x ng/mL)
Therapeutic: 120 - 250
Toxic: >500
Nortriptyline *ng/mL* (SI: nmol/L = 3.8 x ng/mL)
Therapeutic: 50 - 150
Toxic: >=500

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Ammonia
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Ammonia ***µmol/L*** (SI: µmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 17Aug79 - present: 11 – 35

Test Name: Amylase Fractions
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Pancreatic, Macroamylase
Reference Ranges:

Amylase Fractions
Pancreatic Amylase *U/L* (SI: U/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 07Feb00 - present: >=15Y 11 – 54
Effective 19Sep94 - 06Feb00: >=15Y 0 – 43

Performed at SmithKline Beecham, Van Nuys CA
Effective 09Sep90 - 18Sep94: 7 – 54

Macroamylase
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present: none detected

Total Amylase *U/L* (SI: U/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
0M-23M 0 – 265
2Y-3Y 31 – 203
4Y-5Y 11 – 259
6Y-7Y 22 – 150
8Y-9Y 14 – 198
10Y-11Y 11 – 119
12Y-13Y 36 – 160
14Y-15Y 29 – 173
16Y-17Y 12 – 188
Effective 16Jul01 - present: >=18Y 26 - 102
Effective 19Sep94 - 15Jul01: >=18Y 35–115

Performed at SmithKline Beecham, Van Nuys CA
Effective 09Sep90 to 18Sep94: 30 – 170

Salivary Amylase *U/L* (Test no longer performed)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 01Mar98:
Salivary >=15Y 0 – 76*(Salivary discontinued 02 Mar98)*

Performed at SmithKline Beecham, Van Nuys CA
Effective 09Sep90 - 18Sep94: 12 – 137

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Amylase, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Amylase, Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 - present: No ranges available

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Amylase, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Amylase, Serum *U/L* (SI: U/L)
Performed at National Institutes of Health, Bethesda MD
Effective 10Apr02 - present: 36 – 143
Effective 22Jul98 - 09Apr02: 21 – 106
Effective 11Dec80 - 21Jul98: 18 – 93
Effective 01Jan79 - 10Dec80: 5 – 25

HISTORICAL REFERENCE RANGES

Test Name: Amylase, Urine
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer offered as of January 10, 2001
Amylase Excretion ***U/24hr*** (SI: U/d = 1 x U/24hr)
Performed at National Institutes of Health, Bethesda MD
Effective 06Mar99 - 10Jan01:
24hr 59 - 401
0-23-hr 2 - 19 *U/hr*

Effective 11Dec80 - 05Mar99:
24hr 16 - 325

Amylase Urine Concentration ***U/L*** (SI: U/L)
Performed at National Institutes of Health, Bethesda MD
Effective 06Mar99 - 10Jan01: Not established
Effective 01Jan79 - 02Jul96: 0 - 70

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Amylase/Creatinine Ratio
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer offered as of January 10, 2001
Amylase/Creatinine Ratio % (SI: Frac = 0.01 x %)
Performed at National Institutes of Health, Bethesda MD
Effective 03Mar99 – 10Jan01: 1.3-4.3 %

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Anaerobic Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Anaerobic Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No anaerobic bacteria isolated

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Anaerobic Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Anaerobic Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No anaerobic bacteria isolated

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Anaerobic Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Anaerobic Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No anaerobic bacteria isolated

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Anaerobic Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Synovial Fluid
Reference Ranges:

Anaerobic Culture

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No anaerobic bacteria isolated

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Anaerobic Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Anaerobic Culture

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No anaerobic bacteria isolated

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Anaerobic Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Paracentesis
Reference Ranges:

Anaerobic Culture

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No anaerobic bacteria isolated

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Anaerobic Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Thoracentesis
Reference Ranges:

Anaerobic Culture

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No anaerobic bacteria isolated

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Anaerobic Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Anaerobic Culture

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No anaerobic bacteria isolated

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Anaerobic Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Anaerobic Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No anaerobic bacteria isolated

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Anaerobic Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Anaerobic Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No anaerobic bacteria isolated

HISTORICAL REFERENCE RANGES

Test Name: Androstenedione
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Androstenedione ***ng/dL*** (SI: nmol/L = 0.0349 x ng/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
MALE
0Y-7Y 10 – 20
8Y-9Y 10 – 30
10Y-11Y 30 – 70
12Y-13Y 40 – 100
14Y-17Y 50 – 140
>=18Y 30 – 310
FEMALE
0Y-7Y 10 – 30
8Y-9Y 20 – 50
10Y-11Y 40 – 100
12Y-13Y 80 – 190
14Y-17Y 70 – 220
>=18Y 20 – 310

Performed at SmithKline Beecham, Van Nuys CA
Effective 06Feb89 - 18Sep94:
Male 65 - 270
Female 65 - 270
Prepuberty <60
Postmenopause <180

Performed at SmithKline Beecham, Van Nuys CA
Effective 25Mar88 - 05Feb89:
Male 70 - 205
Female 80 - 300
Prepuberty 8 - 50
Postmenopause 30 - 140

Test Name: Angiotensin Converting Enzyme
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: ACE
Reference Ranges:

Angiotensin Converting Enzyme *U/L* (SI: U/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug01 – present: Adults 16.0 - 52.0

Performed at Mayo Medical Labs, Rochester MN
Effective 07Feb00 – 31Jul01: 7.0 – 46.0
Effective 19Sep94 – 06Feb00:

<1Y	10.9 – 42.1
1Y-2Y	9.4 – 36.0
3Y-4Y	7.9 – 29.8
5Y-9Y	9.6 – 35.4
10Y-12Y	10.0 – 37.0
13Y-16Y	9.0 – 33.4
17Y-19Y	7.2 – 26.6
>=20Y	6.1 – 21.1

Performed at SmithKline Beecham, Van Nuys CA
Effective 23Jul88 – 18Sep94: Male/Female 8 - 52
Effective 01Oct87 - 18Sep94: Female 10 - 30
Effective 01Oct87 – 22Jul88: Male 12 - 36

HISTORICAL REFERENCE RANGES

Test Name: Angiotensin I
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Angiotensin I ***pg/mL*** (SI: ng/L = 1.0 x pg/mL)
Performed at InterScience Institute, Inglewood CA
Effective 24Sep97 - present: 0.0 - 25.0

Performed at Robert Woods-Johnson Medical School, New Brunswick NJ
Effective 06Jul95 - 23Sep97: 11 - 88

HISTORICAL REFERENCE RANGES

Test Name: Angiotensin II
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Angiotensin II ***pg/mL*** (SI: ng/L = 1.0 x pg/mL)
Performed at InterScience Institute, Inglewood CA
Effective 24Sep97 - present: 10 - 60

Performed at Robert Woods-Johnson Medical School, New Brunswick NJ
Effective 06Jul95 - 23Sep97: No ranges available

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Ansamycin LM 427
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Ansamycin LM 427
Performed at Centers for Disease Control, Atlanta GA
No longer requested as of January 2000.

Test Name: Ansamysin 5.0
Department:
Lab Area:
Synonyms:
Reference Ranges:

Ansamysin 5.0
Performed at Centers for Disease Control, Atlanta GA
No longer requested as of January 2000.

Test Name: Anti-Adrenal 21 hydroxylase Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Anti-Adrenal 21 hydroxylase Antibody ***U/mL***
Performed at Esoterix Endocrinology, Calabasas Hills CA
Effective 14May03 – present: 0.0 - 0.9
Ranges represent adult values.
2.5% of healthy individuals exhibit values up to 3.7 U/mL.

Test Name: Anti-Adrenal Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Anti-Adrenal Antibody ***titer***
Performed at Focus Technologies, Cypress CA
Effective 14May03 – present:
<1:4 Antibody not detected
>=1:4 Antibody detected
Adrenal antibodies are present in 60% of patients with idiopathic adrenocortical insufficiency (Addison's disease), 5% of patients with tuberculous Addison's disease, and 1-5% of patients with other autoimmune endocrine disease.

Test Name: Anti-Cardiolipin Antibody IgG and IgM
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: ACA
Reference Ranges:

Anti-Cardiolipin Antibody, IgG and IgM
Performed at National Institutes of Health, Bethesda MD
Effective 10Jan01 – present**:**
Cardiolipin IgG *GPL*
Negative: <12
Indeterminate: 12 – 20
Low to medium positive: 20 – 80
High positive: >80

Cardiolipin IgM *MPL*
Negative: <18
Indeterminate: 18 – 25
Low to medium positive: 26 – 80
High positive: >80

Effective 01Sep93 – 09Jan01:
IgG negative: <12 GPL
IgM negative: <10 MPL

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HISTORICAL REFERENCE RANGES

Test Name: Anti-Centromere Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: CREST, HEp-2, ACA
Reference Ranges:

Anti-Centromere Antibody
Performed at Mayo Medical Labs, Rochester MN
Effective 18Sep01 – present: Negative

Test Name: Anti-CMV Antibody IgG and IgM
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: Cytomegalovirus
Reference Ranges:

Anti-CMV Antibody IgG and IgM ***units***
Performed at National Institutes of Health, Bethesda MD
Effective 09Mar01 – present:
Negative: <=0.900
Equivocal: 0.901-1.099
Positive: >=1.100

Effective 19Sep94 – 08Mar01:
Negative: <=0.900
Equivocal: 0.901 – 0.999
Positive: >=1.000

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94:
Negative: <=0.900
Equivocal: 0.901 – 0.999
Positive: >=1.000

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Anti-Cyclic Citrullinated Peptide
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: Anti-CCP
Reference Ranges:

Anti-Cyclic Citrullinated Peptide ***Units***
Performed at National Institutes of Health, Bethesda MD
Effective 08Oct03 – present:
Negative <20
Weak Positive 20-39
Positive >=40
Results obtained with INOVA kit may not be interchanged with different manufacturer assays.

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HISTORICAL REFERENCE RANGES

Test Name: Anti-DNA Antibody
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: dsDNA
Reference Ranges:

Anti-DNA Antibody ***IU***
Performed at National Institutes of Health, Bethesda MD
Effective 10Oct89 - present:

Negative:	< 25
Borderline Positive:	25-30
Low Positive:	30-60
Positive:	60-200
Strongly Positive:	> 200

Performed at American Medical Labs, Chantilly VA
Effective 12Jun85 – 09Oct89: Negative

HISTORICAL REFERENCE RANGES

Test Name: Anti-dsDNA Antibody
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: double-stranded
Reference Ranges:

Anti-dsDNA Antibody ***IU***
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep01 – present:
Negative: < 25
Borderline Positive: 25-30
Low Positive: 30-60
Positive: 60-200
Strongly Positive: > 200

Effective 10Oct89 – 18Sep01:
Negative: <10 titer

Performed at American Medical Labs, Chantilly VA
Effective until 09Oct89: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Anti-EBV VCA IgG
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: Epstein-Barr Virus
Reference Ranges:

Anti-EBV VCA IgG ***titer***
Performed at National Institutes of Health, Bethesda MD
Effective 15May92 – present:
Negative: < 10

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 14May92: Negative: < 10

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Negative: < 10

HISTORICAL REFERENCE RANGES

Test Name: Anti-HDV
Department: Transfusion Medicine
Lab Area: Hepatitis/HIV
Synonyms: Antibody to hepatitis D (delta) virus
Reference Ranges:

Anti-HDV

Performed at Mayo Medical Labs, Rochester MN
Effective 14Mar01 – present: Negative

Test Name: Anti-Histone Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Anti-Histone Antibody ***units*** (SI: units)
Performed at Mayo Medical Labs, Rochester MN
Effective 13Aug97 - present:
Negative <1.0
Borderline 1 – 1.5
Positive >1.5

Test Name: Anti-H. Influenzae IgG Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: HFlu, Haemophilus
Reference Ranges:

Anti-H. Influenzae IgG Antibody ***µg/mL*** (SI: mg/L = 1.0 x µg/mL)
Performed at Focus Technologies, Cypress CA
Effective 06Mar99 - present:
Nonprotective ab level: <0.15
Indeterminate for protective ab 0.2 - 0.99
Protective ab level >=1.0
A four-fold increase in the polyribosylribitol phosphate (PRP) IgG Ab level between pre-vaccination and post-vaccination sera is considered evidence of effective immunization.

HISTORICAL REFERENCE RANGES

Test Name: Anti-JO-1 Antibody
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: Jo-1 Ab
Reference Ranges:

Anti-JO-1 Antibody ***EU***
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep01 – present:
Negative: < 20
Borderline Positive: 20 – 24
Positive: >= 25

Effective 13Jun85 - 18Sep01: Negative

Performed at American Medical Labs, Chantilly VA
Effective until 12Jun85: No ranges available

Test Name: Anti-MAG Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: MAG, Myelin Associated Glycoprotein
Reference Ranges:

Anti-MAG Antibody
Performed at Focus Technologies, Cypress CA
Effective 14 Apr04 – present:
Reference Values:
SGPG IgM Antibody <1:400
MAG IgM Antibody <16 U/mL
MAG Antibody, Western Blot: Negative

Interpretive Criteria:
SGPG IgM Antibody <1:400 Antibody Not Detected
> or = 1:400 Antibody detected
MAG IgM Antibody <16 Antibody Not Detected
> or = 16 Antibody Detected

MAG Ab, Western Blot
Interpretive Criteria: Negative - Antibody Not Detected
Positive - Antibody Detected
This MAG Western blot assay was performed as a reflex test due to a positive MAG antibody dual ELISA.

Test Name: Anti-Myeloperoxidase Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: MPO
Reference Ranges:

Anti-Myeloperoxidase Antibody ***EU/mL*** (SI: EU/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 18Feb03 – present:
<= 5.0 Negative
5.1-14.9 Equivocal
>=15.0 Positive

Effective 21Aug96 – 12Feb03:
0.0 – 5.0 Negative
5.1 – 400 Positive

Effective 08Aug95 - 06Aug96: <= 10 units

HISTORICAL REFERENCE RANGES

Test Name: Anti-Neuronal Nuclear Antibody-1
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: ANNA-1, Hu
Reference Ranges:

Anti-Neuronal Nuclear Antibody-1 ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 11Mar98 - present: Negative at <1:60

HISTORICAL REFERENCE RANGES

Test Name: Anti-Neuronal Nuclear Antibody-2
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: ANNA-2, Ri
Reference Ranges:

Anti-Neuronal Nuclear Antibody-2 ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 11Mar98 - present: Negative at <1:60

Test Name: Anti-Neuronal Nuclear Antibody Type 2, CSF
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: ANNA-II, Ri
Reference Ranges:

Anti-Neuronal Nuclear Antibody-2, CSF ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 08Mar95 - present: Negative at <1:2

HISTORICAL REFERENCE RANGES

Test Name: Anti-Neutrophil Cytoplasmic Antibody
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: ANCA
Reference Ranges:

Anti-Neutrophil Cytoplasmic Antibody ***titer***
Performed at National Institutes of Health, Bethesda MD
Effective 12Jun85 – present:
C-ANCA Screen Negative: < 20
Titer performed if positive

P-ANCA Screen Negative: < 20

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HISTORICAL REFERENCE RANGES

Test Name: Anti-Nuclear Antibody
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: ANA
Reference Ranges:

Anti-Nuclear Antibody ***EU***
Performed at National Institutes of Health, Bethesda MD
Effective19Sep01 – present:
Negative: < 1.0
Positive: >= 1.0
Strong Positive: >= 3.0

Effective 10Dec89 – 18Sep01:
Negative: < 80 titer

Performed at American Medical Labs, Chantilly VA
Effective 02Jul80 – 09Dec89: Negative < 80 titer

Performed at SmithKline Beecham, Van Nuys CA
Effective until 01Jul80: Negative < 80 titer

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HISTORICAL REFERENCE RANGES

Test Name: Anti-SM Antibody
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: Smith Antibody
Reference Ranges:

Anti-SM Antibody ***EU***
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep01 – present:
Negative: < 20
Borderline Positive: 20 – 24
Positive: >= 25

Effective 13June85 – 18Sep01: Negative

Performed at American Medical Labs, Chantilly VA
Effective until 12Jun85: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Anti-Smooth Muscle Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: SMA
Reference Ranges:

Anti-Smooth Muscle Antibody ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:

None detected	<1:20
Weak positive	1:20 - 1:40
Suggestive of Chronic Hepatitis	>=1:80

Performed at SmithKline Beecham, Van Nuys CA
Effective 20May91 – 18Sep94:

None detected	<1:20
Weak positive	1:20 - 1:40
Suggestive of Chronic Hepatitis	>=1:80

Effective 03Jan89 – 19May91: Negative at 1:40

Effective 01Oct87 – 02Jan89: 0 titer

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National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Anti-SmRNP Antibody
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms:
Reference Ranges:

Anti-SmRNP Antibody ***EU***
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep01 – present:
Negative: < 20
Borderline Positive: 20 – 24
Positive: >= 25

Effective 13Jun85 – 18Sep01: Negative

Performed at American Medical Labs, Chantilly VA
Effective until 12Jun85: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Anti-SSA Antibody
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: RO Autoantibodies, Anti-Ro
Reference Ranges:

Anti-SSA Antibody *EU*
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep01 – present:
Negative: < 20
Borderline Positive: 20 – 24
Positive: >= 25

Effective 13Jun85 – 18Sep01: Negative

Performed at American Medical Labs, Chantilly VA
Effective until 12Jun85: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Anti-SSB Antibody
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: Anti-La
Reference Ranges:

Anti-SSB Antibody ***EU***
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep01 – present:
Negative: < 20
Borderline Positive: 20 – 24
Positive: >= 25

Effective 13Jun85 - 18Sep01: Negative

Performed at American Medical Labs, Chantilly VA
Effective until 12Jun85: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Anti-Striated Muscle Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Anti-Striated Muscle Antibody ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present: Negative at <1:60

Performed at SmithKline Beecham, Van Nuys CA
Effective 02Dec92 - 18Sep94: none detected

Test Name: Anti-Thyroid Panel
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms:
Reference Ranges:

Anti-Thyroid Panel
Anti-Thyroglobulin *IU/mL* (SI: IU/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 03Dec97 – present:
Male: 0 - 59
Female: 0 - 99
Effective 10Oct89 – 02Dec97: < 10 *titer*

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jul85 - 09Sep89: 0 - 9 *titer*
Effective 01Jan79 - 30Jun85: 0 - 100 *titer*

Anti-Thyroperoxidase *IU/mL* (SI: IU/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 03Dec97 – present:
Male: 0 - 59
Female: 0 - 99

Effective 02Oct96 - 02Dec97: *IU/mL* (SI: kU/mL = IU/mL)
Negative: 0 - 20
Borderline: 21 - 64
Positive: >= 65

Performed at Mayo Medical Labs, Rochester MN
Effective 07Dec94 - 01Oct96: 0.0 - 1.9 *U/mL* (SI: kU/mL = U/mL)

Test Name: Anti-Varicella Zoster IgG
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: VZV IgG Ab
Reference Ranges:

Anti-Varicella Zoster IgG ***units***
Performed at National Institutes of Health, Bethesda MD
Effective 11Aug97 – present:
Negative: <= 0.900
Equivocal: 0.901 – 1.099
Positive: >= 1.100

Effective 18Oct95 – 10Aug97:
Negative: <= 0.90
Equivocal: 0.91 – 1.09
Positive: >= 1.10

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HISTORICAL REFERENCE RANGES

Test Name: Anti Xa Low Molecular Weight Heparin
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: LMWH
Reference Ranges:

Anti Xa Low Molecular Weight Heparin ***IU/mL***
Performed at National Institutes of Health, Bethesda MD
Effective 12Jun02 – present: 0.5 - 1.2

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HISTORICAL REFERENCE RANGES

Test Name: Anti Xa Unfractionated Heparin
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: UNFX Hep, UFXH
Reference Ranges:

Anti Xa Unfractionated Heparin *IU/mL*
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: 0.3 - 0.7

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HISTORICAL REFERENCE RANGES

Test Name: Antithrombin III
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: AT III
Reference Ranges:

Antithrombin III

Performed at National Institutes of Health, Bethesda MD
Effective 11Mar98 – present: 75 - 127 %

Test Name: Apolipoprotein Panel
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: APO A-I, APO B, B/A-I
Reference Ranges:

APOLIPOPROTEIN Panel *mg/dL* (SI: g/L = 0.01 x mg/dL)
Effective 11Jun03 – present:
APO A-1
Male: 91 – 160
Female: 105 – 194

APO B
Male: 54 – 129
Female: 56 – 127

APO B/A-1
Male: 0.40 – 1.20 ratio
Female: 0.35 – 1.00 ratio

Effective 06Oct93 - 10Jun03:
APO A-1
Male: 90 – 203
Female: 106 – 244
APO B/A-1
Male: 0.45 – 1.71 ratio
Female: 0.39 – 1.6 ratio

Effective 05Oct94 - 10Jun03:
APO B
Male: 48 – 164
Female: 53 – 173

APO A-1
Effective 05Mar92 - 05Oct93:
Male: 92 – 184
Female: 101 – 216

APO B
Effective 06Oct93 - 04Oct94:
Male: 58 – 200
Female: 65 – 211

Effective 05Mar92 - 05Oct93:
Male: 63 - 165
Female: 61 - 159

APO B/A-1
Effective 05Mar92 - 05Oct93:
Male: 0.42 - 1.52 ratio
Female: 0.41 - 1.21 ratio

Test Name: Arsenic, Fluid
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Arsenic, Fluid
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present

Performed at SmithKline Beecham, Van Nuys CA
Effective 05Jan88 - 18Sep94
Effective 01Jan79 - 04Jan88: µg/100g (SI: nmol/g = 0.133 x µg/g)

HISTORICAL REFERENCE RANGES

Test Name: Arsenic, Hair or Nails
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Arsenic, Hair or Nails ***µg/g*** (SI: nmol/g = 13.3 x µg/g)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
Arsenic, Hair: 0.0 – 0.9
Arsenic, Nails: 0.0 – 0.9

Performed at SmithKline Beecham, Van Nuys CA
Effective 05Jan88 - 18Sep94:
Arsenic, Hair: 0.0 - 4.0
Arsenic, Nails: 0.03 - 0.32

Effective 01Jan79 - 04Jan88: *µg/100g* (SI: nmol/g = 0.133 x µg/g)
Arsenic, Hair: 0 - 64
Arsenic, Nails: 90 - 180

HISTORICAL REFERENCE RANGES

Test Name: Arsenic, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Heavy Metals
Reference Ranges:

Arsenic, Urine ***µg/24hr*** (SI: µmol/d x 0.0133 = µg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
Normal concentration: <120
Toxic concentration: >= 5000
Reference values are for a 24 hr collection. Specimens collected for other than a 24 hr time period are reported in units of µg/L for which
reference values are not established.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 - 18Sep94
0 – 100 *µg/L* (SI: µmol/L x 0.0133 = µg/L)

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HISTORICAL REFERENCE RANGES

Test Name: Arylsulfatase A, Fibroblasts
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Arylsulfatase A, Fibroblasts ***U/g of cellular protein***
Performed at Mayo Medical Labs, Rochester MN
Efffective 09Oct96 - present: 2.28 – 15.74

HISTORICAL REFERENCE RANGES

Test Name: Arylsulfatase A, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Arylsulfatase A, Urine *U/L* (SI: U/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present: >1

Performed at SmithKline Beecham, Van Nuys CA
Effective 07Jul93 - 18Sep94: 3.8 - 22.0 *µg/mL/hr* (SI: mg/L/hr = 1.0 x µg/mL/hr)

Test Name: Ascaris
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Ascaris
Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94

Performed at American Medical Labs, Chantilly VA
Effective 02Mar86 - 31Aug90

Performed at Centers for Disease Control, Atlanta GA
Effective until 01Mar86

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HISTORICAL REFERENCE RANGES

Test Name: Aspartate Amino-Transferase
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: AST, SGOT
Reference Ranges:

Aspartate Amino-Transferase *U/L* (SI: U/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 - present: 9 - 34
Effective 01Jan79 - 30Nov88: 8 - 31

Test Name: Aspergillis Fumigatus IgG Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Aspergillus Fumigatus IgG Antibody ***mg/L*** (SI: mg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 12Jun01 – present: 0.0 – 110.0
Interpretation:
Elevated concentrations of IgG antibodies to Aspergillus fumigatus are consistent with the diagnosis of aspergillosis, either invasive disease or HP (2).

Aspergillus Ab, ID
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 11Jun01: Titered if positive

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: Titered if positive

Performed at American Medical Labs, Chantilly VA
Effective Until 31Aug90: Titered if positive

Test Name: Aspergillus Ab, CSF
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Flavus, Fumigatus, Niger,
Reference Ranges:

Aspergillus Ab, CSF
Aspergillus Flavus, CSF, Agar Gel
Aspergillus Fumigatus, CSF, Agar Gel
Aspergillus Niger, CSF, Agar Gel

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 01Mar98

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18sep94

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: Aspergillus Fumigatus, IgG Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Taken off Web site 6/15/2004 per Microbiology Department (Dr. Witebsky) as obsolete test. No longer sent out as of 7/14/2004.
Aspergillus Fumigatus, IgG Antibody ***mg/L*** (SI: mg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 12Jun01 – 14Jul04: 0.0 – 110.0
Interpretation:
Elevated concentrations of IgG antibodies to Aspergillus fumigatus are consistent with the diagnosis of aspergillosis, either invasive disease or HP (2).

Aspergillus Ab, ID (old method)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 11Jun01: Titered if positive

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: Titered if positive

Performed at American Medical Labs, Chantilly VA
Effective Until 31Aug90: Titered if positive

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HISTORICAL REFERENCE RANGES

Test Name: Atrial Natriuretic Factor
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: ANF, ANP, Peptide
Reference Ranges:

Atrial Natriuretic Factor ***pg/mL*** (SI: ng/L = 1.0 x pg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 20 – 77
Effective 03Nov93 – 18Sep94: 9 – 45

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HISTORICAL REFERENCE RANGES

Test Name: Autopsy Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Autopsy Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No growth

For information on Antibiotic Susceptibility on significant isolates, click here

Test Name: B-K virus Quantitative PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: BKV PCR
Reference Ranges:

B-K virus Quantitative PCR
Performed at National Institutes of Health, Bethesda MD
Effective 10Apr02 – present:
Negative for B-K virus or quantitative calculated copies of B-K virus genome per mililiter of plasma.

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HISTORICAL REFERENCE RANGES

Test Name: B-K Virus Quantitiative PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: BKV PCR
Reference Ranges:

B-K virus Quantitative PCR
Performed at National Institutes of Health, Bethesda MD
Effective 10Apr02 – present:
Negative for B-K virus or quantitative calculated copies of B-K virus genome per mililiter of urine.

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National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Babesia Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Microti
Reference Ranges:

Babesia Antibody ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 08May96 - present: <= 1:64

HISTORICAL REFERENCE RANGES

Test Name: Bartonella Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Henselae, Quintana
Reference Ranges:

Bartonella Antibody ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 06Mar99 - present:
Bartonella Henselae IgG 0 – 127
Bartonella Henselae IgM 0 – 19
Bartonella Quintana IgG 0 – 127
Bartonella Quintana IgM 0 – 19

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National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Bartonella Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Cat-scratch disease
Reference Ranges:

Bartonella Culture
Performed at National Institutes of Health, Bethesda MD
Effective 06Mar94 – present: No Bartonella isolated

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HISTORICAL REFERENCE RANGES

Test Name: Bartonella Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Bartonella Culture
Performed at National Institutes of Health, Bethesda MD
Effective 06Mar94 – present: No Bartonella isolated

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Beta-2-Microglobulin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: B2M
Reference Ranges:

Beta-2-Microglobulin *mg/L* (SI: mg/L)
Performed at the National Institutes of Health, Bethesda MD
Effective 13Oct99 – present: 0.9 - 1.7
Effective 20Jan99 – 12Oct99: 1.0 - 2.6
Effective 01Sep93 – 19Jan99: 0.9 - 1.7
Effective 05Mar92 – 31Aug93: 0.8 - 2.0
Effective 02May91 - 04Mar92: 0.0 - 2.9

Performed at SmithKline Beecham, Van Nuys CA
Effective 25Aug88 - 01May91: 0.0 - 2.9

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Beta-2-Microglobulin, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: B2M
Reference Ranges:

Beta-2-Microglobulin, Urine *mg/L* (SI: mg/L)
Performed at National Institutes of Health, Bethesda MD
Effective 20Jan99 - present: 0.0 - 0.30
Effective 01Sep93 - 19Jan99: 0.0 - 0.16
Effective 02May91 - 31Aug93: 0.0 - 0.29

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Oct88 - 01May91: 0.0 - 0.29

Test Name: Beta-2 Glycoprotein I Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: B2GPI
Reference Ranges:

Beta-2 Glycoprotein I Antibody Panel (includes IgG, IgM, IgA)
Performed at Focus Technologies, Cypress CA
Effective Effective 20Jun03 – present:
B2GPI IgG <20 U/mL
B2GPI IgM <10 U/mL
B2GPI IgA <10 U/mL

INTERPRETIVE CRITERIA:
IgG <20 U/mL Antibody Not Detected
>=20 U/mL Antibody Detected

IgM and IgA <10 U/mL Antibody Not Detected
>=10 U/mL Antibody Detected

Effective Effective 12Feb03 – 19Jun03:
INTERPRETIVE CRITERIA:
<15 U/mL Antibody Not Detected
>= 15 U/mL Antibody Detected

B2GPI, a phospholipid-binding protein involved in regulation of the coagulation system, binds to cardiolipin in vitro to form the antigenic complex used for detecting autoimmune cardiolipin antibodies. Such antibodies are associated with the antiphospholipid syndrome (APS), characterized by thrombosis, thrombocytopenia, and recurrent fetal loss. Recent studies have shown that cardiolipin antibodies associated with APS recognize the B2GPI component of the B2GPI-cardiolipin complex, whereas cardiolipin antibodies associated with infection (particularly syphilis) recognize the cardiolipin component. B2GPI antibodies are strongly associated with APS. Although most APS patients possess antibodies reactive in both B2GPI and cardiolipin assays, occasional APS patients may exhibit antibodies reactive only with B2GPI or only with cardiolipin.

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HISTORICAL REFERENCE RANGES

Test Name: Beta-Galactosidase, Fibroblasts
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Beta-Galactosidase, Fibroblasts ***U/g of cellular protein***
Performed at Mayo Medical Labs, Rochester MN
Effective 09Oct96 - present: 4.7 – 19.1

HISTORICAL REFERENCE RANGES

Test Name: Beta-hCG Tumor Marker
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Chorionic Gonadotropin Subunit
Reference Ranges:

Beta-hCG Tumor Marker *U/L* (SI: U/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Oct99 - present:
Male 0.0 – 0.69
Female 0.0 – 0.79
Postmenopause 0 – 3.29
Effective 19Sep94 - 18Oct99:
Male 0.0 – 2.4
Female 0.0 – 4.9
Postmenopause 0 – 8.9

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jul91 - 18Sep94: *mIU/mL* (SI: U/L = 1.0 x mIU/mL)
Male and nonpregnant Female: <5.0
Effective 31Jan90 - 30Jun91: *U/L*
Male <2.5
Female <5.0
Postmenopause <9.0
Effective 01Jul85 - 30Jan90: 0 - 4 *mIU/mL*
Effective 08Nov79 - 30Jun85: 0 - 3 *mIU/mL*
Effective 01Jan79 - 07Nov79: 0 - 25 *mIU/mL*

HISTORICAL REFERENCE RANGES

Test Name: Beta-Mannosidase, Fibroblasts
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Beta-Mannosidase, Fibroblasts ***nmol/mg protein/hr***
Performed at University of Alabama (Metabolic Disease Center), Birmingham AL
Effective 02Sep01 – present: Normal control reported with each result.

Performed at E. K. Shriver Center (Lysosomal Storage Diseases Lab), Waltham MA
Effective 09Oct96 – 01Sep01: Normal control reported with each result.

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HISTORICAL REFERENCE RANGES

Test Name: Beta-Mannosidase, Plasma
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Beta-Mannosidase, Plasma
Performed at E. K. Shriver Center (operational until Sept. 2001)
Lysosomal Storage Diseases Lab, Waltham MA
Effective 09Oct96 – 25Sep01: Normal control noted on report.

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HISTORICAL REFERENCE RANGES

Test Name: Bicarbonate, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Bicarbonate, Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 - present No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Big Endothelin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Big Endothelin ***pg/mL*** (SI: ng/L = 1.0 x pg/mL)
Performed at Mayo Medical Labs, Cardiorenal Research Lab, Rochester MN
Effective 09Jun99 - present: 20Y-60Y 1.8 – 6.6

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HISTORICAL REFERENCE RANGES

Test Name: Bilirubin, Direct
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Bilirubin, Direct *mg/dL* (SI: µmol/L = 17.1 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 – present: 0.0 - 0.2
Effective 01Jan79 – 30Nov88: 0.0 - 0.3

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HISTORICAL REFERENCE RANGES

Test Name: Bilirubin, Total
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Bilirubin, Total *mg/dL* (SI: µmol/L = 17.1 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 – present: 0.1 - 1.0
Effective 01Jan79 – 30Nov88: 0.2 - 1.2

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HISTORICAL REFERENCE RANGES

Test Name: Biopsy Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Biopsy Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBC's, No organisms seen
Culture: No growth
For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Biotinidase, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Biotinidase, Serum ***U/L*** (SI: U/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 09Oct96 - present: 3.5 – 13.8

Test Name: Bladder Tumor Antigen, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: BTA
Reference Ranges:

Bladder Tumor Antigen, Urine
Performed at Specialty Labs, Santa Monica CA
Effective 10Nov99 - present: Negative

Performed at National Institutes of Health, Bethesda MD
Effective 05Jun96 - 09Nov99: Negative

Test Name: Blastomyces Antibody, Blood or CSF
Department: Laboratory Medicine
Lab Area:
Synonyms: Blasto Yeast CF
Reference Ranges:

Blastomyces Antibody CSF, Blood or CSF
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 12Jun02

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: Blastomyces Yeast Antigen, CSF
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Blastomyces Yeast Antigen, CSF
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 12Jun02

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

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HISTORICAL REFERENCE RANGES

Test Name: Blood Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Blood Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No growth at 7 days

For information on Antibiotic Susceptibility on significant isolates,click here

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HISTORICAL REFERENCE RANGES

Test Name: Blood Filtration for Microfilaria
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Microfilaria
Reference Ranges:

Blood Filtration for Microfilaria
Performed at National Institutes of Health, Bethesda MD
Effective – present: Negative for Microfilaria

Test Name: Blood Gases
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: ABG
Reference Ranges:

Blood Gases, Arterial
Performed at National Institutes of Health, Bethesda MD
Effective 25Jun97 – present:
pH arterial 7.35 – 7.45
PCO_2: 35 – 48 *mmHg* (male) (SI: kPa = 0.133 x mm Hg)
32 – 45 *mmHg* (female) (SI: kPa = 0.133 x mm Hg)
pO_2 arterial 83 – 108 *mmHg* (SI: kPa = 0.133 x mm Hg)
HCO_3 arterial 22 – 26 *mmol/L*
O_2 Saturation 94.0 – 98.0 *percent*

Effective 01Jan79 - 24Jun97:
pH arterial 7.34 - 7.45
pCO_2 arterial
Male 35 - 48 *mmHg* (SI: kPa = 0.133 x mm Hg)
Female 32 - 45 *mmHg* (SI: kPa = 0.133 x mm Hg)
pO_2 arterial 83 - 108 *mmHg* (SI: kPa = 0.133 x mm Hg)

Effective 01Aug90 - 24Jun97:
HCO_3 arterial 23 - 33 *mmol/L*

Effective 01Jan79 - 31Jul90:
HCO_3 arterial 23 - 33 *mEq/L*

Blood Gases, Venous
Effective 23Aug90 - 25Jun97:
pH Venous 7.37 - 7.45

Effective 01Jan79 - 22Aug90:
pH Venous 7.31 - 7.42

Effective 01Jan79 - 25Jun97:
pCO_2 Venous 39 - 55 *mmHg* (SI: kPa = 0.133 x mm Hg)
pO_2 Venous 30 - 50 *mmHg* (SI: kPa = 0.133 x mm Hg)

Effective 01Aug90 - 25Jun97:
HC_3 Venous 23 - 33 *mmol/L*

Effective 01Jan79 - 31Jul90:
HC_3 Venous 23 - 33 *mEq/L*

Test Name: Blood Gases, Venous
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: VBG
Reference Ranges:

Blood Gases, Venous
Performed at National Institutes of Health, Bethesda MD
Effective 25Jun97 – present:
pH arterial 7.32 – 7.45
PCO_2: 38 – 50 *mmHg* (SI: kPa = 0.133 x mm Hg)
pO_2 venous not established *mmHg* (SI: kPa = 0.133 x mm Hg)
HCO_3 venous not established *mmol/L*
O_2 Saturation not established *percent*

Effective 23Aug90 - 25Jun97:
pH Venous 7.37 - 7.45

Effective 01Jan79 - 22Aug90:
pH Venous 7.31 - 7.42

Effective 01Jan79 - 25Jun97:
pCO_2 Venous 39 - 55 *mmHg* (SI: kPa = 0.133 x mm Hg)
pO_2 Venous 30 - 50 *mmHg* (SI: kPa = 0.133 x mm Hg)

Effective 01Aug90 - 25Jun97:
HCO_3 Venous 23 - 33 *mmol/L*

Effective 01Jan79 - 31Jul90:
HCO_3 Venous 23 - 33 *mEq/L*

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HISTORICAL REFERENCE RANGES

Test Name: Bone Marrow
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Bone Marrow
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Call Hematology for interpretation

HISTORICAL REFERENCE RANGES

Test Name: Borrelia Culture CSF
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Borrelia Culture CSF
Performed at Mayo Medical Labs, Rochester MN
Effective 08May96 - 05Nov96

Performed at American Medical Labs, Chantilly VA
Effective until 07May96

HISTORICAL REFERENCE RANGES

Test Name: Borrelia Culture, Blood
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Borrelia Culture CSF
Performed at Mayo Medical Labs, Rochester MN
Effective 08May96 - 05Nov96

Performed at American Medical Labs, Chantilly VA
Effective until 07May96

HISTORICAL REFERENCE RANGES

Test Name: Borrelia PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Lyme
Reference Ranges:

Borrelia PCR
Performed at National Institutes of Health, Bethesda MD
Effective 02Oct99 - present:
Negative for Borrelia by PCR

Performed at Mayo Medical Labs, Rochester MN
Effective 08May96 - 01Oct99:
Negative for Borrelia by PCR

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HISTORICAL REFERENCE RANGES

Test Name: Borrelia PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Lyme
Reference Ranges:

Borrelia PCR
Performed at National Institutes of Health, Bethesda MD
Effective 02Oct99 - present:
Negative for Borrelia by PCR

Performed at Mayo Medical Labs, Rochester MN
Effective 08May96 - 01Oct99:
Negative for Borrelia by PCR

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HISTORICAL REFERENCE RANGES

Test Name: Borrelia PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Synovial fluid, Lyme
Reference Ranges:

Borrelia PCR
Performed at National Institutes of Health, Bethesda MD
Effective 02Oct99 - present:
Negative for Borrelia by PCR

Performed at Mayo Medical Labs, Rochester MN
Effective 08May96 - 01Oct99:
Negative for Borrelia by PCR

Test Name: Brain Natriuretic Peptide
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: BNP
Reference Ranges:

Brain Natriuretic Peptide *pg/mL*
Performed at Mayo Medical Labs, Rochester MN
Effective 10Mar04 – present:
Males:
<= 45 years: <= 35 pg/mL
46 years: <= 36 pg/mL
47 years: <= 37 pg/mL
48 years: <= 38 pg/mL
49 years: <= 39 pg/mL
50 years: <= 40 pg/mL
51 years: <= 41 pg/mL
52 years: <= 42 pg/mL
53 years: <= 43 pg/mL
54 years: <= 45 pg/mL
55 years: <= 46 pg/mL
56 years: <= 47 pg/mL
57 years: <= 48 pg/mL
58 years: <= 49 pg/mL
59 years: <= 51 pg/mL
60 years: <= 52 pg/mL
61 years: <= 53 pg/mL
62 years: <= 55 pg/mL
63 years: <= 56 pg/mL
64 years: <= 57 pg/mL
65 years: <= 59 pg/mL
66 years: <= 60 pg/mL
67 years: <= 62 pg/mL
68 years: <= 64 pg/mL
69 years: <= 65 pg/mL
70 years: <= 67 pg/mL
71 years: <= 69 pg/mL
72 years: <= 70 pg/mL
73 years: <= 72 pg/mL
74 years: <= 74 pg/mL
75 years: <= 76 pg/mL
76 years: <= 78 pg/mL

77 years: <= 80 pg/mL
78 years: <= 82 pg/mL
79 years: <= 84 pg/mL
80 years: <= 86 pg/mL
81 years: <= 88 pg/mL
82 years: <= 91 pg/mL
>= 83 years: <= 93 pg/mL

Females:
<= 45 years: <= 64 pg/mL
46 years: <= 66 pg/mL
47 years: <= 67 pg/mL
48 years: <= 69 pg/mL
49 years: <= 71 pg/mL
50 years: <= 73 pg/mL
51 years: <= 74 pg/mL
52 years: <= 76 pg/mL
53 years: <= 78 pg/mL
54 years: <= 80 pg/mL
55 years: <= 82 pg/mL
56 years: <= 84 pg/mL
57 years: <= 87 pg/mL
58 years: <= 89 pg/mL
59 years: <= 91 pg/mL
60 years: <= 93 pg/mL
61 years: <= 96 pg/mL
62 years: <= 98 pg/mL
63 years: <= 101 pg/mL
64 years: <= 103 pg/mL
65 years: <= 106 pg/mL
66 years: <= 109 pg/mL
67 years: <= 112 pg/mL
68 years: <= 114 pg/mL
69 years: <= 117 pg/mL
70 years: <= 120 pg/mL
71 years: <= 123 pg/mL
72 years: <= 127 pg/mL
73 years: <= 130 pg/mL
74 years: <= 133 pg/mL
75 years: <= 137 pg/mL
76 years: <= 140 pg/mL
77 years: <= 144 pg/mL
78 years: <= 147 pg/mL
79 years: <= 151 pg/mL
80 years: <= 155 pg/mL
81 years: <= 159 pg/mL

82 years: <= 163 pg/mL
>= 83 years: <=167 pg/mL

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HISTORICAL REFERENCE RANGES

Test Name: Bromide, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Bromide, Serum *mmol/L* (SI: mmol/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
Therapeutic: 12.5 – 25.0
Toxic: >= 37.5
(Above ranges are from Tietz, first edition)

Performed at SmithKline Beecham, Van Nuys CA
Effective 07Oct92 - 18Sep94:
Therapeutic: 9.4 - 18.7
Toxic: >15.6

HISTORICAL REFERENCE RANGES

Test Name: Bromsulfophthalein
Department: Laboratory Medicine
Lab Area:
Synonyms: BSP
Reference Ranges:

Bromsulfophthalein
Performed at SmithKline Beecham, Van Nuys CA
Effective until 31Aug90: no ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Bronchial Lavage Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: BAL
Reference Ranges:

Bronchial Lavage Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram stain: No WBCs, No organisms seen
Culture: Oropharyngeal Flora, or No growth, No Legionella isolated
For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Bronchial Wash Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: BAL
Reference Ranges:

Bronchial Wash Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram stain: No WBCs, No organisms seen
Culture: Oropharyngeal Flora, or No growth, No Legionella isolated
For information on Antibiotic Susceptibility on significant isolates, click here

HISTORICAL REFERENCE RANGES

Test Name: Brucella Abortus Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Brucella Abortus Antibody ***titer***
Performed at Focus Technologies, Cypress CA
Effective 01Apr98 - present:
IgG: <1:160
IgM: <1:160

Effective 19Sep94 - 31Mar98: <1:80

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Brucella Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Brucella Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No Brucella isolated.
For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Brugia malayi PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Brugia malayi PCR
Performed at National Institutes of Health, Bethesda MD
Effective 15Sep99 – present:
Negative for Brugia malayi by PCR

Test Name: B. Burdorferi Antibody, CSF
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Lyme Disease
Reference Ranges:

B. Burdorferi Antibody, CSF
Performed at Focus Technologies, Cypress CA
Effective 06May98 – present:
IgG <1:4 titer
IgM <1:1 titer

Effective 08Mar95 – 05May98:
Not detected <15 units
Indeterminate 15 – 20 units
Weakly Positive 21 – 35 units
Positive >35 units

HISTORICAL REFERENCE RANGES

Test Name: B. Burgdorferi Antibody, Serum EIA
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Lyme
Reference Ranges:

B. Burgdorferi Antibody, Serum EIA

Performed at New England Medical Center, Boston MA
Effective 08May96 - present

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HISTORICAL REFERENCE RANGES

Test Name: C-Peptide
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

C-Peptide *ng/mL* (SI: nmol/L = 0.33 x ng/mL)
Performed at the National Institutes of Health, Bethesda MD
Effective 08Mar00 – present: 0.9 – 4

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sept94 - 07Mar00: 170 - 900 *pmol/L* (SI: nmol/L = 0.001 x pmol/L)

Performed at SmithKline Beecham, Van Nuys CA
Effective 20May91 - 18Sept94: 0.8 - 4 *ng/mL*

Performed at SmithKline Beecham, Van Nuys CA
Effective 25Mar88 - 19May91: 0.5 - 3 *ng/mL*

HISTORICAL REFERENCE RANGES

Test Name: C-Peptide, Sensitive
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

C-Peptide, Sensitive *ng/mL* (SI: nmol/L = 0.333 x ng/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 29Oct02 – present: >=16Y 0.9 - 4.3

C-Peptide, Sensitive *pmol/L* (SI: nmol/L = 0.001 x pmol/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: (fasting) 170 – 900

Performed at SmithKline Beecham, Van Nuys CA
Effective 20May91 – 18Sep94: 0.8 – 4.0 *ng/mL* (SI: nmol/L = 0.333 x ng/mL)

Effective 25Mar88 – 19May91: 0.5 – 3.0 *ng/mL* (SI: nmol/L = 0.333 x ng/mL)

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HISTORICAL REFERENCE RANGES

Test Name: C-Reactive Protein
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: CRP
Reference Ranges:

C-Reactive Protein ***mg/dL*** (SI: mg/L = 10 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 10Jan85 - present: 0.0 - 0.8

HISTORICAL REFERENCE RANGES

Test Name: C3/C4
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms:
Reference Ranges:

C3/C4 *mg/dL*
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present:
C3 *mg/dL* (SI: g/L = 0.01 x mg/dL) 69 – 175
C4 *mg/dL* (SI: mg/L = 10 x mg/dL) 13 – 38

C3 *mg/dL* (SI: g/L = 0.01 x mg/dL)
Effective 05Oct94 - present: 57 – 135
Effective 06Jan93 - 04Oct94: 55 – 130
Effective 03May91 - 05Jan93: 43 – 118
Effective 12Mar85 - 02May91: 62 – 173
Effective 10Jan85 - 11Mar85: 70 – 176

C4 *mg/dL* (SI: mg/L = 10 x mg/dL)
Effective 05Oct94 - present: 12 - 34
Effective 06Jan93 - 04Oct94: 9 - 26
Effective 03May91 - 05Jan93: 14 - 49
Effective 12Mar85 - 02May91: 9 - 42
Effective 10Jan85 - 11Mar85: 16 - 40

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HISTORICAL REFERENCE RANGES

Test Name: CA 125
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: OC 125, Cancer Antigen 125
Reference Ranges:

CA 125 ***U/mL*** (SI: kU/L = 1 x U/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 20Jan99 - present: 0 – 34

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 19Jan99: 0 – 34

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Oct88 - 18Sep94: 0 - 35

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HISTORICAL REFERENCE RANGES

Test Name: CA 15-3
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Cancer Antigen, MUC-1, Mucin-Like Carcinoma

Reference Ranges:

CA 15-3 ***U/mL*** (SI: kU/L = 1.0 x U/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 08Mar00 - present: 0 – 29.9

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HISTORICAL REFERENCE RANGES

Test Name: CA 19-9
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Carbohydrate Antigen
Reference Ranges:

CA 19-9 ***U/mL*** (SI: kU/L = 1.0 x U/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present: 0 – 39

Performed at SmithKline Beecham, Van Nuys CA
Effective 16Sep91 - 18Sep94: <33

HISTORICAL REFERENCE RANGES

Test Name: Calcitonin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Calcitonin *pg/mL* (SI: ng/L = 1.0 x pg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Jun02 - present:
Basal:
Male: 0 - 15.9
Female: 0 - 7.9
Peak Calcium Infusion:
Male: 0 - 130
Female: 0 - 90
For <=16 years reference ranges are not established.

Effective 19Sep94 - 18Jun02:
Basal: Maximum reference value has not exceeded:
Male: 0 - 19
Female: 0 - 14
Peak Calcium Infusion: (2.4 mg calcium/kg)
Maximum reference value has not exceeded:
Male: 0 - 19
Female: 0 - 14

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Oct87 - 18Sep94:
Male: 0 - 39
Female: 0 - 19

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HISTORICAL REFERENCE RANGES

Test Name: Calcium, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Calcium, CSF *mmol/L* (SI: mmol/L = mEq/L x 0.5) (mmol/L = mg/dL x 0.25)
Performed at National Institutes of Health, Bethesda MD
Efffective 31Jul90 – present: 1.05 - 1.35
Efffective 01Jan79 - 30Jul90: 2.1 - 2.7 *mEq/L* (SI: mmol/L = mEq/L x 0.5)

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HISTORICAL REFERENCE RANGES

Test Name: Calcium, Ionized, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: iCa
Reference Ranges:

Calcium, Ionized, Serum *mmol/L* (SI: mmol/L = 0.5 x mEq/L; mmol/L = 0.25 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 - present: 1.17 - 1.31

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Oct87 - 31Jul90: 4.6 - 5.3 *mg/dL*

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HISTORICAL REFERENCE RANGES

Test Name: Calcium, Ionized, Whole Blood
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Calcium, Ionized, Whole Blood *mmol/L* (SI: mmol/L = 0.5 x mEq/L; mmol/L = 0.25 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jul01 - present: 1.17 - 1.31

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HISTORICAL REFERENCE RANGES

Test Name: Calcium, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Calcium, Serum *mmol/L* (SI: mmol/L = 0.5 x mEq/L; mmol/L = 0.25 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 04Nov92 - present: 2.05 - 2.5
Effective 01Aug90 - 03Nov92: 2.05 - 2.4
Effective 01Dec88 - 31Jul90: 4.1 - 4.8 *mEq/L*
Effective 01Jan79 - 30Nov88: 4.5 - 5.3 *mEq/L*

Includes supine and upright normal subjects

HISTORICAL REFERENCE RANGES

Test Name: Calcium, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Calcium, Urine *mmol/24h* (SI: mmol/d = 1 x mmol/24h)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 - present:
Male: 1.25 - 7.5
Female: 1.25 - 6.25
Random Urine Calcium: No ranges established *mmol/L*

Effective 02Nov87 - 31Jul90: Female 2.5 - 12.5 *mEq/24hr* (SI: mmol/d = 0.5 x mEq/24hr)

Effective 14Nov85 - 31Jul90: Male 2.5 - 15 *mEq/24hr*

Effective 14Nov85 - 01Nov87: Female 2.5 - 12 *mEq/24hr*

Effective 01Jun82 - 13Nov85: 2.5 - 15.0 *mEq/24hr*

Test Name: Calculi
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Stone analysis
Reference Ranges:

Calculi
Performed at Mayo Medical Labs, Rochester MN
Effective 25Jan95 - present: Contents of stone are listed on report.

Performed at Louis C. Herring and Company, Orlando FL
Effective 01Jan79 - 24Jan95: Contents of stone are listed on report.

Test Name: Candida Albicans, Blood
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

C. Albicans Agar Gel
C. Albicans Antibody
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 17Mar04

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: Candida Albicans, CSF
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

C. Albicans Agar Gel, CSF
C. Albicans Latex, CSF
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 01Sep99

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: Capreomycin
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Capreomycin
Performed at Centers for Disease Control, Atlanta GA
No longer requested as of January 2000.

HISTORICAL REFERENCE RANGES

Test Name: Carbamazepine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Tegretol
Reference Ranges:

Carbamazepine *mg/L* (SI: µmol/L = 4.23 x mg/L) (µg/mL=mg/L)
Performed at National Institutes of Health, Bethesda MD
Effective 02Apr92 - present:
Therapeutic 4 - 12
Toxic >15

Performed at MetPath Labs, Rockville MD
Effective until 01Apr92:
Therapeutic 8 - 12
Toxic >15

Test Name: Carbamazepine, Free
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: 10,11-Epoxide
Reference Ranges:

Carbamazepine, Free ***mg/L*** (SI: µmol/L = 4.23 x mg/L)
Performed at Mayo Medical Labs, Rochester MN.
Effective 21Jul98 - present:
Carbamazepine, Free
Therapeutic 0.5 – 4.0
Toxic >4.0

Effective 19Sep94 - present:
Carbamazepine, Total (done as part of Free Carbamazepine Panel)
Therapeutic 2.0 – 10.0
Toxic >=12.0
Carbamazepine 10, 11-Epoxide
Therapeutic 0.4 – 4.0
Toxic >=8.0

Effective 19Sep94 - 20Jul98:
Carbamazepine, Free
Therapeutic 0.4 – 3.6
Toxic >= 5.0

Performed at SmithKline Beecham Laboratories, Van Nuys CA.
Effective 28Aug92 - 18Sep94:
Carbamazepine, Free
Therapeutic 1.0 - 3.0
Toxic >3.0
Effective 02Apr92 - 27Aug92: Optimum 1.6 - 2.4
Effective until 01Apr92: 1.6 - 2.4

Effective 02Dec92 - 18Sep94:
Carbamazepine 10, 11-Epoxide:
Usual Antiepileptic range 0.1 - 1.0

Performed at MetPath Laboratories, Rockville MD.
Effective until 17Mar88: No ranges available

Free Carbamazepine is sent out to a Referral Lab which includes the Total Carbamazepine. The

Referral Lab's therapeutic and toxic ranges for Total Carbamazepine may not the be identical to the ranges for Total Carbamazepine performed in-house at NIH.

Test Name: Carbohydrate Deficient Transferrin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: CDT
Reference Ranges:

Carbohydrate Deficient Transferrin
Performed at Mayo Medical Labs, Rochester MN
Effective 12Oct00 - present:
Mono-oligo/Di-oligo Ratio 0.000 - 0.074
A-oligo/Di-oligo Ratio 0.000 - 0.022

Effective 09Oct96 - 11Oct00:
CDT Pentasialo 13 – 23 percent
CDT Tetrasialo 38 – 49 percent
CDT Trisialo 17 – 31 percent
CDT Disialo 2 – 15 percent
CDT Monosialo 0 – 6 percent
CDT Asialo 0 – 5 percent

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HISTORICAL REFERENCE RANGES

Test Name: Carbon Dioxide, Total
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: CO2, Bicarbonate
Reference Ranges:

Carbon Dioxide, Total *mmol/L* (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 – present: 21 – 31
Effective 01Dec88 – 31Jul90: 21 - 31 *mEq/L* (SI: mmol/L = 1 x mEq/L)
Effective 01Jan79 – 30Nov88: 23 - 33 *mEq/L*

HISTORICAL REFERENCE RANGES

Test Name: Carboxyhemoglobin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Carbon Monoxide
Reference Ranges:

Carboxyhemoglobin ***percent*** (SI: fraction = 0.01 x percent)
Performed at National Institutes of Health, Bethesda MD
Effective 04Nov92 - present:

Non-smokers	0.5 - 1.5
1-2 packs/d	4 - 5
>2 packs/d	8 - 9
Toxic	>20

Test Name: Carnitine, Free, Total, and Acylcarnitine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Carnitine, Free, Total, and Acylcarnitine ***µmol/L*** (SI: µmol/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 09Dec99 – present:

Total Carnitine

1D	23 - 68
2D-7D	17 - 41
8D-31D	19 - 59
32D-12M	38 - 68
13M-6Y	35 - 84
7Y-10Y	28 - 83
11Y-17Y	34 - 77
18Y-150Y	34 - 74

Free Carnitine

1D	12 - 36
2D-7D	10 - 21
8D-31D	12 - 46
32D-12M	27 - 49
13M-6Y	24 - 63
7Y-10Y	22 - 66
11Y-17Y	22 - 65
18Y-150Y	25 - 54

Acylcarnitine

1D	7 - 37
2D-7D	3 - 24
8D-31D	4 - 15
32D-12M	7 - 19
13M-6Y	4 - 28
7Y-10Y	3 - 32
11Y-17Y	4 - 29
18Y-150Y	5 - 30

AC/FC RATIO

1D	0.4 - 1.7
2D-7D	0.2 - 1.4
8D-31D	0.1 - 0.7
32D-12M	0.2 - 0.5
13M-6Y	0.1 - 0.8

7Y-10Y	0.1 - 0.9
11Y-17Y	0.1 - 0.9
18Y-150Y	0.1 - 0.8

Effective 04Oct95 - 08Dec99: *nmol/mL* (SI: µmol/L = 1.0 x nmol/mL)

Free Carnitine

M & F, 1D-7D	10.0 – 29.0
M & F, 8D-2Y	19.0 – 50.0
Male	28.0 – 69.0
Female	19.0 – 60.0

Total Carnitine

M & F, 1D-7D	17.0 – 46.0
M & F, 8D-2Y	24.0 – 66.0
Female	30.0 – 73.0
Male	37.0 – 89.0

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HISTORICAL REFERENCE RANGES

Test Name: Carotene
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Carotene *µg/dL* (SI: µmol/L = 0.0186 x µg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 15Sep99 – present: 48 – 200*

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 14Sep99: 48 – 200*

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 18Sep94: 50 – 300*

*varies with diet

Test Name: Catecholamines, Fractionated, 12 hr Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Catecholamines, Fractionated, 12 hr Urine ***µg/specimen***
Performed at Mayo Medical Labs, Rochester MN
Effective 18Dec02 – present:
Epinephrine, Urine: No ranges available
Norepinephrine, Urine: No ranges available
Dopamine, Urine: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Catecholamines, Fractionated, CSF
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Test no longer performed
Catecholamines, Fractionated, CSF
Performed at Covance Laboratories, Madison WS
Effective 09Oct96 - 27Sept02: Reference ranges are noted on the report.

Test Name: Catecholamines, Fractionated, Plasma
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Catecholamines, Fractionated, Plasma *pg/mL*
Performed at National Institutes of Health, Bethesda MD
Effective 13Jun01 – present:
Supine 15 min

Norepinephrine	80 – 498	(SI: nmol/L = 0.006 x pg/mL)
Epinephrine	4 – 83	(SI: pmol/L = 5.46 x pg/mL)
Dopamine	3 – 46	(SI: pmol/L = 6.53 x pg/mL)
DHPG	518 – 1408	
DOPA	922 – 248	
DOPAC	675 – 2636	

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 12Jun01:
Supine

Norepinephrine	70 – 750
Epinephrine	0 – 110
Dopamine	0 – 29

Standing

Norepinephrine	200 – 1700
Epinephrine	0 – 140
Dopamine	0 – 29

Performed at SmithKline Beecham, Van Nuys CA
Effective 25Jan90 - 18Sep94:
Supine 30 min.

Norepinephrine	110 – 410
Epinephrine	<50
Dopamine	<85
Total	120 – 450

Sitting

Norepinephrine	120 – 680
Epinephrine	<60
Dopamine	not established
Total	140 – 730

Standing 30 min.

Norepinephrine	125 – 700

Epinephrine	<90
Dopamine	not established
Total	150 – 750

Effective 24Feb89 - 24Jan90:

Supine 30 min.

Norepinephrine	110 – 410
Epinephrine	<50
Dopamine	<30
Total	120 – 450

Sitting

Norepinephrine	120 – 680
Epinephrine	<60
Dopamine	<30
Total	140 – 730

Standing 30 min.

Norepinephrine	125 – 700
Epinephrine	<90
Dopamine	<30
Total	150 – 750

Effective 25Mar88 – 23Jan89:

Supine 30 min.

Norepinephrine	110 – 410
Epinephrine	<50
Dopamine	<30
Total	140 – 450

Sitting

Norepinephrine	120 – 680
Epinephrine	<60
Dopamine	<30
Total	140 – 730

Standing 30 min.

Norepinephrine	125 – 700
Epinephrine	<90
Dopamine	<30
Total	150 – 750

HISTORICAL REFERENCE RANGES

Test Name: Catecholamines, Fractionated, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Epinephrine, Norepinephrine, Dopamine
Reference Ranges:

Catecholamines, Urine, Fractionated *µg/24hr* (SI: nmol/d)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
Epinephrine *µg/24hr* (SI: nmol/d = 5.46 x µg/24hr)
1M-11M 0 – 2.5
12M-23M 0 – 3.5
2Y-3Y 0 – 6
4Y-9Y 0.2 – 10
10Y-15Y 0.5 – 20
16Y-150Y 0 – 20
Norepinephrine *µg/24hr* (SI: nmol/d = 5.91 x µg/24hr)
1M-11M 0 – 10
12M-23M 1 – 17
2Y-3Y 4 – 29
4Y-9Y 8 – 45
10Y-15Y 13 – 65
16Y-150Y 15 – 80
Dopamine *µg/24hr* (SI: nmol/d = 6.53 x µg/24hr)
1M-11M 0 – 85
12M-23M 10 – 140
2Y-3Y 40 – 260
4Y-150Y 65 – 400

Performed at SmithKline Beecham, Van Nuys CA
Effective 04Jan89 - 18Sep94:
Norepinephrine 11 – 86 *µg/24h*r (SI: nmol/d = 5.91 x µg/24hr)
Epinephrine 0 – 15 *µg/24h*r (SI: nmol/d = 5.46 x µg/24hr)
Dopamine 100 – 440 *µg/24h*r (SI: nmol/d = 6.53 x µg/24hr)

Effective 01Jul85 - 03Jan89: Total 0 - 115
Effective 01Jan79 - 30Jul85: Total 0 - 135

HISTORICAL REFERENCE RANGES

Test Name: Catheter IV Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Cath tip
Reference Ranges:

Catheter IV Culture

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
No growth or < 15 colonies of organisms considered to be insignificant.
For information on Antibiotic Susceptibility on significant isolates,
click here

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HISTORICAL REFERENCE RANGES

Test Name: Catheter Non-IV Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: CTHNIV
Reference Ranges:

Catheter Non-IV Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No growth
For information on Antibiotic Susceptibility on significant isolates, click here

Test Name: CBC and Fingerstick CBC
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Complete Blood Count
Reference Ranges:

CBC and Fingerstick CBC
Performed at National Institutes of Health, Bethesda MD
WBC Count *x 10^3/µL* (SI: 10^9/L = 1.0 x 10^3/µL)
Effective 18Sep86 – present:
Male 3.3 - 9.6
Female 3.4 - 9.6
Effective 01Jan79 – 17Sep86: M/F 5 - 10

RBC Count *x 10^6/µL* (SI: 10^{12}/L = 1.0 x 10^6/µL)
Effective 18Sep86 – present:
Male 4.14 - 5.59
Female 3.58 - 4.99
Effective 01Jan79 – 17Sep86:
Male 4.2 - 6.2
Female 4.2 - 5.2

Hemoglobin *g/dL*
Effective 01Jan79 – present:
0-6Y 11.0-15.0
7-14Y 11.5-15.5
Effective 28Aug96 – present:
Male >=15Y 12.7 - 16.7
Female >=15Y 11.1 - 15.0
Effective 01Jan79 – 17Sep86:
Male >=15Y 14.0 - 16.5
Female >=15Y 12.0 - 16.0
Fingerstick Hemoglobin
Effective 01Jan79 - 31Jan96:
0Y-6Y 10.3 - 14.9
7Y-14Y 10.6 - 15.2

Hematocrit *%*
Effective 01Jan79 – present:
0-6Y 33-42
7-14Y 35-44

Effective 28Aug96 – present:
Male >=15Y 36.7 - 48.3
Female >=15Y 31.8 - 43.2
Effective 01Jan79 – 17Sep86:
Male >=15Y 42 - 51
Female >=15Y 37 - 47

RBC Indices
MCV *fL*
Effective 28Aug96 – present:
Male 79-98
Female 77-99
Effective 01Jan79 – 17Sep86: M/F 80 - 99

RDW *%*
Effective 28Aug96 – present: 11.6-14.8

MCH *pg* (no longer performed)
Effective 18Sep86 – 27Aug96:
Male 27 - 34
Female 26 - 35
Effective 01Jan79 – 17Sep86: M/F 27 - 31

MCHC *g/dL* (no longer performed)
Effective 18Sep86 – 27Aug96: 34 - 36
Effective 01Jan79 – 17Sep86: 32 - 36

Platelet Count *x 10^3/µL* (SI: 10^9/L = 1.0 x 10^3/µL)
Effective 28Aug96 – present:
Male 154 - 345
Female 162 - 380
Effective 01Jan79 – 17Sep86: M/F 145 - 364

Fingerstick Platelet
Effective 01Jan79 – present: 150 - 450

Test Name: CBC/Diff
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: WBC Diff Count
Reference Ranges:

Complete Blood Count Reference Ranges:
Performed at National Institutes of Health, Bethesda MD
WBC Count *x 10^3/µL* (SI: 10^9/L = 1.0 x 10^3/µL)
Effective 18Sep86 – present:
Male 3.3 - 9.6
Female 3.4 - 9.6
Effective 01Jan79 – 17Sep86: M/F 5 - 10

RBC Count *x 10^6/µL* (SI: 10^{12}/L = 1.0 x 10^6/µL)
Effective 18Sep86 – present:
Male 4.14 - 5.59
Female 3.58 - 4.99
Effective 01Jan79 – 17Sep86:
Male 4.2 - 6.2
Female 4.2 - 5.2

Hemoglobin *g/dL*
Effective 01Jan79 – present:
0-6Y 11.0-15.0
7-14Y 11.5-15.5
Effective 28Aug96 – present:
Male >=15Y 12.7 - 16.7
Female >=15Y 11.1 - 15.0
Effective 01Jan79 – 17Sep86:
Male >=15Y 14.0 - 16.5
Female >=15Y 12.0 - 16.0

Hematocrit %
Effective 01Jan79 – present:
0-6Y 33-42
7-14Y 35-44
Effective 28Aug96 – present:
Male >=15Y 36.7 - 48.3
Female >=15Y 31.8 - 43.2
Effective 01Jan79 – 17Sep86:

Male >=15Y 42 - 51
Female >=15Y 37 - 47

RBC Indices
MCV *fL*
Effective 28Aug96 – present:
Male 79-98
Female 77-99
Effective 01Jan79 – 17Sep86: M/F 80 - 99

RDW *%*
Effective 28Aug96 – present: 11.6-14.8

MCH *pg* (no longer performed)
Effective 18Sep86 – 27Aug96:
Male 27 - 34
Female 26 - 35
Effective 01Jan79 – 17Sep86: M/F 27 - 31

MCHC *g/dL* (no longer performed)
Effective 18Sep86 – 27Aug96: 34 - 36
Effective 01Jan79 – 17Sep86: 32 - 36

Platelet Count *x 10^3/µL* (SI: 10^9/L = 1.0 x 10^3/µL)
Effective 28Aug96 – present:
Male 154 - 345
Female 162 - 380
Effective 01Jan79 – 17Sep86: M/F 145 - 364

Differential Reference Ranges:
Performed at National Institutes of Health, Bethesda MD
Polys *%*
Effective 18Sep86 – present:
Male 40.0 - 78.0
Female 38.0 - 78.0

Polys Abs. *K/µL*
Effective 28Aug96 – present:
Male 1.32 - 7.50
Female 1.29 - 7.50

Lymph *%*
Effective 18Sep86 – present:
Male 14.0 - 49.0
Female 14.0 - 51.0

Lymph Abs. ***K/µL***
Effective 28Aug96 – present:
Male 0.46 - 4.7
Female 0.48 - 4.9

Mono ***%***
Effective 18Sep86 – present:
Male 1.0 -13.0
Female 1.0 - 12.0

Mono Abs. ***K/µL***
Effective 28Aug96 – present:
Male 0.03 - 1.25
Female 0.03 - 1.15

Eos ***%***
Effective 18Sep86 – present:
Male 0 - 9.0
Female 0 - 8.0

Eos Abs. ***K/µL***
Effective 28Aug96 – present:
Male 0 - 0.86
Female 0 - 0.77

Baso ***%***
Effective 18Sep86 – present:
Male 0 - 3
Female 0 - 3

Baso Abs. ***K/µL***
Effective 28Aug96 – present:
Male 0 - 0.29
Female 0 - 0.29

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HISTORICAL REFERENCE RANGES

Test Name: CEA
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Carcino-Embryonic Antigen
Reference Ranges:

CEA ***µg/L*** (SI: µg/L = ng/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 07Oct92 - present: 0 – 2.5 (non-smoking adults)

Performed at SmithKline Beecham, Van Nuys CA
Effective 04Jan89 - 06Oct92: <2.5 *ng/mL*
Effective 07Sep85 - 03Jan89: <3 *ng/mL*
Effective 01Jan79 - 06Sep85: <2.5 *ng/mL*

Test Name: Celiac Disease Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Endomysial, Reticulin, Gliadin
Reference Ranges:

Celiac Disease Antibody
Performed at Mayo Medical Labs, Rochester MN
Endomysial IgA Antibody
Effective 05Feb97 – present:
Negative in normal individuals; also negative in patients w/dermatitits herpetiformis or coeliac disease who adhere to gluten-free diet.

Reticulin Antibody
Effective 17Apr00 - present: Negative

Gliadin Antibody IgG and IgA *EU* (SI: KIU/L = EU x 1.0)
Effective 20Aug01 – present:
Negative
1D-23M 0 – 49.9
23M-150Y 0 – 24.9

Weakly Positive
1D-23M 50 – 100
23M-150Y 25 – 50

Positive
1D-23M >100
23M-150Y >50

Effective 10May00 – 19Aug01: *U/mL* (SI: kIU/L = U/mL x 1.0)
Negative
1D-23M 0 – 49.9
23M-150Y 0 – 24.9
Weakly Positive
1D-23M 50 – 100
23M-150Y 25 – 50
Positive
1D-23M >100
23M-150Y >50
Interpretation for Gliadin Antibodies
Positive results are consistent with celiac disease or dermatitis herpetiformis.

Test Name: Cell Count and Differential
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Body Fluid
Reference Ranges:

Cell Count and Differential
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Cell Count:
Pericardial, Peritoneal, Pleural Fluid
WBC: <500/mm^3
RBC: <100/mm^3
Differential:
<25% neutrophils
Lymphocytes, macrophages and mesothelial cells predominate

Joint (Synovial) Fluid:
WBC: <180/mm^3
RBC: 0-1/mm^3
Differential: <25% neutrophils
Lymphocytes and monocytes/histiocytes predominate.

All cells other than neutrophils and lymphocytes are categorized under "others"

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HISTORICAL REFERENCE RANGES

Test Name: Ceruloplasmin
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms:
Reference Ranges:

Ceruloplasmin *mg/dL* (SI: mg/L = 10 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present: 22 – 66

Ceruloplasmin *mg/L* (SI: mg/L)
Effective 05Oct94 – present: 201 – 575
Effective 06Jan93 - 04Oct94: 170 – 487
Effective 03May91 - 05Jan93: 137 – 375
Effective 11Feb82 - 02May91:
Male: 150 – 320
Female: 180 – 370
Effective 01Jan79 - 10Feb82:
Male: 120 – 270
Female: 150 – 280

Test Name: Chagas Disease Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Trypanosoma Cruzi
Reference Ranges:

Chagas Disease, IgG & IgM ***titer***
Performed at Focus Technologies, Cypress CA
Effective 06Mar99 - present:
IgG <1:16
IgM <1:20

The serodiagnosis of Chagas' disease of American trypanosomiasis by IFA is highly sensitive and specific, although crossreactions may occur with leishmaniasis. A.T. cruzi IgM (> or = 1:20) response is observed in acute disease prior to IgG seroconversion. In chronic Chagas' disease, IgG is usually detected a levels greater than or equal to 1:64.

Effective 19Sep94 - 05Mar99: No ranges available

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Chem 1, Whole Blood, Venous
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Chem 1, Whole Blood, Venous

Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 - present:

Sodium:	135 - 144 *mmol/L*
Potassium:	3.3 - 5.1 *mmol/L*
Chloride:	99 - 107 *mmol/L*
Bicarbonate:	not established *mmol/L*
Glucose:	70 - 115 *mg/dL*
Ionized Calcium:	1.17 - 1.31 *mmol/L*

Test Name: Chem 20 Panel
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Chem 20 Panel
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 - present:

Sodium		135-144 *mmol/L*
Potassium		3.3-5.1 *mmol/L*
Chloride		99-107 *mmol/L*
Total CO_2 (Bicarbonate)		21-31 *mmol/L*
Creatinine	Male:	0.9-1.4 *mg/dL*
	Female:	0.7-1.3 *mg/dL*
Glucose		70-115 *mg/dL*
Urea Nitrogen		8-22 *mg/dL*
Albumin		3.7-4.7 *g/dL*
Calcium, Total		2.05-2.5 *mmol/L* (Includes supine and upright normal subjects)
Magnesium, Total		0.75-1.00 *mmol/L*
Inorganic Phosphorus >=18Y		2.5-4.8 *mg/dL*
Alkaline Phosphatase >18Y		37-116 *U/L*
ALT/GPT		6-41 *U/L*
AST/GOT		9-34 *U/L*
Total Bilirubin		0.1-1.0 *mg/dL*
Direct Bilirubin		< 0.2 *mg/dL*
LD		113-226 *U/L*
Total Protein		6.0-7.6 *g/dL*
Total CK	Male:	52-386 *U/L*
	Female:	38-252 *U/L*
Uric Acid	Male:	3.7-8.6 *mg/dL*
	Female:	2.4-5.8 *mg/dL*

Effective 01Aug90 - 10Jun03:

Sodium		135-144 *mmol/L*
Potassium		3.3-5.1 *mmol/L*
Chloride		99-107 *mmol/L*
Total CO_2 (Bicarbonate)		21-31 *mmol/L*
Creatinine	Male:	0.9-1.4 *mg/dL*
	Female:	0.7-1.3 *mg/dL*
Glucose		70-115 *mg/dL*

Urea Nitrogen		8-22 *mg/dL*
Albumin		3.7-4.7 *g/dL*
Calcium, Total		2.05-2.5 *mmol/L* (Includes supine and upright normal subjects)
Magnesium, Total		0.75-1.00 *mmol/L*
Inorganic Phosphorus >=18Y		2.3-4.3 *mg/dL*
Alkaline Phosphatase >18Y		37-116 *U/L*
ALT/GPT		6-41 *U/L*
AST/GOT		9-34 *U/L*
Total Bilirubin		0.1-1.0 *mg/dL*
Direct Bilirubin		< 0.2 *mg/dL*
LD		113-226 *U/L*
Total Protein		6.0-7.6 *g/dL*
Total CK	Male:	52-386 *U/L*
	Female:	38-252 *U/L*
Uric Acid	Male:	3.7-8.6 *mg/dL*
	Female:	2.4-5.8 *mg/dL*

Test Name: Chem 2, Whole Blood Arterial
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Blood Gases, Arterial
Performed at National Institutes of Health, Bethesda MD
pH
Effective 25Jun97 – present: 7.35 - 7.45
Effective 01Jan79 – 24Jun97: 7.34 - 7.45

PCO_2 ***mmHg*** (SI: kPa = 0.133 x mmHg)
Effective 25Jun97 – present: 32 - 48
Effective 01Jan79 – 24Jun97:
Male 35-48
Female 32-45 mmHg

PO_2 ***mmHg*** (SI: kPa = 0.133 x mmHg)
Effective 01Jan79 – present: 83-108

O_2 ***%***
Effective 01Jan79 – present: 94.0-98.0%

HCO_3 ***mmol/L***
Effective 25Jun97 – present: 22 - 26
Effective 01Jan79 – 24Jun97: 23 - 33

Electrolytes:
Effective 01Aug90 – present:
Sodium 135-144 mmol/L
Potassium 3.3-5.1 mmol/L
Chloride 99-107 mmol/L
Bicarbonate 22-26 mmol/L
Glucose 70-115 mg/dL
L-lactate 0.5-2.2 mmol/L
Ionized Calcium 1.17-1.31 mmol/L

Test Name: Chem 2, Whole Blood Arterial, Surgery
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: OR Panel
Reference Ranges:

Chem 2, Whole Blood, Arterial , Surgery
Performed at National Institutes of Health, Bethesda MD
Effective 25Jun97 – present:
pH Arterial 7.35 – 7.45
PCO_2: 35 – 48 *mmHg* (male); (SI: kPa = 0.133 x mm Hg)
32 – 45 *mmHg* (female)(SI: kPa = 0.133 x mm Hg)
pO_2 arterial 83 – 108 *mmHg* (SI: kPa = 0.133 x mm Hg)
HCO_3 Arterial 22 – 26 *mmol/L*
O_2 Saturation 94.0 – 98.0 *percent*
Hematocrit:
<6Y 33.0-42.0%
6-14Y 35.0-44.0%
Male >14Y 36.7-48.3%
Female >14Y 31.8-43.2%

Effective 01Aug90 – present:
Sodium 135-144 *mmol/L*
Potassium 3.3-5.1 *mmol/L*
Chloride 99-107 *mmol/L*
Bicarbonate 22-26 *mmol/L*
Glucose 70-115 *mg/dL*
Ionized Calcium 1.17-1.31 *mmol/L*
Ionized Magnesium 0.44-0.60 *mmol/L*

Test Name: Chem 2, Whole Blood, Venous
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Chem 2, Whole Blood, Venous
Performed at National Institutes of Health, Bethesda MD
Effective 25Jun97 – present:

Sodium	135-144 *mmol/L*
Potassium	3.3-5.1 *mmol/L*
Chloride	99-107 *mmol/L*
Bicarbonate	not established *mmol/L*
Glucose	70-115 *mg/dL*
L-lactate	0.5-2.2 *mmol/L*
Ionized Calcium	1.17-1.31 *mmol/L*

Test Name: Chem 2, Whole Blood, Venous, Surgery
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: OR Panel
Reference Ranges:

Chem 2, Whole Blood, Venous, Surgery
Performed at National Institutes of Health, Bethesda MD
Effective 25Jun97 – present:
Hematocrit:

<6Y	33.0-42.0%
6-14Y	35.0-44.0%
Male >14Y	36.7-48.3%
Female >14Y	31.8-43.2%

pH	7.32-7.45
pCO_2:	38-50 *mmHg*
Sodium	135-144 *mmol/L*
Potassium	3.3-5.1 *mmol/L*
Chloride	99-107 *mmol/L*
Bicarbonate	not established *mmol/L*
Glucose	70-115 *mg/dL*
Ionized Calcium	1.17-1.31 *mmol/L*
Ionized Magnesiumn	0.44-0.60 *mmol/L*

Test Name: Chlamydia Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Lymphogran Venereum
Reference Ranges:

Chlamydia Antibody *titer*
Performed at Mayo Medical Labs, Rochester MN
Effective 15Dec95 - present:
C. pneumoniae IgG:
>= 1:512 Presumptive evidence of current infection.
< 1:512 and >= 1:64 Evidence of infection at an undetermined time.
<1:64 Suggests patient does not have current infection.

C. psittaci IgG, C. trachomatis IgG:
>=1:64 Presumptive evidence of current infection.
<1:64 Suggests patient does not have current infection.

C. pneumoniae IgM, C. psittaci IgM, C. trachomatis IgM:
>= 1:10 Presumptive evidence of infection.
< 1:10 Suggests patient does not have current infection.

Effective 19Sep94 - 14Dec95: <1:10

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective 02Mar86 – 31Aug90: No ranges available

Performed at Center for Disease Control, Atlanta GA
Effective until 01Mar86: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Chlamydia by EIA
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Chlamydia Trachomatis Ag
Reference Ranges:

Chlamydia EIA
Performed at Mayo Medical Labs, Rochester MN
Effective 08Mar00 - present: Reported as negative or positive for Chlamydia trachomatis antigen

Test Name: Chlamydia pneumoniae PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Chlamydia pneumoniae PCR
Performed at National Institutes of Health, Bethesda MD
Effective 14Feb01 – present:
Reported as negative or positive for Chlamydia pneumoniae by PCR

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Chlamydia pneumoniae PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Chlamydia pneumoniae PCR
Performed at National Institutes of Health, Bethesda MD
Effective 14Feb01 – present:
Reported as negative or positive for Chlamydia pneumoniae by PCR

Test Name: Chlamydia trachomatis and Neisseria gonorrhoeae LCR
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

***C. trachomatis* / *N. gonorrhoeae* LCR**
Performed at Mayo Medical Labs, Rochester MN
Effective 10Nov99 - 26Aug02:
Reported as Negative or Positive for *Chlamydia trachomatis* and *Neiseria gonorrhoeae*.

HISTORICAL REFERENCE RANGES

Test Name: Chlamydia trachomatis/ Neisseria gonorrhoeae Amplified DNA
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: C.trach/N.gono DNA
Reference Ranges:

***Chlamydia trachomatis* and *Neisseria gonorrhoeae* by Nucleic Acid Amplification**
Performed at Mayo Medical Labs, Rochester MN
Effective 27Aug02 - present:
Reported as positive or negative for *Chlamydia trachomatis* DNA and *Neisseria gonorrhoeae* DNA.

Test Name: Chlamydia trachomatis/Neisseria gonorrhoeae amplfied DNA
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: C.trach/N.gono DNA
Reference Ranges:

Chlamydia trachomatis and Neisseria gonorrhoeae by Nucleic Acid Amplification
Performed at Mayo Medical Labs, Rochester MN
Effective 27Aug02 - present:
Reported as positive or negative for *Chlamydia trachomatis* DNA and *Neisseria gonorrhoeae* DNA.

HISTORICAL REFERENCE RANGES

Test Name: Chlamydia trachomatis/Neisseria gonorrhoeae amplified DNA
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: C.trach/N.gono. DNA
Reference Ranges:

Chlamydia trachomatis and Neisseria gonorrhoeae by Nucleic Acid Amplification
Performed at Mayo Medical Labs, Rochester MN
Effective 27Aug02 - present:
Reported as negative or positive for *Chlamydia trachomatis* DNA and/or *Neisseria gonorrhoeae* DNA.

Test Name: Chlamydia trachomatis/Neisseria gonorrhoeae DNA
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Chlamydia trachomatis and Neisseria gonorrhoeae by Nucleic Acid Amplification
Performed at Mayo Medical Labs, Rochester MN
Effective 27Aug02 - present:
Reported as positive or negative for Chlamydia trachomatis DNA and / or Neisseria gonorrhoeae DNA.

Test Name: Chlamydia/gonorrhoeae Amplified DNA
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Trachomatis, Neisseria
Reference Ranges:

***Chlamydiea trachomatis* and *Neisseria gonorrhoeae* by Nucleic Acid Amplification**
Performed at Mayo Medical Labs, Rochester MN
Effective 27Aug02 - present:
Chlamydia trachomatis DNA not detected
Neisseria gonorrhoeae DNA not detected

HISTORICAL REFERENCE RANGES

Test Name: Chloride, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Cl
Reference Ranges:

Chloride, CSF *mmol/L* (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 – present: 118-132
Effective 12Apr89 - 31Jul90: 118 - 132 mEq/L (SI: mmol/L = 1 x mEq/L)
Effective 12Dec85 - 11Apr89: 118 - 130 mEq/L
Effective 01Jan79 - 11Dec85: 118 - 132 mEq/L

Test Name: Chloride, Feces
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Fecal, Stool
Reference Ranges:

Chloride, Feces
Performed at Mayo Medical Labs, Rochester MN
Effective 25Nov96 - present:
24hr Collection 0.0 – 29.9 *mEq/24hrs* (SI: mmol/d = 1.0 x mEq/24hrs)
Random 0.0 – 39.9 *mEq/kg* (SI: mmol/kg = 1.0 x mEq/kg)

Effective 06Nov96 - 24Nov96:
24hr Collection 0.0 – 2.0 mEq/24hrs
Random Collection 0.0 – 10.0 mEq/kg

Effective 15Mar95 - 05Nov96:
24hr Collection no established ranges
Random Collection no established ranges

Performed at American Medical Labs, Chantilly VA
Effective 02Jan85 – 14Mar95: Ranges not available

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 01Jan85: Ranges not available

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HISTORICAL REFERENCE RANGES

Test Name: Chloride, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Potassium, Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan80 – present: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Chloride, Serum or Plasma
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Cl
Reference Ranges:

Chloride *mmol/L* (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 - present: 99 – 107
Effective 01Dec88 - 31Jul90: 99 – 107 *mEq/L* (SI: mmol/L = 1 x mEq/L)
Effective 01Jan79 - 30Nov88: 100 – 110 *mEq/L*

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HISTORICAL REFERENCE RANGES

Test Name: Chloride, Sweat
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Chloride, Sweat *mEq/L* (SI:mmol/L = 1 x mEq/L)
Performed at Children's National Medical Center, Washington D.C.
Effective 10Oct90 - present: No ranges established

Effective 01Jan79 - 31Dec84:
0Y-20Y 5 - 50
>=21Y 5 - 60

HISTORICAL REFERENCE RANGES

Test Name: Chloride, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Cl
Reference Ranges:

Chloride, Urine *mmol/24hr* (SI: mmol/d = 1 x mmol/24hr) also (mmol/24h = mEq/24h)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 - present:
Chloride Excretion 110 - 250
Random Urine No ranges established

Effective 01Jun82 - 31Jul90:
Chloride Excretion 110 - 250 *mEq/24hr*

HISTORICAL REFERENCE RANGES

Test Name: Cholestanol
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Cholestanol *µg/mL* (SI: mg/L = 1.0 x µg/mL)
Performed at Kennedy Krieger Institute, Clinical Mass Spectrometry Laboratory, Baltimore MD
Effective 09Oct96 - present:
0Y-11Y 1.9 – 4.3
12Y-150Y 3.0 – 5.4

HISTORICAL REFERENCE RANGES

Test Name: Cholesterol, HDL
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: High density lipoprotein
Reference Ranges:

Cholesterol, HDL *mg/dL* (SI: mmol/L = 0.0259 x mg/dL)
Performed at the National Institutes of Health, Bethesda MD
Effective 13Jun01 – present:
Low (high risk) <40
High (low risk) >=60

Effective 07Feb96 – 12Jun01:
Negative risk >=60
Average risk 35 – 59
Major risk <35

Effective 10Oct91 – 06Feb96:
Male/Female Decreased Risk >=35

Performed at SmithKline Beecham, Van Nuys CA
Effective 04Jan89 – 09Oct91:
Male
Decreased Risk >45
Increased Risk <45
Average Risk 45
Female:
Decreased Risk >55
Increased Risk <55
Average Risk 55

Effective 01Oct87 – 03Jan89:
Male
5Y-19Y 30 – 74
20Y-29Y 30 – 63
30Y-39Y 28 – 63
40Y-49Y 27 – 67
50Y-59Y 28 – 71
60Y-69Y 30 – 78
>=70Y 31 – 75
Female:
5Y-19Y 35 – 74

20Y-29Y 33 – 83
30Y-39Y 34 – 82
40Y-49Y 34 – 88
50Y-59Y 37 – 92
60Y-69Y 35 – 98
>=70Y 33 – 92

Effective 06Nov85 – 30Sep87:
Male
0Y-19Y 30 – 65
20Y-29Y 35 – 70
>29Y 30 – 65
Female
0Y-19Y 30 – 70
20Y-29Y 35 – 75
30Y-39Y 35 – 85
40Y-49Y 40 – 95
>=50Y 35 – 85

Effective 26Mar80 – 05Nov85: 29 – 77

Test Name: Cholesterol, LDL (Calculated)
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Low density lipoprotein
Reference Ranges:

Cholesterol, Total *mg/dL* (SI: mmol/L = 0.0259 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 07Feb96-present:
Desirable <200
Borderline high risk 200-239
High risk >=240

Effective 12Jul89 – 06Feb96: 100 – 200

Effective 01Dec88 – 11Jul89: 75 – 200

Effective 04Nov87 – 30Nov88:
2Y-19Y 75 – 175
20Y-29Y 75 – 206
30Y-39Y 75 – 226
>=40Y 75 – 247

Effective 08Jan81 – 04Nov87: 163 – 263

Effective 01Jan79 – 07Jan81: 150 – 250

Cholesterol, LDL *mg/dL* (SI: mmol/L = 0.0259 x mg/dL)
Performed at the National Institutes of Health, Bethesda MD
Effective 13Jun01 – present:
Optimal <100
Near or above optimal 100 – 129
Borderline high risk 130 – 159
High risk 160 – 189
Very high risk >=190

Effective 24Jan95 – 12Jun01:
Desirable: 65 – 129
Moderate Risk: 130 – 159
High Risk: >=160

Effective 07Feb96 – 12Jun01:

Optimal in CHD: <=100
Higher than Optimal in CHD: >100

Cholesterol, HDL *mg/dL* (SI: mmol/L = 0.0259 x mg/dL)
Performed at the National Institutes of Health, Bethesda MD
Effective 13Jun01-present:
Low (high risk) <40
High (low risk) >=60

Effective 07Feb96 – 12Jun01:
Negative risk >=60
Average risk 35 – 59
Major risk <35

Effective 10Oct91 – 06Feb96:
Male/Female Decreased Risk >=35

Effective 04Jan89 – 09Oct91:
Male
Decreased Risk >45
Increased Risk <45
Average Risk 45
Female:
Decreased Risk >55
Increased Risk <55
Average Risk 55

Effective 01Oct87 – 03Jan89:
Male
5Y-19Y 30 – 74
20Y-29Y 30 – 63
30Y-39Y 28 – 63
40Y-49Y 27 – 67
50Y-59Y 28 – 71
60Y-69Y 30 – 78
>=70Y 31 – 75

Female:
5Y-19Y 35 – 74
20Y-29Y 33 – 83
30Y-39Y 34 – 82
40Y-49Y 34 – 88
50Y-59Y 37 – 92
60Y-69Y 35 – 98
>=70Y 33 – 92

Effective 06Nov85 – 30Sep87:
Male
0Y-19Y 30 – 65
20Y-29Y 35 – 70
>29Y 30 – 65

Female
0Y-19Y 30 – 70
20Y-29Y 35 – 75
30Y-39Y 35 – 85
40Y-49Y 40 – 95
>=50Y 35 – 85

Effective 26Mar80 – 05Nov85: 29 – 77

Triglycerides ***mg/dL*** (SI: mmol/L = 0.0113 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Jun01-present:
Normal <150
Borderline high risk 150-199
High risk 200-499
Very high risk >=500

Effective 01Jan79 - 12Jun01:
0Y-9Y not established
10Y-29Y 10 - 140
30Y-39Y 10 – 150
40Y-49Y 10 – 160
50Y-59Y 10 – 190
>59Y not established

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HISTORICAL REFERENCE RANGES

Test Name: Cholesterol, LDL (Direct)
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Low density lipoprotein
Reference Ranges:

Cholesterol, LDL *mg/dL* (SI: mmol/L = 0.0259 x mg/dL)
Performed at the National Institutes of Health, Bethesda MD
Effective 13Jun01 – present:

Optimal	<100
Near or above optimal	100 – 129
Borderline high risk	130 – 159
High risk	160 – 189
Very high risk	>=190

Effective 24Jan95 – 12Jun01:

Desirable:	65 – 129
Moderate Risk:	130 – 159
High Risk:	>=160

Effective 07Feb96 – 12Jun01:

Optimal in CHD:	<=100
Higher than Optimal in CHD:	>100

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HISTORICAL REFERENCE RANGES

Test Name: Cholesterol, Total
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Cholesterol, Total *mg/dL* (SI: mmol/L = 0.0259 x mg/dL)
Performed at the National Institutes of Health, Bethesda MD
Effective 07Feb96-present:

Desirable	<200
Borderline high risk	200-239
High risk	>=240

Effective 12Jul89 – 06Feb96: 100 – 200

Effective 01Dec88 – 11Jul89: 75 – 200

Effective 04Nov87 – 30Nov88:

2Y-19Y	75 – 175
20Y-29Y	75 – 206
30Y-39Y	75 – 226
>39Y	75 – 247

Effective 08Jan81 – 04Nov87: 163 – 263

Effective 01Jan79 – 07Jan81: 150 – 250

HISTORICAL REFERENCE RANGES

Test Name: Cholinesterase, Pseudo
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Cholinesterase, Pseudo ***U/L*** (SI: kU/L = 0.001 x U/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 17Dec97 – present:
Male 3100 – 6500
Female 0Y-17Y not established
18Y-49Y 1800 – 6600
50Y-150Y 2550 – 6800

Effective 19Sep94 – 16Dec97:
Male >=18Y 11 – 25 *U/mL* (SI: kU/L = 1.0 x U/mL)
Female >=18Y 7 – 25 *U/mL*

Performed at SmithKline Beecham, Van Nuys CA
Effective 15Mar93 - 18Sep94: 1400 – 5600 *U/L*

Effective 25Sep89 – 14Mar93: 2436 – 4872 *mIU/mL* (mIU/mL = U/L)

Effective 06Jul89 - 24Sep89: 5000 – 7000 *mIU/mL*

Effective 18May89 - 05Jul89: 2.5 – 7.1 *IU/mL*

Effective 01Jul85 to 17May89:
Female 1.7 – 7.4 *U/mL*
Male 2.4 – 6.2 *U/mL*

Effective 01Jan79 – 01Jul85: 3 – 8 *U/mL*

HISTORICAL REFERENCE RANGES

Test Name: Cholinesterase, RBC
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Acetylcholinesterase Erythrocytes
Reference Ranges:

Cholinesterase, RBC ***U/g hgb*** (SI: U/g hgb)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 26.7 – 49.2

Performed at SmithKline Beecham, Van Nuys CA
Effective 5Mar93 – 18Sep94: 7700 – 17500 *U/L* (SI: kU/L = 0.001 x U/L)

Effective 25Sep89 – 14Mar93: 3590 – 6666 *mIU/mL* (SI: kU/L = 0.001 x mIU/mL)

Effective 06Jul89 – 24Sep89: 2000 – 4800 *mIU/mL*

Effective 18May89 – 05Jul89: 3 – 5 *IU/mL* (SI: kU/L = 1.0 x IU/mL)

Effective 01Jul85 – 17May89:
Male 9.9 – 16.0 *U/mL*
Female 9.9 – 19.3 *U/mL*

Effective 01Jan79 – 01Jul85: 0.5 – 1.0 *U/mL*

HISTORICAL REFERENCE RANGES

Test Name: Chromogranin A
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Chromogranin A ***ng/mL*** (SI: µg/L = 1.0 x ng/mL)
Performed at ARUP Laboratories, Salt Lake City UT
Effective 12May04 – present:
Male: 0 – 76
Female: 0 – 51

Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 01Nov01 – 11May04: 6 – 39
Effective 17Jul00 – 31Oct01: 2.3 – 14.3
Effective 14Nov97 – 16Jul00: 1.6 – 5.6
Effective 06Nov96 – 13Nov97: 10 – 50

HISTORICAL REFERENCE RANGES

Test Name: Citric Acid, Random, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Citrate
Reference Ranges:

Citric Acid, Random Urine
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: No ranges established

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Dec93 – 18Sep94: No ranges established

HISTORICAL REFERENCE RANGES

Test Name: Citric Acid, Serum
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Citric Acid, Serum *mg/dL*
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 11Sep01: 1.3 - 2.6

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Dec93 - 18Sep94: 1.3 - 2.6

HISTORICAL REFERENCE RANGES

Test Name: Citric Acid, Urine, 24hr
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Citrate
Reference Ranges:

Citric Acid, Urine, 24hr ***mg/24hr*** (SI: mg/d =1.0 x mg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: >150 (>= 20 years)
Citrate excretion increases with age for ages 20–60 ages. Lower limit of normal at age 20 is 150 mg/specimen and increases at a rate of 7.11 mg/specimen for each year over age 20. The reference values for each age are automatically calculated and reported. Reference ranges not available for ages >60 years.

Performed at SmithKline Beecham, Van Nuys CA
Effective 17Jan94 – 18Sep94: >170
Effective 01Dec93 – 16Jan94: 140 – 940

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HISTORICAL REFERENCE RANGES

Test Name: CK-MB
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: CK-2, CPK-2
Reference Ranges:

CK-MB ***µg/L*** (SI: µg/L)
Performed at National Institutes of Health, Bethesda MD
Effective 04Nov92 – present: 0 – 5

Test Name: Clomipramine + Norclomipramine (Total)
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Clomipramine + Norclomipramine (Total) ***µg/L*** (SI: µg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 31May95 – present:
Therapeutic 150 – 450
Toxic >600

Performed at American Medical Labs, Chantilly VA
Effective 01Dec93 – 30May95:
Therapeutic 160 – 450
Toxic not well defined

Test Name: Clostridium Difficile Toxin Assay
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Clostridium Difficile Toxin Assay
Performed at National Institutes of Health, Bethesda MD
Effective 31Aug90 – present: Negative

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: Clotazimine
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Clotazimine
Performed at Centers for Disease Control, Atlanta GA
No longer requested as of January 2000.

Test Name: Clozapine & Norclozapine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Clozaril
Reference Ranges:

Clozapine & Norclozapine *ng/mL* (SI: µg/L = 1.0 x ng/mL)
Peformed at Medtox Labs, St. Paul MN
Effective 24Mar00 – present:
Therapeutic Ranges
Clozapine 350 – 1500
Norclozapine not established
Combined Total 451 – >450 Plasma concentrations of Clozapine + Norclozapine (combined total) greater than 450 ng/mL have been associated with therapeutic effect.
Toxic >1800

Performed at National Medical Services, Willow Grove PA
Effective 06Mar99 – 23Mar00:
Clozapine + Norclozapine:
Average steady-sate plasma concentration following 100 mg twice daily:
Peak (2.5 hrs after last dose): 102 – 771
Trough (just before dose): 41 – 343
300 mg daily: 200 – 600

The rate of formation and biological activity of Clozapine metabolites have not been fully elucidated. One study of patients dosed with 400 mg Clozapine daily for 4 weeks, showed that patients were most likely to respond to therapy when plasma concentrations of Clozapine + Norclozapine (limited activity) totaled at least 450 ng/mL.

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HISTORICAL REFERENCE RANGES

Test Name: Coagulation Inhibitor Assay
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Coagulation Inhibitor Assay
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Dependent on inhibitor factor tested.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Coagulation Panel
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Coagulation Panel
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Prothrombin Time (sec.)
11.8-14.7 - STA (automated instrument)
11.3-14.0 - Fib. (fibrometer-manual method)

Partial Thromboplastin Time (sec.)
23.4 -34.5 - STA (automated instrument)
24.4 - 35.6 - Fib. (fibrometer-manual method)

Test Name: Coccidioides Antibody
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Coccidioides Antibody
Performed at School of Medicine, University of California, Davis CA
Effective 04Sep02 - present:

Performed at Mayo Medical Labs, Rochester MN
Effective 26Jun02 - 03Sep02:
Complement Fixation: Negative
Immunodiffusion: IgG: Negative
IgM: Negative
If positive, results are titered.

Effective 19Sep94 - 25Jun02: Negative, if positive results are titered.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: Negative, if positive results are titered.

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Negative, if positive results are titered.

Test Name: Coccidioides Antibody, CSF
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Coccidioides Antibody, CSF
Performed at School of Medicine, University of California, Davis CA
Effective 04Sep02 - present

Performed at Mayo Medical Labs, Rochester MN
Effective 26Jun02 - 03Sep02:
Complement Fixation: Negative
Immunodiffusion: IgG: Negative
IgM: Negative
If positive, results are titered.

Effective 19Sep94 - 25Jun02: Negative, if positive results are titered.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: Negative, if positive results are titered.

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Negative, if positive results are titered.

HISTORICAL REFERENCE RANGES

Test Name: Collagen Peptide Type I
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Collagen Peptide Type I ***BCE/L***
Performed at Quest Diagnostics, San Juan Capistrano CA
Effective 12Feb03 – present:
Male 10.7 - 22.9
Female 8.7 - 19.8

Test Name: Complement level CH50
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms:
Reference Ranges:

Complement level CH50

Performed at National Institutes of Health, Bethesda MD
Effective 23Dec96 – present: 60 – 160 *CAE units* (SI: kU/L=CAE units)
Effective 01Apr86 – 22Dec96: 42 – 130 *U/mL* (SI: kU/L = 1.0 xU/mL)
Effective 01Jul85 – 31Mar86: 41 – 135 CH100 *U*
Effective 25May79 – 30Jun85: 33 – 71 *U/mL*
Effective 01Jan79 – 24May79: 25 – 50 *U/mL*

HISTORICAL REFERENCE RANGES

Test Name: Compound S, Urine
Department: Laboratory Medicine
Lab Area:
Synonyms: 11-Deoxycortisol
Reference Ranges:

Compound S, Urine ***mg/24hr*** (SI: µmol/d = 2.72 x mg/24hr)
Performed at SmithKline Beecham, Van Nuys CA
Effective 24May89 – 01Oct93: <2.0
Post Metrypone Single Dose 8 – 30
Multiple Dose 11 – 42

Effective 25Mar88 – 23May89: 0 – 1

HISTORICAL REFERENCE RANGES

Test Name: Comprehensive Drug Screen, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Toxicology
Reference Ranges:

Comprehensive Drug Screen, Urine
Performed at Mayo Medical Labs, Rochester MN
Effective 15Mar95 - present

Performed at American Medical Labs, Chantilly VA
Effective 11Oct91 - 14Mar95

Performed at MetPath Labs, Rockville MD
Effective until 10Oct91

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HISTORICAL REFERENCE RANGES

Test Name: Comprehensive Virus Culture
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Comprehensive Virus Culture
Performed at American Medical Labs, Chantilly VA
Effective 21Aug96 - 21Sep98

Test Name: Cooximeter Panel, Venous
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Blood Gases
Reference Ranges:

Cooximeter Panel, Venous
Performed at National Institutes of Health, Bethesda MD
Effective 02Apr92 – present:
Hemoglobin, Total *g/dL* (SI: g/L = 10 x g/dL)
Male: 12.7 – 16.7
Female: 11.1 – 15
Oxyhemoglobin *%* (SI: fraction = 0.01 x %): 94 – 97%
Carboxyhemoglobin *%* (SI: fraction = 0.01 x %)
Non-smoker 0.5 – 1.5
Toxic >20
Methemoglobin *%* (SI: fraction = 0.01 x %): <2.0
Free Hemoglobin *%* (SI: fraction = 0.01 x %): not established
Oxygen Content *mL/dL* not established
Oxygen Capacity *mL/dL* not established
Oxygen Saturation *%* (SI: fraction = 0.01 x %): not established

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HISTORICAL REFERENCE RANGES

Test Name: Copper, Liver Tissue
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Copper, Liver Tissue ***µg/g dry weight***
Performed at Mayo Medical Labs, Rochester MN
Effective 25Jun97 – present: 10 – 35

HISTORICAL REFERENCE RANGES

Test Name: Copper, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Copper,Serum ***µg/dL*** (SI: µmol/L = 0.157 x µg/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 15Sep99 - present: 75 – 145

Performed at National Institutes of Health, Bethesda MD
Effective 03Jul96 - 14Sep99: Male 71 – 131
Female 85 – 175

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 02Jul96: 75 – 145

Performed at SmithKline Beecham, Van Nuys CA
Effective 20May91 - 18Sep94: 70 – 155
Effective 04Jan89 - 19May91: 70 – 150
Effective 14Mar86 - 03Jan89: 70 – 155
Effective 01Jan79 - 13Mar86: Male 70 – 140
Female 85 – 15

HISTORICAL REFERENCE RANGES

Test Name: Copper, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Copper, Urine µ*g/24hr* (SI: µmol/d = 0.0157 x µg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 15 – 60

Performed at SmithKline Beecham, Van Nuy CA
Effective 22Jul88 – 18Sep94: 15 – 50
Effective 14Mar86 – 06Apr88: 15 – 20
Effective 01Jan79 – 13Mar86: 15 – 50

HISTORICAL REFERENCE RANGES

Test Name: Cortisol Binding Globulin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: CBG
Reference Ranges:

Cortisol Binding Globulin ***mg/dL***
Performed at Esoterix Endocrinology, Calabasas Hills CA
Effective 12Feb03 - present
Male
0-21D 1.6-2.5
22D-12M 2.2-8.3
1Y-9Y 4.3-10.0
>=10Y 2.3-3.9
Female
0-21D 1.6-2.5
22D-12M 2.2-8.3
1Y-8Y 4.3-10.0
>=9Y 2.3-3.9

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HISTORICAL REFERENCE RANGES

Test Name: Cortisol, 12 hr Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: UFC
Reference Ranges:

Cortisol, 12 hr Urine
Performed at National Institutes of Health, Bethesda MD
Effective 18Dec02 – present:
Cortisol, Urine Concentration *µg/dL*: No ranges available
Cortisol Excretion *µg/12hr*: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Cortisol, Free, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Cortisol, Free, Urine ***µg/24hr*** (SI: nmol/d = 2.76 x µg/24hr)
Performed at National Institutes of Health, Bethesda MD
Effective 31Oct01 – present: 8 – 77

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 30Oct01:
>=18Y 24 – 108
<18Y Not well established. Reported upper limit of normal is 91.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 18Sep94: 20 – 90

HISTORICAL REFERENCE RANGES

Test Name: Cortisol, Free, Urine by HPLC
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Cortisol, Free, Urine by HPLC ***µg/24hr*** (SI: nmol/d = 2.76 x µg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 21Aug96 - present:

1-10Y	2 - 27
11-17Y	1 - 55
>=18Y	5 - 55

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HISTORICAL REFERENCE RANGES

Test Name: Cortisol, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Cortisol, Serum *µg/dL* (SI: nmol/L = 27.6 x µg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 17Nov99 – present: 5 – 25 (collected between 8 & 9 am)
Effective 21Feb89 – 16Nov99: 7 – 25
Effective 01Jan79 – 20Feb89: 6 – 26

HISTORICAL REFERENCE RANGES

Test Name: Coxsackie A Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Coxsackie A Antibody ***titer***
Performed at Focus Technologies, Cypress CA
Effective 19Sep94 – present:
Coxsackie A Antibodies Types 2, 4, 7, 9, 10, 16 are included.
Antibody not detected <1:8
Equivocal 1:8 – 1:16
Antibody Detected >=1:32

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Coxsackie B Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Coxsackie B Antibody ***titer***
Performed at Focus Technologies, Cypress CA
Effective 19Sep94 – present:
Types 1, 2, 3, 4, 5, 6 are included.
Antibody not detected <1:8
Equivocal 1:8 – 1:16
Antibody Detected >=1:32

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Creatine Kinase
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: CK, CPK
Reference Ranges:

Creatine Kinase ***U/L*** (SI: U/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 – present:

Male	52 – 386
Female	38 – 252

Effective 01Jan79 – 30Nov88:

White Male	27 – 300
White Female	21 – 147

Values higher in African Americans and joggers.

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HISTORICAL REFERENCE RANGES

Test Name: Creatine Kinase Isoenzymes
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: CK
Reference Ranges:

Creatine Kinase Isoenzymes % (SI: fraction activity = 0.01 x %)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan89 – present:
CK-1 CK BB 0 – 0
CK-2 CK MB 0 – 3
CK-3 CK MM 97 – 100

Effective 01Jan79 – 31Dec88:
CK BB 0 – 0
CK MB 0 – 0
CK MM 100 – 100

HISTORICAL REFERENCE RANGES

Test Name: Creatine, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Creatine, Serum w/Lloyd's Reagent ***mg/dL*** (SI: µmol/L = 76.3 x mg/dL)
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 12Aug00 – present: 0.0 – 1.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 22Jul88 – 11Aug00:
Male 0.1 – 0.4
Female 0.2 – 0.7
(Creatinine Male: 0.7 – 1.2 mg/dL
Creatinine Female: 0.5 – 1.0 mg/dL)

Test Name: Creatine, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Creatine, Urine
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: *mg/24hr* (SI: mmol/d = 0.0076xmg/24hr)
Male 0 – 40
Female 0 – 80

Performed at SmithKline Beecham, Van Nuys CA
Effective 09Mar88 – 18Sep94: *g/24hr* (SI: mmol/d = 7.6 x g/24hr)
Male <0.15
Female <0.25

Effective 01Jul85 – 08Mar88: *g/24hr* (SI: mmol/d = 7.6 x g/24hr)
Male 0 – 0.24
Female 0 – 0.14

Effective 01Jan79 to 31May85: *mg/24hr* (SI: mmol/d = 0.0076xmg/24hr) 10 – 100

Test Name: Creatinine Clearance
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Creatinine Clearance (Corrected) ***mL/min/1.73m²*** (SI: mL/s/m² = 0.00963 x mL/min/1.73m²)
Effective 06Mar99 - present:
Male 13Y-150Y 90 – 130
Female 13Y-150Y 80 – 125

Creatinine Clearance (Uncorrected) ***mL/min*** (SI: mL/s = 0.0166 x mL/min)
Effective 01Jan79 - present:
0Y-1Y 35 – 65
1Y-12Y 60 – 90
>=13Y 90 – 125
To correct creatinine clearance for body surface area:
Creatinine clearance in mL/min x 1.73 / patient body surface area.

To calculate patient body surface area use the appropriate formula:
$(\text{Wt in lbs} \times 0.45)^{0.425} \times (\text{Ht in inches} \times 2.54)^{0.725} / 139.315$
OR
$(\text{Wt in kilograms})^{0.425} \times (\text{Ht in cenitmeters})^{0.725} / 139.315$

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HISTORICAL REFERENCE RANGES

Test Name: Creatinine, Peritoneal Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Creatinine, Peritoneal Fluid ***mg/dL***
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Creatinine, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Creatinine, Serum *mg/dL* (SI: µmol/L = 88.4 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 02Jun82 – present: Female 0.7 – 1.3
Effective 01Dec88 – present: Male 0.9 – 1.4
Effective 02Jun82 – 30Nov88: Male 0.9 - 1.6
Effective 01Jan79 – 01Jun82: Male/Female 0.7 - 1.4

HISTORICAL REFERENCE RANGES

Test Name: Creatinine, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Creatinine, Urine ***g/24hr*** (SI: mmol/d = 8.84 x g/24hr)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jun82 – present:

Male	1 – 2
Female	0.8 – 1.8

Random: No ranges established

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HISTORICAL REFERENCE RANGES

Test Name: Cryoglobulins
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Cryoglobulins

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Not detected

Test Name: Cryptococcus Antibody, CSF
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Cryptococcus Antibody, CSF
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 12Jun02

Performed at SmithKline Beecham Clinical Laboratories, Van Nuys CA
Effective 01Sep90 - 18Sep94

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: Cryptococcus Antibody, Serum
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Cryptococcus Antibody, Serum
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 12Jun02

Performed at SmithKline Beecham Clinical Laboratories, Van Nuys CA
Effective 01Sep90 - 18Sep94

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

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HISTORICAL REFERENCE RANGES

Test Name: Cryptococcus Antigen, Blood
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Cryptococcal antigen
Reference Ranges:

Cryptococcus Antigen, Blood
Performed at National Institutes of Health, Bethesda MD
Effective 04Mar82 – present: Negative; positives are titered

Performed at Centers for Disease Control, Atlanta GA
Effective until 03Mar82: Negative; positives are titered

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HISTORICAL REFERENCE RANGES

Test Name: Cryptococcus Antigen, CSF
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Cryptococcal Antigen
Reference Ranges:

Cryptococcus Antigen, CSF
Performed at National Institutes of Health, Bethesda MD
Effective 04Mar82 – present: Negative; positives are titered

Performed at Centers for Disease Control, Atlanta GA
Effective until 03Mar82: Negative; positives are titered

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HISTORICAL REFERENCE RANGES

Test Name: Cryptosporidium
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Cryptosporidium
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No Cryptosporidium species seen

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HISTORICAL REFERENCE RANGES

Test Name: Crystal Identification, Synovial/Joint Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Crystal Identification, Synovial/Joint Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 07Feb92 – present: No crystals seen

Test Name: CSF Cell Count and Differential
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

CSF Cell Count and Differential
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present
Cell Count:
RBC: 0-1/mm^3
WBC: 0-5/mm^3
Differential:
Neutrophils (including bands): 0-6%
Lymphocytes: 40-80%

All cells other than neutrophils and lymphocytes are categorized under "others"

HISTORICAL REFERENCE RANGES

Test Name: Cyclic Amp Nephrogenous (Obsolete)
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer performed as of September 1, 1998
Previously performed at SmithKline Beecham Clinical Laboratories, Van Nuys CA
Cyclic Amp Nephrogenous *µmol/g creat* (SI: nmol/mmol creat = 113.10 x µmol/g creat)
Effective 14Jan88 to 01Sep98: 0.0 – 3.1 µmol/g creat

Test Name: Cyclic Amp Urinary Excretion
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Cyclic Amp Urinary Excretion *nmol/dL* (SI: nmol/L of glomerular filtrate = 10 x nmol/dL of glomerular filtrate)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 to present: 1.30 – 3.70

Also includes serum and urine creatinine results (No normals for urine creatinine).
Effective 16Jul02 - present:
Creatinine, Serum *mg/dL*
Males:
0-11M not established
1-2Y 0.2-0.6
3-4Y 0.3-0.7
5-9Y 0.4-0.8
10-11Y 0.5-0.9
12-13Y 0.6-1.0
14-15Y 0.7-1.1
>=16Y 0.9-1.4
Females:
0-11M not established
1-3Y 0.3-0.6
4-5Y 0.4-0.7
6-8Y 0.5-0.8
9-15Y 0.6-0.9
>=16 0.7-1.2

Effective 19Sep94 - 15Jul02:
Creatinine, Serum *mg/dL*
Males:
0-11M not established
1-2Y 0.2-0.6
3-4Y 0.3-0.7
5-9Y 0.4-0.8
10-11Y 0.5-0.9
12-13Y 0.6-1.0
14-15Y 0.7-1.1
>=16Y 0.8-1.2

Females:

0-11M	not established
1-3Y	0.3-0.6
4-5Y	0.4-0.7
6-8Y	0.5-0.8
>=9Y	0.6-0.9

Test Name: Cyclic AMP, Plasma
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Cyclic AMP, Plasma *nmol/L* (SI: nmol/L)
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 04Dec00 – present: adult 3.9 – 13.1
Effective 17Apr00 – 03Dec00: adult 6.3 – 13.7

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan88 – 16Apr00:
Male 14 – 26
Female 13 – 23

Test Name: Cyclic AMP, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Cyclic AMP, Urine ***µmol/L*** (SI: µmol/L)
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 04Dec00 – present: 0.8 – 7.5
Effective 17Apr00 – 03Dec00: 0.6 – 12.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan88 – 16Apr00: 1.0 – 11.5

Test Name: Cyclosporine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Cyclosporine *µg/L* (SI: nmol/L = 0.832 x µg/L)
Performed at National Institutes of Health, Bethesda MD
Effective 03May95 – present:

Renal Transplant, 12 hr post	100 – 200
Cardiac Transplant, 12 hr post	150 – 250
Bone marrow transplant, 12 hr post	100 – 300
Hepatic transplant, 12 hr post	100 – 400
Toxic	>400

Performed at American Medical Labs, Chantilly VA
Effective 02Apr92 – 02May95:

Hepatic transplant, 12 hr post	100 – 400
Renal Transplant, 24 hr post	100 – 200
Cardiac Transplant, 12 hr post	250 – 500
Toxic	none listed

Performed at SmithKline Beecham, Van Nuys CA
Effective until 01Apr92:

Kidney transplant (trough)	100 – 200
Other organs (trough)	200 – 300

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Cystatin C
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Cystatin C ***mg/L***
Performed at National Institutes of Health, Bethesda MD
Effective 09Jun04 – present: 0.55 – 1.03

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Cysticercosis Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Cysticercosis Antibody
Performed at Center for Disease Control, Atlanta GA
Effective 12Jun02 – present: Negative

Performed at Focus Technologies, Cypress CA
Effective 19Sep94 – present: Negative

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: Negative

Peformed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Negative

Test Name: Cystinuria Profile, 24 hr Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Cystinuria Profile, 24 hr Urine ***umol/24hr***
Performed at Mayo Medical Labs, Rochester MN
Effective 13Aug03 – present:
Cystine
<3Y Not established
3-15Y 11-53
>=16Y 28-115
Conversion formulas
Result in µmol/24hr x 0.24 = result in mg/24hr
Result in mg/24hr x 4.17 = result in µmol/24hr

Lysine µmol/24hr
<3Y Not established
3-15Y 19-140
>=16Y 32-290
Ornithine µmol/24hr
<3Y Not established
3-15Y 3-16
>=16Y 5-70
Arginine µmol/24hr
<3Y Not established
3-15Y 10-25
>=16Y 13-64

Effective 19Sep94 – present:
Cystine *µmol/g creat* (SI: µmol/mol creat = 0.113 x µmol/gcreat)
1D-30D 64 – 451
1M-5M 66 – 375
6M-11M 70 – 316
12M-23M 53 – 244
24M-35M 52 – 246
Cystine, 24hr *mg/24hr* (SI: µmol/d = 8.32 x mg/24hr)
3Y-15Y 2.6 – 12.7
>=16Y 6.7 – 27.6

Performed at SmithKline Beecham, Van Nuys CA

Effective 06Oct93 – 18Sep94: 10 - 100 *mg/24hr*

Test Name: Cystinuria Profile, Random Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Cystine
Reference Ranges:

Cystinuria Profile, Random Urine ***nmol/mg Cr***
Effective 13Aug03 – present:
Cystine *nmol/mg Cr* (nmol/g cr x 0.113 = µmol/mol cr)
Premature 480-1690
1-31D 212-668
32D-24M 68-710
25M-18Y 25-125
>18Y 43-210
Lysine *nmol/mg Cr*
Premature 1860-15460
1-31D 270-1850
32D-24M 189-850
25M-18Y 153-634
>18Y 145-634
Ornithine *nmol/mg Cr*
Premature 260-3350
1-31D 118-554
32D-24M 55-364
25M-18Y 31-91
>18Y 20-80
Arginine *nmol/mg Cr*
Premature 190-820
1-31D 35-214
32D-24M 38-165
25M-18Y 31-109
>18Y 10-90

Effective 19Sep94 – 12Aug03:
Cystine µmol/g creat (SI: mmol/mol creat = 0.113 x µmol/g creat)
1D-30D 64 – 451
1M-5M 66 – 375
6M-11M 70 – 316
12M-23M 53 – 244
24M-35M 52 – 246
Cystine, 24hr mg/24hr (SI: µmol/d = 8.32 x mg/24hr)
3Y-15Y 2.6 – 12.7

>=16Y 6.7 – 27.6

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Cytomegalovirus Antigenemia
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: CMV ATG
Reference Ranges:

Cytomegalovirus Antigenemia
Performed at National Institutes of Health, Bethesda MD
Effective 04Aug93 – present: Negative.
Positive results called to physician.

Test Name: Cytomegalovirus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: CMV
Reference Ranges:

Cytomegalovirus Culture, Biopsy
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present: No virus isolated

Performed at American Medical Labs, Chantilly VA
Effective until 01Nov91

HISTORICAL REFERENCE RANGES

Test Name: Cytomegalovirus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: CMV
Reference Ranges:

Cytomegalovirus Culture, Blood
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present: No virus isolated

Performed at American Medical Labs, Chantilly VA
Effective until 01Nov91

Test Name: Cytomegalovirus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: CMV
Reference Ranges:

Cytomegalovirus Culture, Bone Marrow
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present: No virus isolated

Performed at American Medical Labs, Chantilly VA
Effective until 01Nov91

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Cytomegalovirus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: CMV
Reference Ranges:

Cytomegalovirus Culture, Bronchial Lavage
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present: No virus isolated

Performed at American Medical Labs, Chantilly VA
Effective until 01Nov91

Test Name: Cytomegalovirus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: CMV
Reference Ranges:

Cytomegalovirus Culture, Eye
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present: No virus isolated

Performed at American Medical Labs, Chantilly VA
Effective until 01Nov91

HISTORICAL REFERENCE RANGES

Test Name: Cytomegalovirus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: CMV
Reference Ranges:

Cytomegalovirus Culture, Throat
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present: No virus isolated

Performed at American Medical Labs, Chantilly VA
Effective until 01Nov91

HISTORICAL REFERENCE RANGES

Test Name: Cytomegalovirus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: CMV
Reference Ranges:

Cytomegalovirus Culture, Urine
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present: No virus isolated

Performed at American Medical Labs, Chantilly VA
Effective until 01Nov91

Test Name: Cytomegalovirus PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: CMV-PCR
Reference Ranges:

Cytomegalovirus PCR
Performed at National Institutes of Health, Bethesda MD
Effective 02Mar97 – present: Negative for Cytomegalovirus by PCR

Performed at Mayo Medical Labs, Rochester MN
Effective 21Aug96 – 01Mar97: Negative

Test Name: Cytomegalovirus PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: CMV-PCR
Reference Ranges:

Cytomegalovirus PCR
Performed at National Institutes of Health, Bethesda MD
Effective 02Mar97 – present: Negative for Cytomegalovirus by PCR

Performed at Mayo Medical Labs, Rochester MN
Effective 21Aug96 – 01Mar97: Negative

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: D-Cyclosporine
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

D-Cyclosporine
Performed at Centers for Disease Control, Atlanta GA
No longer requested as of January 2000.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: D-dimer
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

D-dimer ***µg/mL*** (SI: mg/L = 1.0 x µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Oct99 – present: 0.0 – 0.5
Effective 02Oct96 – 12Oct99: 0.0 – 0.4

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Dehydroepiandrosterone Sulfate
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: DHEA-S
Reference Ranges:

Dehydroepiandrosterone Sulfate *µg/mL* (SI: µmol/L = 2.7 x µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 20Sep00 - present:
Male 0.80 - 5.60
Female 0.35 - 4.30

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 19Sep00:
Male/Female
0-30 days premature 0.25 - 10
full-term 0.25 - 2
1M-11M not established
1Y-6Y 0 - 0.49

Effective 12Jan98 - 19Sep00:
Male
7Y-19Y not established
20Y- 29Y 1.04 - 4.57
30Y- 39Y 0.76 - 3.34
40Y- 49Y 0.55 - 2.44
50Y- 59Y 0.41 - 1.78
60Y- 69Y 0.3 - 1.3
>=70Y 0.0 - 0.95
Female
7Y-19Y not established
20Y-29Y 0.38 - 3.21
30Y-39Y 0.00 - 2.46
40Y-49Y 0.00 - 1.88
50Y-59Y 0.00 - 1.44
60Y-69Y 0.00 - 1.10
>=70Y 0.00 - 0.84

Effective 19Sep94 - 11Jan98:
Male >=17Y 0 - 5.9
Female >=17Y 0 - 2.9

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan88 - 18Sep94:

Male	
20Y- 29Y	1.4 - 7.9
30Y- 39Y	1.0 - 7.0
40Y- 49Y	0.9 - 5.7
50Y- 59Y	0.6 - 4.1
60Y- 69Y	0.4 - 3.2
>=70Y	0.3 - 2.6
Female	
20Y- 29Y	0.7 - 4.5
30Y- 39Y	0.5 - 4.1
40Y- 49Y	0.4 - 3.5
50Y- 59Y	0.3 - 2.7
60Y- 69Y	0.2 - 1.8
>=70Y	0.1 - 0.9

Test Name: Dehydroepiandrosterone Sulfate
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: DHES, DHEAS
Reference Ranges:

Dehydroepiandrosterone Sulfate *µg/dL* (SI: µmol/L = 0.027 x µg/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 13Jan04 - present:
Adults: ug/dL

Age	Male	Female
18-29	89-457	44-332
30-39	65-334	31-228
40-49	48-244	18-244
50-59	35-179	<15-200
>=60	25-131	<15-157

Children: (Tanner I-IV from Elmlinger, based on Immulite data; Tanner V set to Mayo adult range)
1-14 Days: DHEA-S levels are very elevated at birth but will fall to pre-pubertal levels within a few days.
Males

*Tanner Stages:	Age, mean	ug/dL
Stage I:	pre-pubertal >14 days	<15-120
Stage II:	11.5	<15-333
Stage III:	13.6	<15-312
Stage IV:	15.1	29-412
Stage V:	18.0	89-457

*Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for boys at a median age of 11.5 (+/-2) years. For boys there is no definite proven relationship between puberty onset and body weight or ethnic origin. Progression through Tanner stages is variable. Tanner stage 5 (adult) is usually reached by age 18.

Females

*Tanner Stages:	Age, mean	ug/dL
Stage I:	pre-pubertal >14 days	16-96
Stage II:	10.5	22-184
Stage III:	11.6	<15-296
Stage IV:	12.3	17-343
Stage V:	14.5	44-332

*Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for girls at a median

age of 10.5 (+/-2) years. There is evidence that it may occur up to 1 year earlier in obese girls and in African American girls. Progression through Tanner stages is variable. Tanner stage 5 (adult) is usually reached by age 18.

Dehydroepiandrosterone Sulfate *µg/mL* (SI: µmol/L = 2.7 x µg/mL)
Effective 19Sep94 - 12Jan04:
Male/Female

0-30 days premature	0.25 - 10
full-term	0.25 - 2
1M-11M	not established
1Y-6Y	0 - 0.49

Effective 12Jan98 - 19Sep00:
Male

7Y-19Y	not established
20Y- 29Y	1.04 - 4.57
30Y- 39Y	0.76 - 3.34
40Y- 49Y	0.55 - 2.44
50Y- 59Y	0.41 - 1.78
60Y- 69Y	0.3 - 1.3
>=70Y	0.0 - 0.95

Female

7Y-19Y	not established
20Y-29Y	0.38 - 3.21
30Y-39Y	0.00 - 2.46
40Y-49Y	0.00 - 1.88
50Y-59Y	0.00 - 1.44
60Y-69Y	0.00 - 1.10
>=70Y	0.00 - 0.84

Effective 19Sep94 - 11Jan98:

Male	>=17Y	0 - 5.9
Female	>=17Y	0 - 2.9

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan88 - 18Sep94:
Male

20Y- 29Y	1.4 - 7.9
30Y- 39Y	1.0 - 7.0
40Y- 49Y	0.9 - 5.7
50Y- 59Y	0.6 - 4.1
60Y- 69Y	0.4 - 3.2
>=70Y	0.3 - 2.6

Female

20Y- 29Y	0.7 - 4.5

30Y- 39Y	0.5 - 4.1
40Y- 49Y	0.4 - 3.5
50Y- 59Y	0.3 - 2.7
60Y- 69Y	0.2 - 1.8
>=70Y	0.1 - 0.9

Test Name: Dehydroepiandrosterone, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: DHEA
Reference Ranges:

Dehydroepiandrosterone, Serum *ng/dL* (SI: nmol/L = 0.0347 x ng/dL)
Performed at Mayo Medical Labs, Rochester MN
Reference Ranges based on morning specimen collected before 10:30 a.m.
Effective 14Jan98 – present:
0Y-19Y not established
Male 20Y-49Y 230 – 1280
Male 50Y-150Y 120 – 920
Female 20Y-49Y 120 – 1090
Female 50Y-150Y 50 – 540

Performed at Esoterix Endocrinology, Calabasas Hills CA
Effective 19Sep94 – 13Jan98:
1Y-6Y 20 – 130
6Y-8Y 20 – 275
8Y-10Y 31 – 345
20Y-50Y 160 – 800

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan88 – 18Sep94:
0Y-6Y 10 – 72
7Y-8Y 12 – 150
9Y-10Y 17 – 182
11Y-12Y 20 – 585
13Y-14Y 40 – 542

Effective 06Jan93 – 18Sep94: Adult 130 – 1200
Effective 14Jan88 - 05Jan93: Adult 140 – 1010

Test Name: Dengue Fever Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Dengue Fever Antibody
Performed at Focus Technologies, Cypress CA
Effective 19Sep94 – present:
IgG <0.90
IgM <0.90
This assay detects both IgG and IgM class antibodies against all four Dengue fever virus types. Except for very early IgM responses, the immune response to Dengue fever is not type specific. Therefore, type specific reactions are not reported.

HISTORICAL REFERENCE RANGES

Test Name: Deoxycorticosteroids - (Obsolete)
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer performed as of Mar 14, 2001
Test replaced with 11-Desoxycortisol
Deoxycorticosterone ***µg/dL*** (SI: nmol/L = 28.9 x µg/dL)
Performed at Esoterix Endocrinology, Calabasas Hills CA
Effective 19Sep94 - 13Mar01:
a.m. 0 – 5
p.m. 0 – 3

Performed at SmithKline Beecham, Van Nuys CA
Effective 30Jun88 - 18Sep94:
Baseline < 0.8
Post Metyrapone 8 - 25

Measures 11-Deoxycortisol and Deoxycorticosteroids as a group.

HISTORICAL REFERENCE RANGES

Test Name: Dexamethasone
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Dexamethasone ***ng/dL***
Performed at Esoterix Endocrinology, Calabasas Hills CA
Effective 12Feb03 – present:
Adults Baseline: <30
Drawn at 8AM following 1 mg dexamethasone the previous evening: 140-295
Drawn at 8AM following 8 mg dexamethasone (4 x 2 mg doses) the previous day: 1600-2850

HISTORICAL REFERENCE RANGES

Test Name: Dextromethorphan, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: DM
Reference Ranges:

Dextromethorphan, Serum ***ng/mL***
Performed at Medtox Labs, St. Paul MN
Effective 10Mar04 – present:
Reporting Limit: 1.0
Reference Range: 2.0-6.0
Critical Value: 40.0

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Dialysis/Ascites Culture/Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Dialysis/Ascites Culture/Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen
Culture: No growth
For information on Antibiotic Susceptibility on significant isolates, click here

Test Name: Diazepam/Nordiazepam
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Valium
Reference Ranges:

Diazepam and Nordiazepam *mg/L* (SI: µmol/L = 3.51 x mg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 31May95 – present:

Total Therapeutic	0.4 – 1.8
Total Toxic	>=5.0
Diazepam Therapeutic	0.2 – 0.8
Nordiazepam Therapeutic	0.2 – 1.0

Performed at American Medical Labs, Chantilly VA
Effective 02Apr92 – 30May95:

Therapeutic (Total)	0.1 – 1.0
Toxic (Total)	>5.0

Performed at MetPath Labs, Rockville MD
Effective 31May85 - 01Apr92:

Therapeutic (Total)	100 - 1000 *µg/L*	(µg/L x .001 = mg/L)
Toxic (Total)	>5000 *µg/L*	

Performed at National Health Labs, Vienna Va
Effective until 30May85:

Therapeutic (Total)	100 - 1000 *µg/L*	(µg/L x .001 = mg/L)
Toxic (Total)	>5000 *µg/L*	

HISTORICAL REFERENCE RANGES

Test Name: Digitoxin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Digitoxin *ug/L* (SI: nmol/L = 1.31 x ug/L)
Performed at Medtox Labs, St. Paul MN
Effective 19Sep94 – present:
Therapeutic 11 – 23
Toxic >30

Performed at SmithKline Beecham, Van Nuys CA
Effective 18Mar88 – 18Dec94:
Therapeutic 20 – 35
Toxic >45

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Digoxin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Digoxin *µg/L* (SI: nmol/L = 1.28 x µg/L) (ng/mL = µg/L)
Performed at National Institutes of Health, Bethesda MD
Effective 02Apr92 – present:
Therapeutic:
CHF 0.8 – 1.5
Arrythmia 1.5 – 2.0
Toxic:
Adult >2.5
Child >3.0

Performed at MetPath Labs, Rockville MD
Effective until 01Apr92:
Therapeutic 0.8 – 2.0
Toxic >2.5

Test Name: Dihydrotestosterone
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: 5-A-DHT
Reference Ranges:

Dihydrotestosterone ***pg/mL*** (SI: nmol/L = 0.0344 x pg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 08Dec99 – present:
Male

1Y-19Y	not established
20Y-39Y	150 – 1240
>=40Y	150 – 980

Female

1Y-19Y	not established
20Y-39Y	50 – 250
>=40Y	50 – 137

Performed at Esoterix Endocrinology, Calabasas Hills CA
Effective 19Sep94 – 07Dec99:

Male Adult	30 – 85
Female Adult	4 – 22
Prepubertal children 1Y-10Y	0 – 2.9

Performed at SmithKline Beecham, Van Nuys CA
Effective 25Mar88 – 18Sep94:
Male 30 – 100
Female 6 – 33

HISTORICAL REFERENCE RANGES

Test Name: Diphtheria Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Anti-Diphtheria
Reference Ranges:

Diphtheria Antibody ***IU/mL*** (SI: kU/L = 1.0 x U/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 09June04 – present:
protective ab level: >= 0.1

Performed at Focus Technologies, Cypress CA
Effective 19Sep94 – 08June04:
protective ab level: >= 0.01

Performed at SmithKline Beecham, Van Nuys CA
Effective 22Jul92 – 18Sep94:
protective ab level: >= 0.01

Test Name: Disopyramide
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Norpace
Reference Ranges:

Disopyramide *mg/L* (SI: µmol/L = 2.95 x mg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 31May95 – present:
Therapeutic 2.0 – 4.5
Arrhythmias possible <2.0
Excessive anticholinergic effects >4.5
Toxic >= 8.0
Arrhythmias may be observed at concentrations <2 mg/L, and anticholinergic side effects become excessive at concentrations >4.5 mg/L.

Performed at Americal Medical Labs, Chantilly VA
Effective 02Apr92 – 30May95:
Therapeutic:
Atrial 2.8 – 3.2
Ventricular 3.3 – 7.5
Toxic >7.5

Performed at MetPath Labs
Effective until 01Apr92 (Units of measure: µg/mL = mg/L)
Therapeutic:
Atrial 2.8 – 3.2
Ventricular 3.3 – 7.0
Toxic >7.0

Test Name: Drug Abuse Screen 12, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Toxicology
Reference Ranges:

Drug Abuse Screen 12, Urine
Performed by Mayo Medical Labs, Rochester MN
Effective 14May03 – present: Negative
When a drug is present, the report identifies the specific drug and concentration.
Cutoff concentrations:

Alcohol	300 ug/mL
Amphetamines	500 ng/mL
Barbiturates	200 ng/mL
Benzodiazepines	100 ng/mL
Cocaine	150 ng/mL
Lysergic Acid Diethylamine (LSD)	0.5 ng/mL
Methadone	300 ng/mL
Methaqualone	300 ng/mL
Opiates	300 ng/mL
Phencyclidine (PCP)	25 ng/mL
Propoxyphene	300 ng/mL
Tetrahydrocannabinol (THC)	15 ng/mL

Test Name: Drug Abuse Screen + Ethanol, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Toxicology
Reference Ranges:

Drug Abuse Screen + Ethanol, Urine
Performed at Mayo Medical Labs, Rochester MN
Effective 30Sep02 – present:
Negative (Positives are reported as positive with confirmation.)
Cutoff concentrations:
Alcohol: 300 *ug/mL*
Amphetamines: 500 *ng/mL*
Barbiturates: 200 *ng/mL*
Cocaine: 150 *ng/mL*
Methadone: 300 *ng/mL*
Opiates (Morphine, Codeine): 300 *ng/mL*
Phencyclidine (PCP): 25 *ng/mL*
Propoxyphene (Darvon): 300 *ng/mL*

Effective 19Sep94 – 29Seo02:
Negative (Positives are reported as positive with confirmation.)
Cutoff concentrations:
Alcohol: 0.03 *g/dL*
Amphetamines: 500 *ng/mL*
Barbiturates: 200 *ng/mL*
Cocaine: 300 *ng/mL*
Methadone: 300 *ng/mL*
Opiates (Morphine, Codeine): 300 *ng/mL*
Phencyclidine (PCP): 25 *ng/mL*
Propoxyphene (Darvon): 300 *ng/mL*

Performed at American Medical Labs 11Oct91 – 14Mar95: No ranges available

Performed at MetPath Labs until 10Oct91: No ranges available

Test Name: Drug Abuse Screen, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Toxicology, Amphetamines, Barbiturates, Cocaine, Methadone, Opiates, Phencyclidine, Propoxyphene

Reference Ranges:

Drug Abuse Screen, Urine
Performed at Mayo Medical Labs, Rochester MN
Effective 30Sep02 – present:
Negative (Positives are reported as positive with confirmation.) The specific drug will be reported.
Cutoff concentrations:

Amphetamines:	500 *ng/mL*
Barbiturates:	200 *ng/mL*
Cocaine/metabolite:	150 *ng/mL*
Methadone:	300 *ng/mL*
Opiates (Morphine, Codeine):	300 *ng/mL*
Phencyclidine (PCP):	25 *ng/mL*
Propoxyphene (Darvon):	300 *ng/mL*

Effective 19Sep94 – 29Sep02:
Negative (Positives are reported as positive with confirmation.) The specific drug will be reported.
Cutoff concentrations:

Amphetamines:	500 *ng/mL*
Barbiturates:	200 *ng/mL*
Cocaine/metabolite:	300 *ng/mL*
Methadone:	300 *ng/mL*
Opiates (Morphine, Codeine):	300 *ng/mL*
Phencyclidine (PCP):	25 *ng/mL*
Propoxyphene (Darvon):	300 *ng/mL*

Performed at American Medical Labs, Chantillly VA
Effective 11Oct91 – 14Mar95: No ranges available

Test Name: Drug Confirmatory, GC/MS
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Drug Confirmatory test from drug screening by *GC/MS*
Performed at MetPath Labs, Rockville MD until 10Oct91, when it was replaced by Toxicology Profile (on serum) and Comprehensive Drug Screen on serum and urine.

Test Name: Drug Profile #1, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Tox, Amphetamines, Barbiturates, Benzodiazepines, Cocaine, LSD Lysergic Acid Diethylamine, Opiates, PCP Phencyclidine, THC Tetrahydrocannabinol

Reference Ranges:

Drug Profile #1, Urine
Performed at Mayo Medical Labs, Rochester MN
Effective 30Sep02 – present: Negative
When a drug is present, the report identifies the specific drug and concentration.
Cutoff concentrations:

Amphetamines	500 *ng/mL*
Barbiturates	200 *ng/mL*
Benzodiazepines	100 *ng/mL*
Cocaine	150 *ng/mL*
Lysergic Acid Diethylamine (LSD)	0.5 *ng/mL*
Opiates	300 *ng/mL*
Phencyclidine (PCP)	25 *ng/mL*
Tetrahydrocannabinol (THC)	15 *ng/mL*

Effective 15Mar95 – 29Sep02: Negative
When a drug is present, the report identifies the specific drug and concentration.
Cutoff concentrations:

Amphetamines	500 *ng/mL*
Barbiturates	200 *ng/mL*
Benzodiazepines	200 *ng/mL*
Cocaine	300 *ng/mL*
Lysergic Acid Diethylamine (LSD)	0.5 *ng/mL*
Opiates	300 *ng/mL*
Phencyclidine (PCP)	25 *ng/mL*
Tetrahydrocannabinol (THC)	15 *ng/mL*

Performed at American Medical Labs, Chantilly VA
Effective 11Oct91 – 14Mar95:
Drugs included:
Amphetamines
Barbiturates
Benzodiazepines
Cocaine and Metabs

LSD
Opiates
Phencyclidine (PCP)
THC Metabs

Test Name: Drug Screen, Urine, Qual. (DLM)
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Toxicology
Reference Ranges:

Drug Screen, Urine, Qual. (DLM)
Performed at National Institutes of Health, Bethesda MD
Effective 12May04 – present:
Cutoff concentrations:
Benzodiazepine: 300 *ng/mL*
Cocaine: 300 *ng/mL*
Methamphetamine: 1000 *ng/mL*
Opiates: 300 *ng/mL*
Tetrahydrocannabinol (THC): 50 *ng/mL*

Effective 10Apr02 – 11May04:
Cutoff concentrations:
Benzodiazepine: 100 *ng/mL*
Cocaine: 300 *ng/mL*
Methamphetamine: 500 *ng/mL*
Morphine: 300 *ng/mL*
Tetrahydrocannabinol (THC): 50 *ng/mL*

Test Name: EBV Panel
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Epstein Barr Virus
Reference Ranges:

EBV Panel
Performed at Mayo Medical Labs, Rochester MN
Effective 11Oct01 - present:

Result Scenario:	VCA (IgG)	VCA (IgM)	EBNA	Interpretation:
1	-	-	-	No previous exposure
2	+	+	-	Recent infection
3	+	-	+	Past infection
4	+	-	-	Past infection

In most populations, at least 90% of the adult population will have been infected with EBV sometime in the past and, therefore, will be positive for anti-VCA-IgG and anti-EBNA. Antibodies to EBNA-1 are usually detectable only after 2-6 months after acute EBV infection. Furthermore, antibodies to EBNA-1 may never (5-10%) be demonstrable in serum specimens from some individuals. Presence of anti-VCA/IgM indicates recent primary infection with EBV.

Effective 15May97 - 10Oct01:
Anti-VCA/IgG Negative
Anti-VCA/IgM Negative
Anti-EBNA Negative

Result Scenario:	VCA (IgG)	VCA (IgM)	EBNA	Interpretation:
1	-	-	-	No previous exposure
2	+	+	-	Recent infection
3	+	-	+	Past infection
4	+	-	-	Past infection

In most populations, at least 90% of the adult population will have been infected with EBV sometime in the past and, therefore, will be positive for anti-VCA-IgG and anti-EBNA. Abs to EBNA develop 6-8 weeks after primary infection and remain present for life. Presence of anti-VCA/IgM indicates recent primary infection with EBV.

Test Name: Echinococcus Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Echinococcus Antibody
Performed at Center for Disease Control, Atlanta GA
Effective 12Jun02 – present: Negative

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 11Jun02:
Western Blot, IgG: Negative
Reported as Negative, Equivocal, or Reactive
A positive Western blot suggests the presence of antibodies to Echinococcus.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: Negative

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Negative

HISTORICAL REFERENCE RANGES

Test Name: Echovirus Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Echovirus Antibody
Performed at Focus Technologies, Cypress CA
Effective 19Sep94 – present:
<1:8 Antibody not detected
>= 1:8 Antibody detected

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: Negative

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Negative

HISTORICAL REFERENCE RANGES

Test Name: Ehrlichia Antibody Panel
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Ehrlichia Antibody Panel ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 06Mar99 – present:
HGE Ab 0 – 63
HME Ab 0 – 63

HISTORICAL REFERENCE RANGES

Test Name: Electrolyte Panel
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Electrolyte Panel *mmol/L* (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 - present:
Sodium: 135-144 *mmol/L*
Potassium: 3.3 - 5.1 *mmol/L*
Chloride: 99 – 107 *mmol/L*
Total CO_2: 21 - 31 *mmol/L*

Effective 01Dec88 - 31Jul90:
Sodium: 135-144 *mmol/L*
Potassium: 3.3 - 5.1 *mEq/L* (SI: mmol/L = 1 x mEq/L
Chloride: 99 – 107 *mEq/L* (SI: mmol/L = 1 x mEq/L)
Total CO_2: 21 - 31 *mEq/L* (SI: mmol/L = 1 x mEq/L)

Effective 01Jan79 - 30Nov88:
Sodium: 137 – 145 *mEq/L* (SI: mmol/L = 1 x mEq/L
Potassium: 3.3 - 4.6 *mEq/L* (SI: mmol/L = 1 x mEq/L
Chloride: 100 – 110 *mEq/L* (SI: mmol/L = 1 x mEq/L)
Total CO_2: 23 - 33 *mEq/L* (SI: mmol/L = 1 x mEq/L)

Test Name: Electrolytes, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Electrolytes, CSF *mmol/L* (SI: mmol/L = mEq/L)
Performed at National Institutes of Health, Bethesda MD
SODIUM, CSF
Effective 01Aug90 – present: 138 – 150 *mmol/L*
Effective 12Apr89 – 31Jul90: 138 – 150 *mEq/L*
Effective 14Nov85 – 11Apr89: 136 – 150 *mEq/L*
Effective 01Jan79 – 13Nov85: 138 – 150 *mEq/L*

POTASSIUM, CSF
Effective 01Aug90 – present: 2.5 – 3.2 *mmol/L*
Effective 12Apr89 – 31Jul90: 2.5 – 3.2 *mEq/L*
Effective 14Nov85 – 11Apr89: 2.6 – 3.0 *mEq/L*

CHLORIDE, CSF
Effective 01Aug90 – present: 118 – 132 *mmol/L*
Effective 12Apr89 – 31Jul90: 118 – 132 *mEq/L*
Effective 12Dec85 – 11Apr89: 118 – 130 *mEq/L*
Effective 01Jan79 – 11Dec85: 118 – 132 *mEq/L*

CO2
Effective 01Jan79 – 11Apr89: 25 – 28 *mEq/L*
Effective 01Jan79 – 11Apr89: 20 – 25 *mEq/L*

Test Name: Electrolytes, Feces
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Electrolytes, Feces
Performed at Mayo Medical Labs, Rochester MN
Effective 25Nov96 – present:
Feces, 24 hrs *mEq/24hr* (SI: mmol/d = 1.0 x mEq/24hr)
Sodium: 0.0-19.9
Potassium: 0.0-29.9
Chloride: 0.0-29.9

Feces, Random *mEq/kg* (SI: mmol/kg = 1.0 x mEq/kg)
Sodium: 0.0-159.9
Potassium: 0.0-199.9
Chloride: 0.0-39.9

Effective 06Nov96 – 24Nov96:
Feces, 24 hrs *mEq/24hr*
Sodium: 10.0-20.0
Potassium: 5.0-20.0
Chloride: 0.0-2.0

Feces, Random *mEq/kg*
Sodium: 10.0-20.0
Potassium: 5.0-20.0
Chloride: 0.0-10.0

Effective 15Mar95 – 05Nov96:
Feces, 24 hr *mEq/kg*
Sodium: 10.0-20.0
Potassium: 5.0-20.0
Chloride: No ranges established

Feces, Random *mEq/kg*
Sodium: 10.0-20.0
Potassium: 5.0-20.0
Chloride: No ranges established

Performed at National Institutes of Health, Bethesda MD

Effective until 15Mar95: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Electrolytes, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Electrolytes, Urine, 24hr ***mmol/24hrs***
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 – present:

Sodium	40-220
Potassium	25-125
Chloride	110-250

Electrolytes, Urine, Random ***mmol/L***
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 – present: No ranges established

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Electrophoresis, Protein , Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Electrophoresis, Protein , Urine
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No proteins detectable

Test Name: Electrophoresis, Protein, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Electrophoresis, Protein, CSF *percent* (SI: Mass fraction = 0.01 x percent)
Performed at National Institutes of Health, Bethesda MD
Effective 14Nov85 – present:

Prealbumin	2 - 7
Albumin	56 - 76
Alpha 1	2 - 7
Alpha 2	4 - 12
Beta	8 - 18
Gamma	3 - 12

Effective 01Jan79 – 13Nov85:

Albumin	51 - 74
Alpha 1	3 - 8
Beta	9 - 17
Gamma	5 - 9

Test Name: Electrophoresis, Protein, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Electrophoresis, Protein, Serum ***g/dL*** (SI: g/L = 10 x g/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 - present:

Albumin PEP	3.5 - 4.8
Alpha 1	0.1 - 0.3
Alpha 2	0.4 - 0.9
Beta	0.7 - 1.2
Gamma	0.8 - 1.8

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: ENA Screen
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: Sm, RNP, SS-A, SS-B
Reference Ranges:

ENA Screen ***EU***
Effective 19Sep01 - present:
Screen and Markers
Negative: < 20
Borderline Positive: 20 - 24
Positive: >= 25

Normal: Screen Negative
If positive, will do individual assay for Anti-SmRNP, Anti-Sm, Anti-SS-A, Anti-SS-B.

Test Name: Endomysial IgA Ab
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Celiac Disease
Reference Ranges:

Endomysial IgA Antibody
Performed at Mayo Medical Labs, Rochester MN
Effective 05Feb97 – present:
Negative in normal individuals; also negative in patients w/dermatitits herpetiformis or coeliac disease who adhere to gluten-free diet.

HISTORICAL REFERENCE RANGES

Test Name: Endothelin I
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Endothelin I ***pg/mL*** (SI: ng/L = 1 x pg/mL)
Performed at Mayo Medical Labs, Cardiorenal Research Lab, Rochester MN
Effective 09Jun99 – present:
20Y-60Y 4.0 – 10.4

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HISTORICAL REFERENCE RANGES

Test Name: Eosinophil Count, Total
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

This is no longer performed as a separate test. It is included in the CBC/Diff test.

Eosinophil Count, Total ***cells/µL*** (SI: 10^6cells/L = 1000000 x cells/µL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 18Sep90: 50 - 500

HISTORICAL REFERENCE RANGES

Test Name: Epstein-Barr Virus Early Antigen
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: EBV-EA
Reference Ranges:

EBV-EA ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present: <1:10
Titers of <= 1:20 are present in up to 15% of normal population.

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National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Erythrocyte Sedimentation Rate
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Sed Rate
Reference Ranges:

Erythrocyte Sedimentation Rate ***mm/hr***
Performed at National Institutes of Health, Bethesda MD
Effective 27Sep90 – present:
Male 0 – 25
Female 0 – 42

Effective 18Sep86 – 26Sep90:
Male 1 – 39
Female 3 – 56

Effective 01Jan79 – 17Sep86:
Male 0 – 15
Female 0 – 20

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Erythropoietin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: EPO
Reference Ranges:

Erythropoietin *mU/mL* (SI: IU/L = 1.0 x mU/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 08May02 – present: 5.0 – 24.6

Performed at Mayo Medical Labs, Rochester MN
Effective 28Aug01 – 07May02:
Male 4.0 - 16.0
Female 4.0 - 21.0
Effective 03Jul96 - 27Aug01: 4.0 – 24.0
Effective 19Sep94 - 02Jul96: <25.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 06Jul93 - 18Sep94: <25.0
Effective 28Oct89 - 05Jul93: <19.0
Effective 14Jan88 - 27Oct89: 4 - 26

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Esterfied Retinol
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Retinyl Esters, Retinol, Vitamin A
Reference Ranges:

Esterfied Retinol *µg/dL* (SI: µmol/L = 0.0349 x µg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 06Mar99 – present: 0.0 – 1.0

Test Name: Estradiol, Enhanced, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Estradiol-17B, E2
Reference Ranges:

Estradiol, Enhanced, Serum ***pg/mL*** (SI: pmol/L = 3.67 x pg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 09Dec03 - present:
Adults
Males: 10-40
Females
Premenopausal: 15-350 (E2 levels vay widely through the menstrual cycle)
Postmenopausal: <10

Male Children
1-14D: Estradiol levels in newborns are very elevated at birth but will fall to prepubertal levels within a few days.

Tanner Stages:	Mean Age:	Reference Range:
Stage I (>14D and prepubertal)	7.1Y	undetectable - 13
Stage II	12.1Y	undetectable - 16
Stage III	13.6Y	undetectable - 26
Stage IV	15.1Y	undetectable - 38
Stage V	18 Y	10 - 40

Note: Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for boys at a median age of 11.5(+/– 2) years. For boys there is no definitively proven relationship between puberty onset and body weight or ethnic origin. Progression through Tanner stages is variable. Tanner stage 5 (adult) should be reached by age 18.

Female Children:

Tanner Stages:	Mean Age:	Reference Range:
Stage I (>14D and prepubertal)	7.1Y	undetectable - 20
Stage II	10.5Y	undetectable - 24
Stage III	11.6Y	undetectable - 60
Stage IV	12.3Y	15 - 85
Stage V	14.5Y	15 - 350

Note: Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for girls at a median age of 10.5(+/– 2) years. There is evidence that it may occur up to 1 year earlier in obese girls and in African American girls. Progression through Tanner stages is variable. Tanner stage 5 (adult) should be reached by age 18.

Effective 01Apr99 – 8Dec03:

Female
Adult Premenopause 0 – 400
Postmenopause 0 – 34
Male >=16Y 0 – 50
Male and Female <=15Y 0 – 9.9
Male and Female Puberty Ranges vary

Effective 19Sep94 – 30Mar99:
Female
Premenopause 30 - 400
Postmenopause 0 - 30
Male >=20Y 10 - 50
Male and Female Puberty Ranges vary
Male and Female 1M - 8Y 0 - 9

Performed at SmithKline Beecham, Van Nuys CA
Effective 04Jan89 – 18Sep94:
Female
Follicular 10 - 200
Midcycle 100 - 400
Luteal 15 - 260
Prepubertal <20
Post Menopausal <50
Male, Adult <50
Prepubertal <20

Effective 14Jan88 – 03Jan89:
Female
Post Menopausal 5 - 20
Follicular 30 - 100
Luteal 50 - 150
Hormone Treatment 350 - 750
Male 10 - 60

Test Name: Estradiol, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Estradiol-17B, E2
Reference Ranges:

Estradiol, Serum *pg/mL* (SI: pmol/L = 3.67 x pg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 17Oct01 – present:

Male >=16yrs	<20 – 56
Female	
Untreated postmenopausal	<20 – 30
Treated postmenopausal	<20 – 93
Oral Contraceptives	<20 – 102
Follicular Phase	<20 – 160
Follicular Phase 2-3 days	<20 – 84
Periovulatory phase ±3 days	34 – 400
Luteal phase	27 – 246

Performed at Mayo Medical Labs, Rochester MN
Effective 01Apr99 – 16Oct01:

Female	
Adult Premenopause	0 – 400
Postmenopause	0 – 34
Male >=16Y	0 – 50
Male and Female <=15Y	0 – 9.9
Male and Female Puberty	Ranges vary

Effective 19Sep94 – 30Mar99:

Female	
Premenopause	30 - 400
Postmenopause	0 - 30
Male >=20Y	10 - 50
Male and Female Puberty	Ranges vary
Male and Female 1M - 8Y	0 - 9

Performed at SmithKline Beecham, Van Nuys CA
Effective 04Jan89 – 18Sep94:

Female	
Follicular	10 - 200
Midcycle	100 - 400
Luteal	15 - 260

Prepubertal	<20
Post Menopausal	<50
Male, Adult	<50
Prepubertal	<20

Effective 14Jan88 – 03Jan89:

Female	
Post Menopausal	5 - 20
Follicular	30 - 100
Luteal	50 - 150
Hormone Treatment	350 - 750
Male	10 - 60

Test Name: Estriol, Unconjugated, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Estriol, Unconjugated, Serum ***ng/mL*** (SI: nmol/L = 3.47 x ng/mL)
Performed at Specialty Labs, Santa Monica CA
Effective 11Sep01 – present:

Males >=16Y	0 – 0.24
Female (non-pregnant) >=16Y	0 – 0.2

Weeks of pregnancy:

18	2.4 – 7.2
19	2.7 – 8.0
20	3.0 – 9.0
21	3.3 – 10.1
22	3.8 – 11.2
23	4.2 – 12.5
24	4.4 – 13.2
25	4.4 – 13.3
26	4.4 – 13.4
27	2.9 – 12.7
28	3.3 – 14.3
29	3.7 – 16
30	4.1 – 17.9
31	4.6 – 19.9
32	5.1 – 22.1
33	5.7 – 24.4
34	6.3 – 27
35	7 – 29.7
36	7.7 – 30
37	>8.5
38	>9.3
39	>10.2
40	>11.1

Effective 02Apr92 – 18Sep00:
Weeks of pregnancy:

18	2.4 – 7.2
19	2.7 – 8.0
20	3.0 – 9.0
21	3.3 – 10.1

22	3.8 – 11.2
23	4.2 – 12.5
24-28	4.4 – 13.5
29	5.0 – 14.2
30	5.5 – 15.8
31	5.8 – 17.2
32	6.3 – 19.3
33	6.8 – 20.6
34	7.4 – 22.3
35	8.0 – 24.2
36	8.9 – 26.3
37	9.8 – 30.1
38	11.5 – 35.0
39	13.3 – 39.6
40	14.2 – 43.0
41-42	15.0 – 44.0

Effective 04Jan89 – 18Sep00:
Non Pregnant, and Male 0 – 1.9
Weeks of pregnancy:

28-32	3.7 – 17.8
32-36	4.5 – 28.1
36-38	8.2 – 38.8
38-40	8.6 – 38

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan88 – 03Jan89:
Weeks of pregnancy:

30-32	2 – 12
33-35	3 – 19
36-38	5 – 27
39-40	10 – 30

HISTORICAL REFERENCE RANGES

Test Name: Estriol, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Estriol, Urine ***µg/g creat*** (SI: nmol/d = 3.47 x creat/d)
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 19Sep94 - present:
Female
Follicular 3 - 48
Midcycle 20 - 130
Luteal 9 - 60
Male 2 - 19

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Oct90 - 18Sep94:
Female
Follicular 3 - 48
Midcycle 20 - 130
Luteal 9 - 60
Male 2 - 19

Effective 04Jan89 - 30Sep90:
Female

Weeks of Pregnancy	*mg/24hr*
16-20	1.5 - 2
20-24	2 - 5
24-28	5 - 12
28-32	7 - 14
32-36	7 - 16
36-40	9 - 24
40-44	14 - 40

Effective dates: 14Jan88 - 03Jan89

Weeks of Pregnancy	*mg/24hr*
32 to 34	6 - 27
35 to 37	8 - 39
38 to 40	11 - 44

Test Name: Estrogens, Fractionated
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: E1, E2
Reference Ranges:

Estrogens, Fractionated *pg/mL*
Performed at Mayo Medical Labs, Rochester MN
Effective 10Mar04 – present:

Estrone, Serum *pg/mL* (SI: pmol/L = 3.7 x pg/mL)
Adults
Males: 10 - 60
Females:
Premenopausal 17 - 200
Postmenopausal 7 - 40

Male Children
1-14D: Estrone levels in newborns are very elevated at birth but will fall to prepubertal levels within a few days.

Tanner Stages:	Mean Age:	Reference Range:
Stage I (>14D and prepubertal)	7.1Y	undetectable - 16
Stage II	11.5Y	undetectable - 22
Stage III	13.6Y	10 - 25
Stage IV	15.1Y	10 - 46
Stage V	18 Y	10 - 60

Note: Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for boys at a median age of 11.5(+/– 2) years. For boys there is no definitively proven relationship between puberty onset and body weight or ethnic origin. Progression through Tanner stages is variable. Tanner stage 5 (adult) should be reached by age 18.

Female Children:

Tanner Stages:	Mean Age:	Reference Range:
Stage I (>14D and prepubertal)	7.1Y	undetectable - 29
Stage II	10.5Y	10 - 33
Stage III	11.6Y	15 - 43
Stage IV	12.3Y	16 - 77
Stage V	14.5Y	17 - 200

Note: Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for girls at a median age of 10.5(+/– 2) years. There is evidence that it may occur up to 1 year earlier in obese girls and in African American girls. Progression through Tanner stages is variable. Tanner stage 5 (adult) should be reached by age 18.

Estradiol, Enhanced, Serum *pg/mL* (SI: pmol/L = 3.67 x pg/mL)
Adults
Males: 10-40
Females
Premenopausal: 15-350 (E2 levels vay widely through the menstrual cycle)
Postmenopausal: <10

Male Children
1-14D: Estradiol levels in newborns are very elevated at birth but will fall to prepubertal levels within a few days.

Tanner Stages:	Mean Age:	Reference Range:
Stage I (>14D and prepubertal)	7.1Y	undetectable - 13
Stage II	12.1Y	undetectable - 16
Stage III	13.6Y	undetectable - 26
Stage IV	15.1Y	undetectable - 38
Stage V	18 Y	10 - 40

Note: Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for boys at a median age of 11.5(+/– 2) years. For boys there is no definitively proven relationship between puberty onset and body weight or ethnic origin. Progression through Tanner stages is variable. Tanner stage 5 (adult) should be reached by age 18.

Female Children:

Tanner Stages:	Mean Age:	Reference Range:
Stage I (>14D and prepubertal)	7.1Y	undetectable - 20
Stage II	10.5Y	undetectable - 24
Stage III	11.6Y	undetectable - 60
Stage IV	12.3Y	15 - 85
Stage V	14.5Y	15 - 350

Note: Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for girls at a median age of 10.5(+/– 2) years. There is evidence that it may occur up to 1 year earlier in obese girls and in African American girls. Progression through Tanner stages is variable. Tanner stage 5 (adult) should be reached by age 18.

HISTORICAL REFERENCE RANGES

Test Name: Estrogens, Total, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

No longer performed. Fractionated Estrogens performed.
Estrogens, Total, Serum *pg/mL* (SI: ng/L = 1.0 x pg/mL)
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 19Sep94 – 09Mar04:
Female:
Early Follicular 70 – 400
Late Follicular 100 – 900
Luteal Phase 70 – 700
Postmenopasue 0 – 130
Male, Adult 0 – 130

Effective 07Feb94 - 18Sep94:
Female:
Prepubertal 12 - 57
Follicular 29 - 525
Luteal 126 - 478
Post-Menop. 23 - 103
Male:
Prepubertal 12 - 55
Adult 38 - 139

Effective 20May91 - 06Feb94**:**
Female:
Follicular 61 - 394
Preovulatory 122 - 437
Luteal 156 - 350
Post-Menop. & Prepub 0 - 40
Male: 40 - 115

Effective 04Jan89 - 19May91:
Female:
Follicular 4.5 - 20 ng/dL
Preovulatory 8 - 45 ng/dL
Luteal 14 - 30 ng/dL
Prepub 0 - 3.9 ng/dL
Male: 4 - 11.6 ng/dL

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan88 - 03Jan89

Female:	
Follicular	60 - 250
Midcycle	120 - 750
Luteal	75 - 450
Male:	35 - 130

HISTORICAL REFERENCE RANGES

Test Name: Estrogens, Total, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Estrogens, Total, Urine *µg/g creat* (SI: ng/L = g creat/d x µg/g creat)
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 19Sep94 - present:
Female
Follicular 7 – 65
Ovulatory 32 – 104
Luteal 8 – 135
Male 4 – 23

Performed at SmithKline Beecham, Van Nuys CA
Effective 23Apr90 - 18Sep94:
Female
Follicular 7 – 65
Ovulatory 32 – 104
Luteal 8 – 135
Male 4 – 23

Effective 14Jan88 - 22Apr90:
Female
Follicular 5 - 25 *µg/24hr*
Ovulatory 24 - 100 *µg/24hr*
Luteal 12 - 80 *µg/24hr*
Postmenopausal 0 - 9 *µg/24hr*
Male 4 - 25 *µg/24hr*

Test Name: Estrone, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Estrone, Serum *pg/mL* (SI: pmol/L = 3.7 x pg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 09Dec03 – present:
Adults
Males: 10 - 60
Females:
Premenopausal: 17 - 200
Postmenopausal: 7 - 40

Male Children:
1-14D: Estrone levels in newborns are very elevated at birth but will fall to prepubertal levels within a few days.

Tanner Stages:	Mean Age:	Reference Range:
Stage I (>14D and prepubertal)	7.1Y	undetectable - 16
Stage II	11.5Y	undetectable - 22
Stage III	13.6Y	10 - 25
Stage IV	15.1Y	10 - 46
Stage V	18 Y	10 - 60

Note: Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for boys at a median age of 11.5(+/– 2) years. For boys there is no definitively proven relationship between puberty onset and body weight or ethnic origin. Progression through Tanner stages is variable. Tanner stage 5 (adult) should be reached by age 18.

Female Children:

Tanner Stages:	Mean Age:	Reference Range:
Stage I (>14D and prepubertal)	7.1Y	undetectable - 29
Stage II	10.5Y	10 - 33
Stage III	11.6Y	15 - 43
Stage IV	12.3Y	16 - 77
Stage V	14.5Y	17 - 200

Note: Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for girls at a median age of 10.5(+/– 2) years. There is evidence that it may occur up to 1 year earlier in obese girls and in African American girls. Progression through Tanner stages is variable. Tanner stage 5 (adult) should be reached by age 18.

Effective 14Jan98 – 08Dec03:

Female:

1st trimester preg.	62 – 719
2nd trimester preg.	167 – 1862
3rd trimester preg.	1039 – 3210
Postmenopausal w/ERT	40 – 346
Postmenopausal w/o ERT	14 – 104
Oral contraceptive use	24 – 83
Follicular phase	37 – 138
Luteal phase	50 – 114
Periovulatory	60 – 229

Male: No established reference ranges

Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 19Sep94 – 13Jan98:
Female:

Early Follicular	15 – 150
Late Follicular	100 – 250
Luteal Phase	15 – 200
Postmenopasue	15 – 55
Male, Adult	15 – 65

Performed at SmithKline Beecham, Van Nuys CA
Effective 30Jun88 – 18Sep94:
Female:

Follic	30 – 100
Ovul	>150
Luteal	90 – 160
Postmen	20 – 40
Male	10 – 50

HISTORICAL REFERENCE RANGES

Test Name: Estrone, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Estrone, Urine ***µg/g creat*** (SI: nmol/d = g creat/d x 3.7 x µg/g creat)
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 19Sep94 – present:
Males
2-10Y 0.0-1.2
11-17Y 0.0-3.1
18+Y 2.0-8.0
Females
2-10Y 0.0-1.2
11-17Y 0.0-16.0
Adults
Follicular 2 – 39
Midcycle 11 – 46
Luteal 3 – 52

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Oct90 – 18Sep94:
Female
Follicular 2 – 39
Midcycle 11 – 46
Luteal 3 – 52
Male 2 – 8

Effective 11Apr88 – 30Sep90:
Female *µg/24hr*
Follicular 4 – 7
Midcycle 11 – 31
Luteal 10 – 23
Postmenopause 1 – 7
Male 4 – 23

HISTORICAL REFERENCE RANGES

Test Name: Ethanol
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Ethyl Alcohol
Reference Ranges:

Ethanol ***g/dL*** (SI: mmol/L = 217 x g/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 31May95 – present:
Negative < 0.01
Degrees of Intoxication 0.05 – 0.09
True Intoxication 0.1 – 0.19
Toxic >= 0.2

Performed at American Medical Labs, Chantilly VA
Effective 02Dec92 – 30May95:
Negative <0.01
Degrees of Intoxication 0.05 – 0.1
True Intoxication 0 .11 – 0.3
Coma Likely 0.31 – 0.4
Death Possible > 0.40

Performed at MetPath Labs, Rockville MD until 01Dec92.

HISTORICAL REFERENCE RANGES

Test Name: Ethosuximide
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Zarontin
Reference Ranges:

Ethosuximide *mg/L* (SI: µmol/L = 7.08 x mg/L) (mg/L = ug/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
Therapeutic 40 – 75
Toxic >=100

Performed at SmithKline Beecham, Van Nuys CA
Effective 03Oct89 – 18Sep94:
Therapeutic 40 – 100 ug/mL
Toxic >150

Test Name: Eye Sterile Fluid Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Eye Sterile Fluid Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present
Gram Stain: No WBCs, No organisms seen
Culture: No growth or normal flora.
For information on Antibiotic Susceptibility on significant isolates, click here

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Factor II
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Factor II

Performed at National Institutes of Health, Bethesda MD
Effective 07Jul94 – present: 60 - 150 %

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National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Factor IX
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Factor IX

Performed at National Institutes of Health, Bethesda MD
Effective 07Jul94 – present: 60 - 150 %

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HISTORICAL REFERENCE RANGES

Test Name: Factor V
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Factor V

Performed at National Institutes of Health, Bethesda MD
Effective 07Jul94 – present: 55 - 140 %

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Factor V Leiden Mutation Analysis
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Hereditary Resistance to Activated Protein C, Factor V R506Q mutation

Reference Ranges:

Factor V Leiden Mutation Analysis
Performed at National Institutes of Health, Bethesda MD
Effective 07Jul94 – present: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Factor VII
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Factor VII

Performed at National Institutes of Health, Bethesda MD
Effective 07Jul94 – present: 55 - 160 %

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HISTORICAL REFERENCE RANGES

Test Name: Factor VIII
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Factor VIII *%*
Performed at National Institutes of Health, Bethesda MD
Effective 15Sep99 - present: 55 - 175

Effective 0Jun94 - 14Sep99: 50 - 150

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HISTORICAL REFERENCE RANGES

Test Name: Factor VIII Inhibitor
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Bethesda
Reference Ranges:

FVIII Inhibitor ***Bethesda Units***
Performed at National Institutes of Health, Bethesda MD
Effective 24Jul02 – present: <0.5

Effective 02Jun94 – 23Jul02: No range available

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HISTORICAL REFERENCE RANGES

Test Name: Factor X
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Factor X
Performed at National Institutes of Health, Bethesda MD
Effective 07Jul94 – present: 60 - 150 %

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HISTORICAL REFERENCE RANGES

Test Name: Factor XI
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Factor XI

Performed at National Institutes of Health, Bethesda MD
Effective 07Jul94 – present: 60 - 150 %

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HISTORICAL REFERENCE RANGES

Test Name: Factor XII
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Factor XII

Performed at National Institutes of Health, Bethesda MD
Effective 07Jul94 – present: 60 - 150 %

Test Name: Fatty Acid Profile, Essential
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: FAP
Reference Ranges:

Fatty Acid Profile, Essential *µmol/L*
Performed at Mayo Medical Labs, Rochester MN
Effective 29Aug00 – present:

Lauric Acid
1D-1M 6 – 190
2M-1Y 6 – 190
2Y-17Y 5 – 80
18Y-150Y 6 – 90

Myristic Acid
1D-1M 30 – 320
2m-1Y 30 – 320
2Y-17Y 40 – 290
18Y-150Y 30 – 450

Hexadecenoic Acid
1D-1M 21 – 69
2m-1Y 21 – 69
2Y-17Y 24 – 82
18Y-150Y 25 – 105

Palmitoleic Acid
1D-1M 20 – 1020
2M-1Y 20 – 1020
2Y-17Y 100 – 670
18Y-150Y 110 – 1130

Palmitic Acid
1D-1M 720 – 3120
2M-1Y 720 – 3120
2Y-17Y 960 – 3460
18Y-150Y 1480 – 3730

g-Linolenic Acid
1D-1M 6 – 110
2M-1Y 6 – 110

2Y-17Y 9 – 130
18Y-150Y 16 – 150

a-Linolenic Acid
1D-1M 10 – 190
2M-1Y 10 – 190
2Y-17Y 20 – 120
18Y-150Y 50 – 130

Linoleic Acid
1D-1M 350 – 2660
2M-1Y 1000 – 3300
2Y-17Y 1600 – 3500
18Y-150Y 2270 – 3850

Oleic Acid
1D-1M 250 – 3500
2M-1Y 250 – 3500
2Y-17Y 350 – 3500
18Y-150Y 650 – 3500

Vaccenic Acid
1D-1M 140 – 720
2M-1Y 140 – 720
2Y-17Y 320 – 900
18Y-150Y 280 – 740

Stearic Acid
1D-1M 270 – 1140
2M-1Y 270 – 1140
2Y-17Y 280 – 1170
18Y-150Y 590 – 1170

EPA, C20:5w3 (Eicosapentaenoic Acid)
1D-1M 2 – 60
2M-1Y 2 – 60
2Y-17Y 8 – 90
18Y-150Y 14 – 100

Arachidonic Acid
1D-1M 110 – 1110
2M-1Y 110 – 1110
2Y-17Y 350 – 1030
18Y-150Y 520 – 1490

Mead Acid

1D-1M 8 – 60
2M-1Y 3 – 24
2Y-17Y 7 – 30
18Y-150Y 7 – 30

Homo-g-Linolenic Acid
1D-1M 30 – 170
2M-1Y 30 – 170
2Y-17Y 60 – 220
18Y-150Y 50 – 250

Arachidic Acid
1D-1M 30 – 120
2M-1Y 30 – 120
2Y-17Y 30 – 90
18Y-150Y 50 – 90

DHA, C22:6W3 (Docosahexaenoic Acid)
1D-1M 10 – 220
2M-1Y 10 – 220
2Y-17Y 30 – 160
18Y-150Y 30 – 250

DPA, C22:5w6
1D-1M 3 – 70
2M-1Y 3 – 70
2Y-17Y 10 – 50
18Y-150Y 10 – 70

DPA, C22:5w3
1D-1M 6 – 110
2M-1Y 6 – 110
2Y-17Y 30 – 270
18Y-150Y 20 – 210

DTA, C22:4w6
1D-1M 2 – 50
2M-1Y 2 – 50
2Y-17Y 10 – 40
18Y-150Y 10 – 80

Docosenoic Acid
1D-1M 2 – 20
2M-1Y 2 – 20
2Y-17Y 4 – 20
18Y-150Y 4 – 13

Nervonic Acid
1D-1M 30 – 150
2M-1Y 30 - 150
2Y-17Y 50 – 130
18Y-150Y 60 – 100

Triene Tetraene Ratio
1D-1M 0.017 – 0.083 ratio
2M-1Y 0.013 – 0.050 ratio
2Y-17Y 0.013 – 0.050 ratio
18Y-150Y 0.010 – 0.038 ratio

Total Saturated Acid
1D-1M 1.2 – 4.6
2M-1Y 1.2 – 4.6
2Y-17Y 1.4 – 4.9
18Y-150Y 2.5 – 5.5

Total Monounsaturated Acid
1D-1M 0.3 – 4.6
2M-1Y 0.3 – 4.6
2Y-17Y 0.5 – 4.4
18Y-150Y 1.3 – 5.8

Total Polyunsaturated Acid
1D-1M 1.1 – 4.9
2M-1Y 1.1 – 4.9
2Y-17Y 1.7 – 5.3
18Y-150Y 3.2 – 5.8

Total Omega 3 FA
1D-1M 0.0 – 0.4
2M-1Y 0.0 – 0.4
2Y-17Y 0.1 – 0.5
18Y-150Y 0.2 – 0.5

Total Omega 6 FA
1D-1M 0.9 – 4.4
2M-1Y 0.9 – 4.4
2Y-17Y 1.6 – 4.7
18Y-150Y 3.0 – 5.4

Total Fatty Acids
1D-1M 3.3 – 14.0
2M-1Y 3.3 – 14.0

2Y-17Y 4.4 – 14.3
18Y-150Y 7.3 – 16.8

Effective 09Oct96 – 28Aug00: *percent* (SI: fraction = .01 x percent)
Laurate
0Y-9Y 0.02 – 0.43
10Y-150Y 0.01 – 0.20

Myristate
0Y-9Y 0.40 – 1.70
10Y-150Y 0.30 – 1.30

Palmitate
0Y-9Y 16.70 – 25.90
10Y-150Y 17.10 – 22.60

Palmitoleate
0Y-9Y 0.80 – 5.30
10Y-150Y 1.00 – 3.30

Phytanate
0Y-9Y 0.00 – 0.07
10Y-150Y 0.00 – 0.09

Stearate
0Y-9Y 5.00 – 8.60
10Y-150Y 5.60 – 8.30

Oleate
0Y-9Y 15.50 – 30.70
10Y-150Y 14.30 – 23.80

Linoleate
0Y-9Y 16.40 – 35.60
10Y-150Y 26.80 – 37.70

Linolenate-w6
0Y-9Y 0.10 – 1.60
10Y-150Y 0.10 – 0.70

Linolenate-w3
0Y-9Y 0.20 – 1.20
10Y-150Y 0.20 – 1.00

Arachidate
0Y-9Y 0.14 – 0.39

10Y-150Y 0.14 – 0.32

Arachidonate
0Y-9Y 3.50 – 9.40
10Y-150Y 4.00 – 12.00

Eicosapentaenoate-w3
0Y-9Y 0.10 – 0.90
10Y-150Y 0.10 – 0.60

Docosatetraenoate-w6
0Y-9Y 0.20 – 0.70
10Y-150Y 0.20 – 0.40

Docosapentaenoate-w6
0Y-9Y 0.10 – 0.70
10Y-150Y 0.10 – 0.40

Docosapentaenoate-w3
0Y-9Y 0.20 – 0.70
10Y-150Y 0.20 – 0.60

Docosahexenoate-w3
0Y-9Y 0.70 – 3.30
10Y-150Y 0.60 – 2.00

Triene-Tetraene Ratio
20:3w9/20:4w6
0Y-9Y 0.003 – 0.146
10Y-150Y 0.014 – 0.062
20:3w6/20:4w6
0Y-9Y 0.084 – 0.506
10Y-150Y 0.109 – 0.39
(20:3w9+20:3w6)/20:4w6
0Y-9Y 0.097 – 0.556
10Y-150Y 0.128 – 0.435

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: FDP
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Fibrin Split Product
Reference Ranges:

FDP *µg/mL* (SI: mg/L = 1 x µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Oct99 – present: 0 – 5.0

Effective 02Oct96 – 12Oct99: 0 – 4.9

HISTORICAL REFERENCE RANGES

Test Name: Febrile Aggutinins
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Febrile Aggutinins
Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: Fecal Fat, Qualitative
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Sudan Red Stain
Reference Ranges:

Fecal Fat, Qualitative ***droplets/HPF***
Performed at Focus Technologies, Cypress CA
Effective 01Feb96 – present:
Fats, Neutral: Normal (<60 droplets/HPF)
Fats, Total (includes neutrals, soaps, and fatty acids: Normal (<100 droplets/HPF)
Pathological increase in stool fat is referred to as steatorrhea.
Patients with steatorrhea of pancreatic origin are likely to show
greater increases in neutral fat, while those with enterogenous
steatorrhea (impaired intestinal absorption) are likely to show
greater increases in total fats.

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 31Jan96

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jul92 – 18Sep94

Performed at MetPath Labs, Rockville MD
Effective until 30Jun92

Test Name: Fecal Fat, Total, Quantitative
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Fecal Fat, Total, Quantitative
Performed at Mayo Medical Labs, Rochester MN
Effective 15Mar95 – present:
Total Fat *g/24h* (SI: g/d = 1.0 x g/24hr) 2 – 7

Effective 06Mar99 – 13Mar02 (no longer reported after this date):
%Fat *%* (SI: fraction = .01 x percent) 0 – 19

Peformed at American Medical Labs, Chantilly VA
Effective Oct91 – 14Mar95: 1 – 5 *g/24h*

Performed at MetPath Labs, Rockville MD
Effective 01Jan79 – 30Oct91: 1 – 7 *g/24h*

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National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Ferritin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Ferritin *µg/L* (SI: µg/L)
Performed at National Institutes of Health, Bethesda MD
Effective 30Aug00 – present:
Male 18 – 370
Female 9 – 120

Effective 18Oct95 – 29Aug00:
Male 10 – 300
Female 10 – 125

Effective 01Sep93 – 17Oct95:
Male 7 – 300
Female 5 – 125

Effective 06Mar85 – 31Aug93:
Male 17 – 300
Female 15 – 246

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Fetal Hemoglobin
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: hgb, hb, Hgb F, Fetal Hgb
Reference Ranges:

Fetal Hemoglobin

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: 0 - 2 %

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Fibrinogen
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Fibrinogen *mg/dL* (SI: g/L = 0.01 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Fibrinogen Auto:
Effective 20Jan99 – present: 168 – 458
Effective 08May96 – 19Jan99: 158 – 428
Effective 06Jun85 – 07May96: 160 - 346

Fibrinogen Fibrometer:
Effective 20Jan99 – present: 190 – 457
Effective 01Jan79 – 19Jan99: 186 – 365

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HISTORICAL REFERENCE RANGES

Test Name: Filaria IgG4 Ab
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Filaria IgG4 Antibody
Performed at Focus Technologies, Cypress CA
Effective 26Apr02 - present: <1.00

Interpretation:
<1.00 Antibody not detected
1.00 - 4.00 Antibody Detected; may reflect cross reactivity due to other parasitic infections(ie., trichinosis, echinococcosis, schistosomiasis)
>4.00 Antibody detected; strongly

Test Name: Filariasis Antibody (Obsolete)
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Filaria Antibody IgG4 replaced this test.
Filariasis Antibody
Performed at Specialty Labs, Santa Monica CA
Effective 06Mar99 - 25Apr02:
IgG 0 - 1.9
IgM 0 - 1.9

Effective 19Sep94 - 05Mar99: No ranges available

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug00: No ranges available

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Fluid Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Fluid Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen
Culture: No growth

For information on Antibiotic Susceptibility on significant isolates, click here

Test Name: Fluoxetine / Norfluoxetine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Prozac
Reference Ranges:

Fluoxetine / Norfluoxetine ***ng/mL*** (SI: ug/L = 1.0 x ng/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 13Mar02 – present:
Therapeutic Range: Fluoxetine + Norfluoxetine: 200 – 1100 *ng/mL*

Interpretation
Because fluoxetine is typically administered in doses of 20-80 mg/day and because of individual variations in drug metabolism and clearance, the normal range is broad.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Folate
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Folate ***ng/mL*** (SI: nmol/L = 2.265 x ng/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 18Oct95 – present: 3.0 – 30.0
Effective 30Oct86 – 17Oct95: 3.0 – 11.0
Effective 07Aug79 – 29Oct86: 2.0 – 14.0
Effective 01Jan79 – 06Aug79: 2.3 – 14.0

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National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Folate Reductase, Labile
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: 5-10 methylenetetrahydrofolate Reductase (MTHFR) Mutation Analysis MTHFR C677T variant, Thermolabile MTHFR, Folate Reduct-labile

Reference Ranges:

Labile Folate Reductase
Performed at National Institutes of Health, Bethesda MD
Effective 13Jun01 – present:
An interpretive report will indicate whether or not results are consistent with a diagnosis of thermolabile MTHFR.

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National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Folate, RBC
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Folate, RBC ***ng/mL*** (SI: nmol/L = 2.265 x ng/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 14Jun00 – present: 93 – 750
Effective 18Oct95 – 13Jun00: 155 – 600
Effective 30Oct86 – 17Oct95: 200 – 470
Effective 07Aug79 – 29Oct86: 200 – 800
Effective 01Jan79 – 06Aug79: >140

Test Name: Follicle Stimulating Hormone
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: FSH
Reference Ranges:

Follicle Stimulating Hormone ***U/L*** (SI: U/L = mIU/mL)
Performed at the National Institutes of Health, Bethesda MD
Effective 01Sep93 – present:
Males: 1 – 12
Females:
Follicular 3 – 15
Mid-Cycle >9
Luteal 2 – 9
Postmenopausal 20 – 131

Effective 01May91 – 31Aug93:
Prepubescent male and females: 0 – 9.9 *mIU/mL*
Males: 7 – 20 *mIU/mL*
Females:
Follicular 6 – 23 *mIU/mL*
Ovulatory 18 – 46 *mIU/mL*
Luteal 2 – 19 *mIU/mL*
Postmenopausal >25 *mIU/mL*

Performed at SmithKline Beecham, Van Nuys CA
Effective 03Jan89 – 01May91:
Prepubescent male and females: 0 – 9.9 *mIU/mL*
Males: 7 – 20 *mIU/mL*
Females:
Follicular 6 – 23 *mIU/mL*
Ovulatory 18 – 46 *mIU/mL*
Luteal 2 – 19 *mIU/mL*
Postmenopausal >25 *mIU/mL*

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HISTORICAL REFERENCE RANGES

Test Name: Foreign Body Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Foreign Body Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
No growth
For information on Antibiotic Susceptibility on significant isolates, click here

Test Name: Fragile X, Molecular Analysis
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Fragile X, Molecular Analysis
Performed at Mayo Medical Labs., Rochester MN
Effective03Jul96 – present:
An interpretive report will be issued.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Free Fatty Acids, Total
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: FFA
Reference Ranges:

Free Fatty Acids *µEq/L* (SI: mmol/L = 0.0011 x µEq/L)
Performed at National Institutes of Health, Bethesda MD
Effective 11Apr01 – present: 0 – 839
Effective 21Apr98 – 10Apr01: 0 – 729
Effective 05Oct94 – 20Apr98: 239 – 843

Test Name: Fungal Blood Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Nocardia, Malasezzia,Fungus culture

Reference Ranges:

Fungal Blood Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Fungus Culture: No growth of fungus in 4 weeks.
Nocardia Culture: No growth of Nocardia in 4 weeks.
Malasezzia Culture : No growth of Malasezzia in 4 weeks.

Test Name: Fungal Bone Marrow Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture,Fungus culture
Reference Ranges:

Fungal Bone Marrow Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Fungus Culture: No growth of fungus in 4 weeks

Test Name: Fungal Serology (Protocol)
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Fungal Serology
Performed at Mayo Medical Labs, Rochester MN
Effective 26Jun02 - present:
Negative; if positive, results are titered. Report will indicate significant titers.

NOTE: Antibodies to blastomyces, coccidioides, and histoplasma and antigen to cryptococcus are all measured and reported as if each had been ordered alone.

Effective 19Sep94 - 25Jun02:
Negative; if positive, results are titered.
Report will indicate significant titers.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94:
Negative; if positive, results are titered.

Performed at American Medical Labs, Chantilly VA
Effective 02Mar86 - 31Aug90:
No ranges available

Performed at the Centers for Disease Control, Atlanta GA
Effective until 01Mar86:
No ranges available

Test Name: Fungus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology Culture, Nocardia
Reference Ranges:

Fungus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Lung autopsy: No growth of fungus or Nocardia sp. in 2 weeks

Non- lung autopsy: No growth of fungus in 2 weeks

All fungi and Nocardia identified.

Test Name: Fungus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture
Reference Ranges:

Fungus Culture, Spinal Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
No growth of fungus in 4 weeks

Test Name: Fungus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture
Reference Ranges:

Fungus Culture, Anterior Nares
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Fungus Culture: No growth of fungus in 2 weeks

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HISTORICAL REFERENCE RANGES

Test Name: Fungus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture
Reference Ranges:

Fungus Culture, Urine
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Fungus culture: No growth of fungus in 4 weeks

Test Name: Fungus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Fungus Culture, Eye
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Fungus Culture for Conjunctiva, eyelid: No growth of fungus in 2 weeks

Fungus Culture for Anterior chamber fluid, vitreous fluid, and corneal scrapings: No growth of fungus in 4 weeks.

Test Name: Fungus Culture (includes isolation of Nocardia)
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture
Reference Ranges:

Fungus Culture, Bronchial Brush
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Fungus Culture: No growth of fungi or Norcardia in 4 weeks

Test Name: Fungus Culture (includes isolation of Nocardia)Wet Mount/Modified Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Calcofluor white stain, MAF, Mycology culture
Reference Ranges:

Fungus Culture (includes isolation of Nocardia)Wet Mount/Modified Acid-Fast Stain, Bronchial Lavage
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Modified Acid-Fast stain: No modified acid-fast bacilli seen
Wet mount: Negative for fungi
Culture: No growth of fungus or Nocardia in 4 weeks.

Test Name: Fungus Culture(includes isolation of Nocardia)/ Wet Mount/ Modified Acid Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain,MAF
Reference Ranges:

Fungus Culture (includes isolation of Nocardia)Wet Mount/Modified Acid-Fast Stain, Sputum
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet mount: No fungi seen
Culture: No growth of fungus or Nocardia sp. in 4 weeks
MAF stain:No modified acid-fast bacilli seen

Test Name: Fungus Culture(includes isolation of Nocardia)/ Wet mount/Modified Acid-fast stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain, MAF
Reference Ranges:

Fungus Culture (includes isolation of Nocardia)Wet Mount/Modified Acid-Fast Stain, Trachial Aspirate and Transtracheal
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet mount: No fungi seen.
MAF stain:No modified acid-fast bacilli seen.
Culture: No growth of fungus or Nocardia sp. in 4 weeks

Test Name: Fungus Culture(includes isolation of Nocardia)/Wet Mount,Modified Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Calcofluor white stain, MAF, Mycology culture
Reference Ranges:

Fungus Culture (includes isolation of Nocardia)Wet Mount/Modified Acid-Fast Stain, Bronchial Wash
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
MAF stain: Modified Kinyoun for Nocardia
Wet mount: Negative for fungi
Culture: No growth or fungus or Nocardia sp. in 4 weeks

Test Name: Fungus Culture/ Nocardia/Wet Mount/ Modified Acid Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology Culture, MAF, Calcofluor white stain
Reference Ranges:

Fungus Culture (includes isolation of Nocardia)Wet Mount/Modified Acid-Fast Stain, Biopsy
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
MAF stain: No modified acid fast bacilli seen
Wet mount: No fungi seen
Fungus:No growth of fungus in 4 weeks
Nocardia culture:No Nocardia species isolated

HISTORICAL REFERENCE RANGES

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Calcofluor white stain, Mycology culture, Nocardia

Reference Ranges:

Fungus Culture /Wet Mount, Abscess
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet Mount: Negative for fungi.
Fungus Culture: No growth of fungus in 4 weeks.

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HISTORICAL REFERENCE RANGES

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain
Reference Ranges:

Fungus Culture /Wet Mount, Drainage
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet Mount: No fungi seen
Fungus Culture: No growth of fungus in 4 weeks

HISTORICAL REFERENCE RANGES

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain
Reference Ranges:

Fungus Culture/Wet Mount, Esophageal Brushing
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet Mount: No fungi seen
Fungus Culture: No growth of fungus in 2 weeks

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain
Reference Ranges:

Fungus Culture /Wet Mount, Hair
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet Mount: No fungi seen
Fungus culture: No growth of fungus in 2 weeks

HISTORICAL REFERENCE RANGES

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain
Reference Ranges:

Fungus Culture /Wet Mount, Joint Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet mount: No fungi seen
Fungus culture: No growth of fungus in 4 weeks

Test Name: Fungus Culture/ Wet mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain
Reference Ranges:

Fungus Culture /Wet Mount, Nails
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet Mount: No fungi seen
Fungus culture: No growth of fungus in 2 weeks

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HISTORICAL REFERENCE RANGES

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain
Reference Ranges:

Fungus Culture /Wet Mount, Pericardial Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet Mount: No fungi seen.
Fungus Culture: No growth of fungus in 4 weeks

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain
Reference Ranges:

Fungus Culture /Wet Mount, Peritoneal Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet Mount: No fungi seen
Fungus culture: No growth of fungus in 4 weeks

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain, Nocardia

Reference Ranges:

Fungus Culture /Wet Mount, Pleural Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet mount: No fungi seen
Fungus culture: No growth of fungus in 4 weeks

HISTORICAL REFERENCE RANGES

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain
Reference Ranges:

Fungus Culture /Wet Mount, Prostatic Massage Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet mount: No fungi seen
Fungus culture: No growth of fungus in 4 weeks

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain
Reference Ranges:

Fungus Culture/Wet Mount, Sinus
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet mount: No fungi seen
Fungus culture: No growth of fungus in 4 weeks

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain
Reference Ranges:

Fungus Culture/Wet Mount, Skin Lesion
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet mount: No fungi seen
Fungus culture: No growth of fungus in 4 weeks

HISTORICAL REFERENCE RANGES

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain
Reference Ranges:

Fungus Culture/Wet Mount, Skin Scraping
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet mount: No fungi seen
Fungus culture: No growth of fungus in 4 weeks

Test Name: Fungus Culture/ Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Mycology culture, Calcofluor white stain
Reference Ranges:

Fungus Culture/Wet Mount, Wound
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Wet mount: No fungi seen
Fungus culture: No growth of fungus in 4 weeks

HISTORICAL REFERENCE RANGES

Test Name: Gabapentin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Neurontin
Reference Ranges:

Gabapentin *µg/mL* (SI: mg/L = µg/mL x 1.0)
Performed at Mayo Medical Labs, Rochester MN
Effective 15Sep99 – present:
Therapeutic 2 – 12
Toxic >=25

Test Name: GAD65 Ab Assay
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Glutamic Acid Decarboxylase Antibody Assay
Reference Ranges:

GAD65 Ab Assay *nmol/L*
Performed at Mayo Medical Labs, Rochester MN
Effective 08Dec99 – present: <=0.02
Interpretation:
Values > or = 0.03 nmol/L are consistent with susceptibility to autoimmune (type 1) diabetes, and related endocrine disorders (thyroiditis and pernicious anemia).

Values > or = 20 nmol/L are found in stiff-man syndrome and in realted autoimmune neurologic disorders (e.g. acquired cerebellar ataxia).
Values in patients who have type 1 diabetes with an autoimmune neurologic syndrome are usually <20 nmol/L.

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HISTORICAL REFERENCE RANGES

Test Name: Galactosylceramide Beta-Galactosidase, Fibroblast
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Cerebroside Beta-Galactoside, Krabbe's Disease

Reference Ranges:

Galactosylceramide Beta-Galactosidase, Fibroblast ***mU/g of cellular protein***
Performed at Mayo Medical Labs, Rochester MN
Effective 09Oct96 – present: 10.3 – 89.7

HISTORICAL REFERENCE RANGES

Test Name: Gamma Glutamyl Transferase
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: GGT
Reference Ranges:

Gamma Glutamyl Transferase *U/L* (SI: U/L)
Performed at National Institutes of Health, Bethesda MD
Effective 06Dec95 – present:
Male 11 – 52
Female 7 – 38

Effective 06Oct93 – 05Dec95:
Male & Female 14 – 84

Effective 08Jan81 – 05Oct93:
Male 10 – 106
Female 7 – 52

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 07Jan81:
Male 0 – 27
Female 0 – 17

HISTORICAL REFERENCE RANGES

Test Name: Gastrin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Gastrin *pg/m*L (SI: ng/L = pg/mL x 1.0)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 0 – 200

Performed at SmithKline Beecham, Van Nuys CA
Effective 24Mar81 – 18Sep94: 0 – 100

Performed at MetPath Labs, Rockville MD
Effective 01Jan79 – 23Mar81: 50 – 170

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HISTORICAL REFERENCE RANGES

Test Name: Gastroccult, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Gastroccult, Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Mar99 – present: Negative

HISTORICAL REFERENCE RANGES

Test Name: Gentamicin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Gentamicin *mg/L* (SI: µmol/L = 2.09 x mg/L)
Performed at National Institutes of Health, Bethesda MD
Effective 02Apr92 – present:
Therapeutic:
Pre <2
Post 5 – 10
Toxic:
Post >10

Effective until 01Apr92:
Therapeutic:
Pre <2
Post 4 – 10
Toxic:
Post >10

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HISTORICAL REFERENCE RANGES

Test Name: Giardia EIA
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Giardia EIA
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Negative

Test Name: Gliadin Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Celiac Disease
Reference Ranges:

Gliadin Antibodies IgG and Ig*A* *EU* (SI: kIU/L = EU x 1.0)
Performed at Mayo Medical Labs, Rochester MN
Effective 22Jan04 – present:
Negative
1D-35M 0 – 20
36M-150Y 0 – 25

Equivocal
1D-35M 20.1 – 24.9
36M-150Y 25.1 – 49.9

Positive
1D-35M >=25
36M-150Y >=50

Effective 20Aug01 – 21Jan04:
Negative
1D-23M 0 – 49.9
23M-150Y 0 – 24.9
Weakly Positive
1D-23M 50 – 100
23M-150Y 25 – 50
Positive
1D-23M >100
23M-150Y >50

Effective 10May00 – 19Aug01: *U/mL* (SI: kIU/L = U/mL x 1.0)
Negative
1D-23M 0 – 49.9
23M-150Y 0 – 24.9
Weak Positive
1D-23M 50 – 100
23M-150Y 25 – 50
Positive
1D-23M >100
23M-150Y >50

HISTORICAL REFERENCE RANGES

Test Name: Glucagon
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Glucagon *pg/mL* (SI: ng/L = pg/mL x 1.0)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 0 – 60

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan88 – 18Sep94: 50 – 200

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HISTORICAL REFERENCE RANGES

Test Name: Glucose-6-Phosphate Dehydrogenase Screen
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: G6PD, Erythrocyte G6PD Screen
Reference Ranges:

Glucose-6-Phosphate Dehydrogenase Screen
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Normal

HISTORICAL REFERENCE RANGES

Test Name: Glucose Quantitative, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Glucose Quantitative, Urine *g/24hr* (SI: mmol/d = 5.55 x g/24hr)
Performed at National Institutes of Health, Bethesda MD
Effective 20Jan99 – present: 24 hr: <0.5
Random: Negative

Effective 29Nov85 – 19Jan99: 24 hr: 0.0 – 0.5
Random: Negative

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HISTORICAL REFERENCE RANGES

Test Name: Glucose, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Glucose, CSF *mg/dL* (SI: mmol/L = 0.0555 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 12Apr89 – present:: 40 – 70
Effective 14Nov85 – 11Apr89: 50 – 80
Effective 01Jan79 – 13Nov85: 40 – 75

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HISTORICAL REFERENCE RANGES

Test Name: Glucose, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Glucose, Fluid ***mg/dL*** (SI: mmol/L = 0.0555 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Glucose, Plasma
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Plasma Glucose
Reference Ranges:

Glucose, Plasma ***mg/dL*** (SI: mmol/L = 0.0555 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 – present: 70 – 115
Effective 01Jan79 – 30Nov88: 70 – 120

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HISTORICAL REFERENCE RANGES

Test Name: Glucose, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: FBS, Fasting Blood Glucose
Reference Ranges:

Glucose, serum ***mg/dL*** (SI: mmol/L = 0.0555 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 – present: 70 – 115
Effective 01Jan79 – 30Nov88: 70 – 120

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HISTORICAL REFERENCE RANGES

Test Name: Glucose, Whole Blood
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Glucose, Whole Blood ***mg/dL*** (SI: mmol/L = 0.0555 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jul01 – present: 70 – 115

Test Name: GM-1 Antibody Panel
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Ganglioside
Reference Ranges:

GM-1 Antibody Panel *titer*
Performed at Mayo Medical Labs, Rochester MN
Effective 01Oct94 – present:

Monosialo GM1	>=500
IgM Monosialo GM1	>=1000
IgG and IgM Asialo GM1	>=4000
IgG and IgM Disialo GD1b	>=1000

Performed at SmithKline Beecham, Van Nuys CA
Effective 02Dec92 - 30Sep94: 0 - 9.99 units

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HISTORICAL REFERENCE RANGES

Test Name: Gold Determination, Urine
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Gold Determination, Urine
Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – present: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Gonococcus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Gonococcus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen
Culture: No Neisseria gonorrhoeae isolated
For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Gonococcus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: GC culture
Reference Ranges:

Gonococcus Culture, Urethra
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
No WBCs, No Gram negative diplococci seen
Culture: No Neisseria gonorrhoeae isolated.
For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Gonococcus Culture/Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: GC Culture
Reference Ranges:

Gonococcus Culture/Gram Stain, **Cervix**
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
No Neisseria gonorrhoeae isolated
Gram stain: No WBCs, No gram negative diplococci seen
For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Gonococcus Culture/Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: GC Culture
Reference Ranges:

Gonococcus Culture/Gram Stain, Vagina
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
No Neisseria gonorrhoeae isolated
For information on Antibiotic Susceptibility on significant isolates, click here

Test Name: Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Gram Stain, Mouth (Oral Cavity)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No yeast like cells seen

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HISTORICAL REFERENCE RANGES

Test Name: Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Gram Stain, Stool
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No White Blood Cells seen

HISTORICAL REFERENCE RANGES

Test Name: Growth Hormone
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: HGH
Reference Ranges:

Growth Hormone *ng/mL* (SI: µg/L = 1 x ng/mL)
Perfomed at the National Institutes of Health, Bethesda MD
Effective 14Apr04 – present:
Male: 0 – 5
Female: 0 – 10

Effective 20Jan99 – 13Apr04: 0 – 5

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 19Jan99:
Females 0 – 10.0
Males 0 – 5.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 20May91 – 18Sep94:
Adult & Child <8.0
Neonate <40.0
Stimulated >5.0
Suppressed <1.0

Effective 04Jan89 – 19May91:
Adult >18Y <5
0Y-18Y <10

Effective 01Jan79 – 30Jun85:
Adult & Child <8
2Y-10Y <10
F >=11Y <15
M >=11Y <10

HISTORICAL REFERENCE RANGES

Test Name: Growth Hormone Binding Protein
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: GHBP
Reference Ranges:

Growth Hormone Binding Protein ***pmol/L***
Performed at Esoterix Endocrinology, Calabasas Hills CA
Effective 08Jan03 – present:

CHILDREN:		
Under 2 Years	95 - 762	(Mean=406)
3-10 Years	268 - 1638	(Mean=864)
10-15 Years	431 - 1892	(Mean=1104)
ADULTS:		
20-50 Years	686 - 2019	(Mean=1104)

Test Name: Haemophilus Influenza IgG Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: H. Flu Ab
Reference Ranges:

Haemophilus Influenza IgG Antibody *ug/mL*
Performed at Focus Technologies, Cypress CA
Effective 06Mar99 – present:
Interpretive criteria:
<0.15 Nonprotective antibody level
0.15 – 0.99 Indeterminate for protective antibody
>=1.0 Protective antibody level
A four-fold increase in the polyribosylribitol phosphate (PRP) IgG Ab level between pre-vaccination and post-vaccination sera is considered evidence of effective immunization.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Haloperidol
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Reduced Haloperidol
Reference Ranges:

Haloperidol *ng/mL* (SI: µg/L = ng/mL x 1.0) (ng/mL = µg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 25Apr01 – present:
Haloperidol 5 – 16
Reduced Haloperidol 10 – 80

Effective 14Feb95 – 24Apr01:
Haloperidol (*µg/L*)
Therapeutic 5 – 16
Low Dose Therapy 2 – 5
High Dose Therapy 10 – 40
Reduced Haloperidol No established range

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Haptoglobin
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms:
Reference Ranges:

Haptoglobin ***mg/dL*** (SI: mg/L = 10 x mg/dl)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present: 33 – 242
Effective 22Dec97 – 10Jun03: 29 – 170
Effective 28Jun95 – 21Dec97: 34 – 181
Effective 05Jul81 – 27Jun95: 41 – 210
Effective 01Jan79 – 04Jul81: 50 – 150

Test Name: Heavy Metals, Free, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Arsenic, Lead, Mercury, Cadmium
Reference Ranges:

Heavy Metals, Free, Urine *µg/24hr*
Performed at Mayo Medical Labs, Rochester MN
Effective 30Mar95 – present:
Arsenic *µg/24hr* (SI: µmol/d = µg/24hr x 0.0133)
Normal concentration: <120
Toxic concentration: >= 5000

Lead *µg/24hr* (SI: µmol/d = µg/24hr x 0.00483)
Normal: <80
Inconclusive: 80-400
Abnormal: >400

Mercury *µg/24hr* (SI: mmol/d = µg/24hr x 0.00499)
Normal concentration: <10
Toxic concentration: >50

Cadmium *µg/24hr* (SI: nmol/d = µg/24hr x 8.897)
Normal concentration: <3.0
These reference values are for a 24 hr collection. Specimens collected for other than a 24 hr time period are reported in units of µg/L for which reference values are not established.

Performed at SmithKline Beecham, Van Nuys CA
Effective 15Nov85 – 19Sep94:
Arsenic: 0 – 100 *µg/L* (SI: µmol/L = µg/L x 0.0133)
Lead: <80 *µg/L* (SI: µmol/L = µg/L x 0.00483)
Mercury: 0.0 – 20.0 *µg/L* (SI: mmol/L = µg/L x 0.00499)

Effective 01Jan79 – 13Nov85:
Arsenic: 0 – 100 *µg/L*
Lead: <100 *µg/L*
Mercury: 0.0 – 20.0 *µg/L*

Test Name: Heinz Body Test
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Heinz Body Test
Performed at Quest Diagnostics, Baltimore MD
Effective 13Nov02 – present: Occasional Heinz body seen

Performed at American Medical Labs, Chantilly VA
Effective 14Jun00 – 12Nov02: Occasional Heinz body seen

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 13Jun00: Occasional Heinz body seen

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Helicobacter Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: H.pylori
Reference Ranges:

Helicobacter Culture, Biopsy
Performed at National Institutes of Health, Bethesda MD
Effective 29Jun94 – present: No Helicobater pylori isolated

HISTORICAL REFERENCE RANGES

Test Name: Helicobacter Pylori IgG Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Helicobacter
Reference Ranges:

Helicobacter Pylori IgG Antibody
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
Reported as positive, negative, or equivocal
negative <=170 ABR
equivocal 171 – 199 ABR
positive >=200 ABR

Performed at SmithKline Beecham, Van Nuys CA
Effective 22Jun94 - 18Sep94

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Hemoglobin A1C
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Glycosylated Hemoglobin, A1C, hgb, hb
Reference Ranges:

Hemoglobin A1C *%* (SI: Hb fraction = 0.01 x %)
Performed at National Institutes of Health, Bethesda MD
Effective 29Apr98 – present: 4.8 – 6.4

Glycosylated Hemoglobin *%*
Effective 01Jul85 – 28Apr98: 5.4 – 7.6
Effective 16Feb82 – 30Jun85: 5.7 – 8.8

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HISTORICAL REFERENCE RANGES

Test Name: Hemoglobin A2
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: hgb, hb
Reference Ranges:

Hemoglobin A2 %
Performed at National Institutes of Health, Bethesda MD
Effective 09Jun99 – present: 2.2 – 3.2
Effective 01Jan79 – 08Jun99: 1.9 – 3.3

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Hemoglobin Electrophoresis
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: hgb, hb
Reference Ranges:

Hemoglobin Electrophoresis
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Call Hematology X65720 for interpretation

Test Name: Hemosiderin, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Hemosiderin, Urine
Performed at Mayo Medical Labs, Rochester MN
Effective 11Apr01 – present

Hemosiderin, Urine	Negative
Hemoglobin, Urine	Negative
RBC, Urine	Occasional <1

Interpretation:
A positive hemosiderin indicates excess red cell destruction.

Hemosiderinuria may still be detected after hemoglobin has cleared from the urine and hemoglobin dipstick is negative.

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 10Apr01: No ranges available

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Hepatic Panel
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Hepatic Panel
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 – present:
Alkaline Phosphatase >18Y 37-116 *U/L*
ALT/GPT 6-41 *U/L*
AST/GOT 9-34 *U/L*
Total Bilirubin 0.1-1.0 *mg/dL*
Direct Bilirubin < 0.2 *mg/dL*

Test Name: Hereditary Hemochromatosis Gene Analysis
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: HFE
Reference Ranges:

HFE Hereditary Hemochromatosis Gene Analysis
Performed at Mayo Medical Labs, Rochester MN
Effective 10Jun98 – present
An interpretive report will indicate whether or not results are consistent with a diagnosis of hereditary hemochromatosis.

Test Name: Herpes Simplex Abs, 1/2, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: HSV, Virus
Reference Ranges:

Herpes Simplex Virus Antibodies
Performed at Mayo Medical Labs, Rochester MN
Effective 19Jul01 – present:
HSV1 IgG Reported as positive, negative or equivocal
HSV2 IgG Reported as positive, negative or equivocal
HSV1/2 IgM Reported as positive or negative

Effective 02Dec97 – 18Jul01:
IgG Reported as positive, negative or equivocal
IgM Reported as positive or negative

Effective 19Sep94 – 01Dec97:
IGG <1:5
IGM <1:10

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No ranges available

Test Name: Herpes Simplex Antibody, 1/2 CSF
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: HSV, Viral
Reference Ranges:

Herpes Simplex Antibodies, Types 1 & 2, CSF ***titer***
Performed at Focus Technologies, Cypress CA
Effective 09Mar99 – present:
Expected Values:
HSV 1 ACIF <1:8
HSV 2 ACIF <1:2
HSV 1 IgM, IFA <1:1
HSV 2 IgM, IFA <1:1
Interpretation:
HSV 1 ACIF: <1:8 Anitbody not detected
HSV 2 ACIF: <1:2 Antibody not detected
HSV 1 ACIF: >= 1:8 Antibody detected
HSV 2 ACIF: >= 1:2 Antibody detected
HSV 1 & 2 IgM IFA: <1:1 Antibody not detected
HSV 1 & 2 IgM IFA: >= 1:1 Antibody detected

Test Name: Herpes Simplex Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: HSV
Reference Ranges:

Herpes Simplex Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep94 – present: No virus isolated.

Performed at American Medical Labs, Chantilly VA
Effective until 19Sep94: No virus isolated.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Herpes Simplex Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: HSV
Reference Ranges:

Herpes Simplex Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep94 – present: No virus isolated.

Performed at American Medical Labs, Chantilly VA
Effective until 19Sep94: No virus isolated.

Test Name: Herpes Simplex Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: HSV
Reference Ranges:

Herpes Simplex Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep94 – present: No virus isolated.

Performed at American Medical Labs, Chantilly VA
Effective until 19Sep94: No virus isolated.

Test Name: Herpes Simplex Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: HSV
Reference Ranges:

Herpes Simplex Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep94 – present: No virus isolated.

Performed at American Medical Labs, Chantilly VA
Effective until 19Sep94: No virus isolated.

Test Name: Herpes Simplex Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: HSV
Reference Ranges:

Herpes Simplex Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep94 – present: No virus isolated.

Performed at American Medical Labs, Chantilly VA
Effective until 19Sep94: No virus isolated.

Test Name: Herpes Simplex Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: HSV
Reference Ranges:

Herpes Simplex Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep94 – present: No virus isolated.

Performed at American Medical Labs, Chantilly VA
Effective until 19Sep94: No virus isolated.

Test Name: Herpes Simplex Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: HSV
Reference Ranges:

Herpes Simplex Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep94 – present: No virus isolated.

Performed at American Medical Labs, Chantilly VA
Effective until 19Sep94: No virus isolated.

Test Name: Herpes Simplex Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: HSV
Reference Ranges:

Herpes Simplex Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep94 – present: No virus isolated.

Performed at American Medical Labs, Chantilly VA
Effective until 19Sep94: No virus isolated.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Herpes Simplex Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: HSV
Reference Ranges:

Herpes Simplex Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep94 – present: No virus isolated.

Performed at American Medical Labs, Chantilly VA
Effective until 19Sep94: No virus isolated.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Herpes Simplex Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: HSV
Reference Ranges:

Herpes Simplex Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 19Sep94 – present: No virus isolated.

Performed at American Medical Labs, Chantilly VA
Effective until 19Sep94: No virus isolated.

Test Name: Herpes Simplex Virus PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: HSV-PCR
Reference Ranges:

Herpes Simplex 1 & 2 CSF PCR
Performed at National Institutes of Health, Bethesda MD
Effective 02Mar98 – present: Negative for Herpes simplex virus type 1 and type 2 by PCR.

Performed at Mayo Medical Labs, Rochester MN
Effective 21Aug96 – 01Mar98: Negative

Test Name: Hexosaminidase, A & Total, Fibroblasts
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Hexosaminidase, A & Total, Fibroblasts
Performed at Mayo Medical Labs, Rochester MN
Effective 09Oct96 – present:
Hexosaminidase,Total 92.5 – 184.5 *U/g of cellular protein*
Hexosaminidase A 41 – 65 *percent*

Test Name: Hexosaminidase, A & Total, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Hexosaminidase, A & Total, Serum
Performed at Mayo Medical Labs, Rochester MN
Effective 09Oct96 – present:
Hexosaminidase, Total
0Y-4Y not established
>=5Y 10.4 – 23.8 *U/L*
Hexosaminidase A
0Y-4Y not established
>=5Y:
Normal 56 – 80 *percent*
Indeterminate 50 – 55 *percent*
Carrier 0 – 49 *percent*

Heterozygote testing is not reliable in neonates due to elevate total and heat stable forms of hexosaminidase. It remains valid in predicting the presence of homozygotes for Tay-Sachs.

HISTORICAL REFERENCE RANGES

Test Name: Histamine, Whole Blood
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Histamine, Whole Blood ***ng/mL*** (SI: µg/L = 1.0 x ng/mL)
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 17Apr00 – present: 9 – 141

Performed at SmithKline Beecham, Van Nuys CA
Effective 28May97 – 16Apr00: 25 – 175

Test Name: Histoplasma Antibody CSF
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Histoplasma Antibody CSF
Histoplasma Yeast CF, CSF
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 20Mar00

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: Histoplasma Antibody, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Histoplasma Antibody, Serum
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
Antibody by Immunodiffusion: Negative, Positives reported as band present
Mycelial by Complement Fixation: Negative, Positives reported as titer
Yeast by Complement Fixation: Negative, Positives reported as titer

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94:
Mycelial by Complement Fixation: Negative, Positives reported as titer
Yeast by Complement Fixation: Negative, Positives reported as titer

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90:
Mycelial by Complement Fixation: Negative, Positives reported as titer
Yeast by Complement Fixation: Negative, Positives reported as titer

Test Name: Histoplasma Antigen
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Histoplasma Antigen, Urine ***EIA units***
Performed at MiraVista Diagnostics, Indianapolis IN
Effective 26Apr02 – present:
EIA units Result Interpretation
Equivocal .....Result inconclusive after repeated testing
<1.0.....Negative
1.0-2.0.....Weak Positive;Suggest Repeat
2.1-4.0.....Positive;Repeat if consistent with Clinical Findings
4.1-10.0.....Moderate Positive
>10.0.....High Positive

FOR FOLLOW-UP TESTING ONLY (comparing to previous specimen test in the same assay):
Increase:
< or = 2.0: Stable*
2.1 – 4.0: Mild increase; possible failure; suggest repeat
>4.0: Moderate to Marked increase; probable failure

Decrease: Current specimen having >2.0 unit decrease compared to result of prior specimen tested in the same assay is interpreted as having a decreased antigen level.

*No Change: Increases or decreases <2.0 units are considered no change.

Performed at Wishard Memorial Hospital, Indianapolis IN
Effective until 25Apr02:
Equivocal: Result inconclusive after repeated testing
<1.0 Negative
1.0 – 2.0 Weak positive; suggest repeat

Test Name: Histoplasma Antigen, Blood
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Histoplasma Antigen, Blood ***EIA units***
Performed at MiraVista Diagnostics, Indianapolis IN
Effective 26Apr02 – present:
Equivocal Result inconclusive after repeated testing
<1.0 Negative
1.0 – 2.0 Weak positive; Suggest repeat
2.1 – 4.0 Positive; Repeat if inconsistent with clinical findings
4.1 – 10.0 Moderate Positive
>10.0 Highly Positive

FOR FOLLOW-UP TESTING ONLY (comparing to previous specimen test in the same assay):
Increase:
< or = 2.0: Stable*
2.1 – 4.0: Mild increase; possible failure; suggest repeat
>4.0: Moderate to Marked increase; probable failure

Decrease: Current specimen having >2.0 unit decrease compared to result of prior specimen tested in the same assay is interpreted as having a decreased antigen level.

*No Change: Increases or decreases <2.0 units are considered no change.

Performed at Wishard Memorial Hospital, Indianapolis IN
Effective until 25Apr02:
Equivocal: Result inconclusive after repeated testing
<1.0 Negative
1.0 – 2.0 Weak positive; suggest repeat
>2.0 Positive

Test Name: Histoplasma Antigen, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Histoplasma Antigen, Urine ***EIA units***
Performed at MiraVista Diagnostics, Indianapolis IN
Effective 26Apr02 – present:
Equivocal Result inconclusive after repeated testing
<1.0 Negative
1.0 – 2.0 Weak positive; Suggest repeat
2.1 – 4.0 Positive; Repeat if inconsistent with clinical findings
4.1 – 10.0 Moderate Positive
>10.0 Highly Positive

FOR FOLLOW-UP TESTING ONLY (comparing to previous specimen test in the same assay):
Increase:
< or = 2.0: Stable*
2.1 – 4.0: Mild increase; possible failure; suggest repeat
>4.0: Moderate to Marked increase; probable failure

Decrease: Current specimen having >2.0 unit decrease compared to result of prior specimen tested in the same assay is interpreted as having a decreased antigen level.

*No Change: Increases or decreases <2.0 units are considered no change.

Performed at Wishard Memorial Hospital, Indianapolis IN
Effective until 25Apr02:
Equivocal: Result inconclusive after repeated testing
<1.0 Negative
1.0 – 2.0 Weak positive; suggest repeat
>2.0 Positive

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: HIV Viral Load
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: VL
Reference Ranges:

HIV Viral Load
Performed at National Institutes of Health, Bethesda MD
Effective 12Sep01 – present: <50 *RNA copies/mL*

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Homocysteine, Total, Plasma
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Homocysteine, Total, Plasma *µmol/L* (SI: = µmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 30Aug00 – present: 0 – 13

Performed at Mayo Medical Labs, Rochester MN
Effective 13Aug98 – 29Aug00: 0 – 13
Effective 21Aug96 – 12Aug98: 4 – 17

HISTORICAL REFERENCE RANGES

Test Name: Homovanillic Acid, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: HVA
Reference Ranges:

Homovanillic Acid, Urine ***mg/24hr*** (SI: µmol/d = 5.49 x mg/24hr)
Homovanillic Acid, Urine ***µg/mg creat*** (SI: mmol/mol creat = 0.621 x µg/mg creat)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
Adults < 8.0 *mg/24hr*
Children:
< 1Y < 35.0 *µg/mg creat*
>= 1Y < 23.0 *µg/mg creat*
2Y-4Y < 13.5 *µg/mg creat*
5Y-9Y < 9.0 *µg/mg creat*
10Y-14Y < 12.0 *µg/mg creat*

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Apr85 – 18Sep94: 0 – 10 *mg/24hr*

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HISTORICAL REFERENCE RANGES

Test Name: Human Chorionic Gonadotropin, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Beta HCG, Pregnancy
Reference Ranges:

Human Chorionic Gonadotropin (for Pregnancy) ***IU/L*** (SI: = IU/L)
Performed at National Institutes of Health, Bethesda MD
Effective 11Mar98 - present:

Negative	0-5
Indeterminate	6-24
Positive	>=25

HISTORICAL REFERENCE RANGES

Test Name: Hydroxyproline, Total, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Hydroxyproline, Total, U ***mg/24hr*** *(SI: mmol/d* = 0.0076 x mg/24hr)
Hydroxyproline, Total, U ***µg/mg creat*** (*SI: mmol/mol creat* = 0.863 x µg/mg creat)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
>=19Y 15 – 45 mg/24hr
<5Y 100 – 400 µg/mg creat
5Y-12Y 100 – 150 µg/mg creat
13Y-18Y dependent on growth spurts

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 18Sep94: 25 – 77 mg/24hr

Test Name: Hypercoagulable Panel
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: HyperCoag Panel
Reference Ranges:

HyperCoag Panel
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present:

Protime, Automated	11.8-14.7 seconds
PTT, Automated	23.4-34.5 seconds
Fibrinogen, Auto.	168-458 mg/dL
Thrombin Time, Auto.	15.6-24.4 seconds
Protein C	72-149 %
Protein S	64-131 %
Antithrombin III	75-127 %
DRVV	Negative
Staclot-LA	Negative
FV Leiden	Negative
Prothrombin 20210	Negative
Homocysteine	0-13 umol/L

Page Hematology Fellow at 104-2359-7 for result interpretation.

Test Name: Hypoglycemic Screen, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Sulfonylurea
Reference Ranges:

Hypoglycemic Screen, Urine
Performed at National Medical Services, Willowgrove PA
Effective 09Jun99 – 13Nov02:
Reporting Limits:

Chlorpropamide	3.0 *µg/mL*	(SI: µmol/L = 3.61 x µg/mL)
Tolazamide	3.0 *µg/mL*	(SI: µmol/L = 3.21 x µg/mL)
Tolbutamide	3.0 *µg/mL*	(SI: µmol/L = 3.70 x µg/mL)
Glyburide	0.8 *µg/mL*	(SI: µmol/L = 2.02 x µg/mL)
Glipizide	0.8 *µg/mL*	(SI: µmol/L = 2.24 x µg/mL)
Acetohexamide	3.0 *µg/mL*	(SI: µmol/L = 3.08 x µg/mL)

Test Name: Hypoglycemic Screen, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Sulfonylurea
Reference Ranges:

Hypoglycemic Screen, Serum *ng/mL*
Performed at Mayo Medical Labs, Rochester MN
Effective 08Nov00 – present:
Reporting Limits:

Acetohexamide	<200	(SI: µmol/L = 0.00308 x ng/mL)
Chlorpropamide	<25	(SI: µmol/L = 0.0036 x ng/mL)
Glimepiride	<20	(SI: Not Available)
Glipizide	<3	(SI: µmol/L = 0.00224 x ng/mL)
Glyburide	<3	(SI: µmol/L = 0.00202 x ng/mL)
Repaglinide	<3	(SI: Not Available)
Tolazamide	<20	(SI: µmol/L = 0.00321 x ng/mL)
Tolbutamide	<50	(SI: µmol/L = 0.0037 x ng/mL)

NOTE: The report indicates a specific drug is POSTIVE if that drug is detected at a concentration greater than the sensitivity limit. The test sensitivity limit listed for each drug is lower than the concentration that will cause incrased insulin and decreased glucose.

Performed at National Medical Services, Willowgrove PA
Effective 09Jun99 - 07Nov00:
Acetohexamide *µg/mL* (SI: µmol/L = 3.08 x µg/mL)
Usual therapeutic range: 20 – 60
Reporting limit: 0.3

Chlorpropamide *µg/mL* (SI: µmol/L = 3.61 x µg/mL)
Therapeutic range with chronic intake: 75 – 250 µg/mL
Reporting limit: 0.3

Glipizide *µg/mL* (SI: µmol/L = 2.24 x µg/mL)
Peak level following single 5 mg oral dose (at 1.6 hrs post dose): 0.1 – 0.5
Reporting limit: 0.08

Glyburide *µg/mL* (SI: µmol/L = 2.02 x µg/mL)
Peak level following single 5 mg oral dose: approximately 0.4
Reporting limit: 0.08

Tolazamide *µg/mL* (SI: µmol/L = 3.21 x µg/mL)
Peak levels following single 250 mg oral dose (at 3-4 hrs post dose): 20 – 25

Reporting limit: 0.3

Tolbutamide *µg/mL* (SI: µmol/L = 3.70 x µg/mL)
Peak level following single 500 mg oral dose: approximately 45
Reporting limit: 0.3

HISTORICAL REFERENCE RANGES

Test Name: IgD
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Immunoglobulin
Reference Ranges:

IgD ***mg/dL*** (SI: mg/L = 10 x mg/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 04Jun02 – present: 0 – 10

Performed at Mayo Medical Labs, Rochester MN
Effective 11Mar98 – 03Jun02: 0 – 14

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HISTORICAL REFERENCE RANGES

Test Name: IgE
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Immunoglobulin E
Reference Ranges:

IgE ***IU/mL*** (SI: kU/L = 1 x IU/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 20Jan99 – present: 0 – 90
Effective 27Jun85 – 19Jan99: 0 – 130

HISTORICAL REFERENCE RANGES

Test Name: IGF-1
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Somatomedin C, Insulin-like Growth Factor-1
Reference Ranges:

IGF-1 *ng/mL* (SI: µg/L = 1 x ng/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 29Aug00 – present:

2M-5Y	17 – 248
6Y-8Y	88 – 474
9Y-11Y	
Male	110 – 565
Female	117 – 771
12Y-15Y	
Male	202 – 957
Female	261 – 1096
16Y-24Y	182 – 780
25Y-39Y	114 – 492
40Y-54Y	90 – 360
>54Y	71 – 290

Tanner Stages

I	
Male	109 – 485
Female	128 – 470
II	
Male	174 – 512
Female	186 – 695
III	
Male	230 – 818
Female	292 – 883
IV	
Male	396 – 776
Female	394 – 920
V	
Male	402 – 839
Female	308 – 1138

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 28Aug00:
Male:

0Y-5Y	0	-	103
6Y-8Y	2	-	118
9-10Y	15	-	148
11Y-13Y	55	-	216
14Y-15Y	114	-	232
16Y-17Y	84	-	221
18Y-19Y	56	-	177
20Y-24Y	75	-	142
25Y-29Y	65	-	131
30Y-34Y	58	-	122
35Y-39Y	51	-	122
40Y-44Y	51	-	115
45Y-49Y	43	-	104
>=50Y	40	-	100

Female:

0Y-5Y	0	-	112
6Y-8Y	5	-	128
9Y-10Y	24	-	158
11Y-13Y	65	-	226
14Y-15Y	124	-	242
16Y-17Y	94	-	231
18Y-19Y	66	-	186
20Y-24Y	64	-	131
25Y-29Y	55	-	121
30Y-34Y	47	-	112
35Y-39Y	40	-	104
40Y-44Y	35	-	98
45Y-49Y	32	-	93
>=50Y	29	-	90

Performed at SmithKline Beecham, Van Nuys CA
Effective 04Jan89 - 18Sep94:
Male:

0Y-2Y	22	-	87
3Y-5Y	20	-	126
6Y-9Y	45	-	167
10Y-12Y	158	-	282
13Y-15Y	152	-	494
16Y-18Y	211	-	454

Female:

0Y-2Y	22	-	93
3Y-5Y	28	-	150

6Y--9Y 53 - 212
10Y-12Y 161 - 580
13Y-15Y 298 - 538
16Y-18Y 204 - 473

Effective 12Dec88 - 18Sep94:
Adult Male 90 - 318
Adult Female 116 - 270

Effective 22Jul88 - 03Jan89:
Male:
0Y-2Y 14 - 56
3Y-5Y 13 - 81
6Y-9Y 29 - 108
10Y-12Y 102 - 182
13Y-15Y 98 - 319
16Y-18Y 136 - 293
Female:
0Y-2Y 14 - 60
3Y-5Y 18 - 97
6Y--9Y 34 - 137
10Y-12Y 104 - 374
13Y-15Y 192 - 347
16Y-18Y 132 - 305

Effective 22Jul88 - 11Dec88:
Adult Male 43 - 178
Adult Female 24 - 153

Test Name: IGF Binding Protein-1
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: IGFBP-1
Reference Ranges:

IGF Binding Protein-1 (IGFBP-1) ***ng/mL*** (SI: ug/L = 1.0 x ng/mL)
Performed at Mayo Medical Labs, Wilmington MA (Clinical Trials)
Effective 12Feb03 – present: No ranges available

Performed at Esoterix Endocrinolgy, Calabasas Hills CA
Effective 24Jul02 – present:
Prepubertal:
Fasting 30-1000
Random 10-500
Pubertal:
Fasting 20-200
Random 20-100
Adults:
Fasting 10-150
Random <5-40

Test Name: IGF Binding Protein-2
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: IGFBP-2
Reference Ranges:

IGF Binding Protein-2 (IGFBP-2) ***ng/mL*** (SI: ug/L = 1.0 x ng/mL)
Performed at Mayo Medical Labs, Wilmington MA (Clinical Trials)
Effective 12Feb03 – present: No ranges available

Performed at Esoterix Endocrinolgy, Calabasas Hills CA
Effective 24Jul02 - present:

Age (Years)	Range (ng/mL)	Mean (ng/mL)
0-1	348-922	567
1-2	280-750	460
2-6	275-700	435
6-10	255-540	370
10-15	200-470	305
15-25	215-518	325
25-45	220-570	345
45-65	225-710	390
65-75	225-650	450
75-85	300-1038	560

Test Name: IGF Binding Protein-3
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: IGFBP-3
Reference Ranges:

IGF Binding Protein (IGFBP-3) ***mg/L*** (SI: mg/L)
Performed at Mayo Medical Labs, Wilmington MA (Clinical Trials)
Effective 12Feb03 – present: No ranges available

Performed at Esoterix Endocrinolgy, Calabasas Hills CA
Effective 23Oct02 – 11Feb03:

0-6D	0.2 - 0.5
7-30D	0.5 - 1.2
31D-11M	0.7 - 2.5
12M-4Y	1.4 - 3.0
5-6Y	1.5 - 3.4
7-8Y	2.1 - 4.2
9-11Y	2.0 - 4.8
12-13Y	2.1 - 6.2
14-15Y	2.2 - 5.9
16-18Y	2.5 - 4.8
19-30Y	2.0 - 4.2
31-70Y	1.9 - 3.6

Effective 24Jul02 - 22Oct02:

Newborns	0.2 - 0.5
7D-30D	0.5 - 1.2
1M-11M	0.7 - 2.5
1Y-4Y	1.4 - 3.0
5Y-6Y	1.5 - 3.4
7Y-8Y	2.1 - 4.2
9Y-11Y	2.0 - 4.8
12Y-13Y	2.1 - 5.2
14Y-15Y	2.2 - 5.9
16Y-18Y	2.5 - 4.8
19Y-30Y	2.0 - 4.2
31Y-70Y	1.9 - 3.6

Test Name: IgG Index, CSF and Serum
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms:
Reference Ranges:

IgG Index, CSF and Serum *ratio*
Performed at National Institutes of Health, Bethesda MD
Effective 26Jun85 – present:
CSF IgG Index: 0.26 – 0.62 ratio

The following tests are reported with the IgG Index:
Ranges effective 11Jun03 – present:

IgG Serum	642-1730	mg/dL
IgA Serum	91-499	mg/dL
IgM Serum	34-342	mg/dL
CSF Albumin	12-33	mg/dL
Alb Quoteint	3.2-9.0	ratio
CSF IgG	0.9-4.8	mg/dL

HISTORICAL REFERENCE RANGES

Test Name: IgG Subclasses
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms:
Reference Ranges:

IgG Subclasses ***mg/dL*** (SI: g/L = 0.01 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present:
IgG 1: 329 – 954
IgG 2: 162 – 693
IgG 3: 15 – 127
IgG 4: 2 – 100
IgG Total: 642 – 1730
IgA: 91 – 499
IgM: 34 – 342

Effective 19Jan95 – 10Jun03:
IgG 1: 356 – 1176
IgG 2: 214 – 644
IgG 3: 28 – 170
IgG 4: 11 – 137
IgG Total: 523 – 1482

Effective 15Aug91 - 18Jan95:
IgG 1: 470 – 1300
IgG 2: 115 – 750
IgG 3: 20 – 130
IgG 4: 5 – 165
IgG Total: 628 – 1590

HISTORICAL REFERENCE RANGES

Test Name: IgG, CSF
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: Immunoglobulin G
Reference Ranges:

IgG, CSF ***mg/dL*** (SI: mg/L = 10 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present: 0.9 – 4.8
Effective 05Oct94 – 10Jun03: 0.8 – 4.1
Effective 03May91 – 04Oct94: >= 15Y: 0.9 – 4.3
Effective 01Jan79 - 02May91: 0Y-14Y: 0.7 – 1.7
Effective 01Dec85 - 03May91: >= 15Y: 0.8 – 4.2
Effective 27Jun85 - 30Nov85: >= 15Y: 0.5 – 3.5
Effective 01Jan79 - 26Jun85: >= 15Y: 0 – 3.5

HISTORICAL REFERENCE RANGES

Test Name: Imipramine/Desipramine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Tofranil, Norpramin
Reference Ranges:

Imipramine/Desipramine *µg/L* (µg/L = ng/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 31May95 - present:
Desipramine (SI: nmol/L = 3.75 x µg/L)
Therapeutic 75 - 225
Toxic >=500
Imipramine + Desipramine (Total) (SI: nmol/L = 3.57 x µg/L)
Therapeutic 125 - 275
Toxic >= 500

Performed at American Medical Labs, Chantilly VA
Effective 02Apr92 - 30May95:
Desipramine
Therapeutic 75 - 300
Toxic >400
Imipramine + Desipramine (Total)
Therapeutic 125 - 250
Toxic >500

Performed at MetPath Labs, Rockville MD
Effective until 01Apr92:
Desipramine
Therapeutic 75 - 160
Toxic >1000
Imipramine + Desipramine (Total)
Therapeutic 125 - 250
Toxic >500

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HISTORICAL REFERENCE RANGES

Test Name: Immunofixation Electrophoresis, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: IFE
Reference Ranges:

Immunofixation Electrophoresis, CSF
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 - present: No anomalous immunoglobulins

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Immunofixation Electrophoresis, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: IFE
Reference Ranges:

Immunofixation Electrophoresis, Serum
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 - present: No anomalous immunoglobulins

HISTORICAL REFERENCE RANGES

Test Name: Immunoglobulins, Quantitative
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: IgG, IgA, IgM
Reference Ranges:

Immunoglobulins, Quantitative *mg/dL*
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present:
Ig A: 91 – 499 (SI: mg/L = 10 x mg/dL)
Ig G: 642 – 1730 (SI: g/L = 0.01 x mg/dL)
Ig M: 34 – 342 (SI: mg/L = 10 x mg/dL)

Effective 05Oct94 – 10Jun03:
Ig A: 51 – 375 (SI: mg/L = 10 x mg/dL)
Ig G: 523 – 1482 (SI: g/L = 0.01 x mg/dL)
Ig M: 37 – 200 (SI: mg/L = 10 x mg/dL)

Effective 06Jan93 – 04Oct94:
Ig A: 52 – 379
Ig G: 545 – 1560
Ig M: 39 – 211

Effective 03May91 – 05Jan93:
Ig A: 93 – 393
Ig G: 650 – 1590
Ig M: 53 – 408

Effective 11Feb82 – 02May91:
Ig A: 65 – 415
Ig G: 650 – 1600
Ig M: 50 – 320

Effective 01Jan79 – 10Feb82:
Ig A: 30 – 261 IU/mL
Ig G: 72 – 204 IU/mL
Ig M: 36 – 266 IU/mL

Test Name: Inborn Errors of Metabolism Screen
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Amino Acid Screen
Reference Ranges:

Inborn Errors of Metabolism Screen
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present: Normally no abnormalities are detected.
Normal biotinidase activity is reported as "activity detected".
If abnormal results are detected, they are reported as narrative.

Performed at SmithKline Beecham, Van Nuys CA
Effective until 18Sep94: Normally no abnormalities are detected.

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HISTORICAL REFERENCE RANGES

Test Name: Indicans, Urine
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer performed
Indicans, Urine ***mg/24hr***
Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 30Dec80: 34 - 122

Performed at National Institutes of Health, Bethesda MD
Effective until 01Jan79: No ranges available

Test Name: Influenza A Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Influenza A Antibody ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
IgG <1:10
IgM <1:10

The presence of IgM class antibodies or a fourfold or greater rise in paired sera IgG titer Indicates recent infection. The presence of demonstrable IgG generally indicates past exposure.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: <1:10

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: <1:10

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HISTORICAL REFERENCE RANGES

Test Name: Influenza A Rapid
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Flu A Rapid
Reference Ranges:

Influenza A Rapid
Performed at National Institutes of Health, Bethesda MD
Effective 07Dec94 - present: Negative for Influenzae A by EIA.

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HISTORICAL REFERENCE RANGES

Test Name: Influenza A Rapid
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Flu A Rapid
Reference Ranges:

Influenza A Rapid
Performed at National Institutes of Health, Bethesda MD
Effective 07Dec94 - present: Negative for Influenzae A by EIA.

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HISTORICAL REFERENCE RANGES

Test Name: Influenza A Rapid
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Flu A Rapid
Reference Ranges:

Influenza A Rapid
Performed at National Institutes of Health, Bethesda MD
Effective 07Dec94 - present: Negative for Influenzae A by EIA.

Test Name: Influenza B Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Influenza B Antibody ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
IgG <1:10
IgM <1:10

The presence of IgM class antibodies or a fourfold or greater rise in paired sera IgG titer Indicates recent infection. The presence of demonstrable IgG generally indicates past exposure.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: <1:10

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: <1:10

Test Name: Influenza Virus C
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Influenza Virus C
Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: INH 5.0
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

INH 5.0

Performed at Centers for Disease Control, Atlanta GA
No longer requested as of January 2000.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: INR-PT
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Prothrombin Time-INR, PT-INR
Reference Ranges:

INR-PT ***ratio***
Performed at National Institutes of Health, Bethesda MD
Effective 25Jun97 - present: 2.0-3.0 Prophylaxis and treatment of venous thrombosis, pulmonary embolism, tissue heart valves, acute myocardial infarction, atrial fibrillation, valvular heart disease, and systemic embolization
Mechanical heart valves: 2.5-3.5

HISTORICAL REFERENCE RANGES

Test Name: Insulin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Insulin *µU/mL* (SI: pmol/L = 6.945 x µU/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 16Nov99 - present: 6.0 - 27.0
Effective 03May95 - 16Nov99: 3.0 - 18.0

Performed at Mayo Medical Labs, Rochester MN
Updated assay (does not cross react with proinsulin)
Effective 23Jun98 - 12Apr00: 1.4 - 14.0
Old assay performed at Mayo Medical Lab cross-reacts with proinsulin
Effective 19Sep94 - 22Jun98: 0.0 - 20.0
Effective 19Sep94 - 12Feb95: Gray Zone: 21.0 - 25.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 26Oct88 - 18Sep94: 5 - 25
Effective 22Jul88 - 25Oct88: 0 - 24
Effective 01Jan79 - 21Jul88: 4 - 24

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HISTORICAL REFERENCE RANGES

Test Name: Insulin-Like Growth Factor II (IGFII)
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: IGF-2
Reference Ranges:

Insulin-Like Growth Factor II (IGFII) ***ng/mL***
Performed at Esoterix Endocrinolgy, Calabasas Hills CA
Effective 24Jul02 - present:

Prepubertal children:	334-642	(MEAN = 488)
Pubertal children:	245-737	(MEAN = 491)
Adults:	288-736	(MEAN = 512)
Growth Hormone Deficiency:	51-299	(MEAN = 175)

Test Name: Insulin Antibodies
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Insulin Antibodies ***% Bound*** (SI: fraction bound = 0.01 x %Bound)
Includes bovine, porcine, human
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: <3 %

Performed at SmithKline Beecham, Van Nuys CA
Effective 05May93 - 19Sep94: <3 %

Includes bovine and porcine
Effective 03Sep91 - 04May93: 0 titer
Effective 04Apr89 - 02Sep91: <4 %
Effective 01Dec87 - 03Apr89: 0 titer

Test Name: Intraocular Fluid Anti-Toxoplasmosis
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Intraocular Fluid Toxoplasmosis Antibody
Performed at National Institutes of Health, Bethesda MD
Effective 11Jul01 - present:
Toxoplasma Antibody IgG, Total: Negative

Performed at Palo Alto Institute, Palo Alto CA
Effective 11Jul01 - present:
Toxoplasma Antibody IgG, Titer: Negative <1:16

Test Name: Intrinsic Factor Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Intrinsic Factor Antibody
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
Negative (reported as positive, negative or indeterminate).
The test is highly specific but has a relatively low sensitivity. It is positive in approximately 50% of pernicious anemia patients.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Apr88 - 18Sep94:
Negative (reported as positive, negative or indeterminate).

Test Name: Inulin Clearance, corrected
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Standard Renal Clearance
Reference Ranges:

Inulin Clearance, corrected
Performed at Mayo Medical Labs, Rochester MN
Effective 06Sep02 – present:
Reference Values: GFR (glomerular filtration rate) and RPF (renal plasma flow) are age dependent. Normal values for GFR (iothalamate or inulin) are > 90 mL/min per 1.73 m^2 for 20-year-old persons, decreasing by 4 mL/decade. Normal values for RPF (para-aminohippuric acid -PAH) are > 448 mL/min per 1.73 m^2 (previously 400 mL/min per 1.73 m^2) for 20-year-old persons, decreasing by 35 mL/decade.

Inulin Clearance (Exogenous) *mL/min** (SI: mL/s = 0.00963 x mL/min)
20Y-29Y 90 – 130
30Y-39Y 86 – 126
40Y-49Y 82 – 122
50Y-59Y 78 – 118
60Y-69Y 74 – 114

PAH Clearance, corrected *mL/min** (SI: mL/s = 0.00963 x mL/min)
20Y-29Y 448-748
30Y-39Y 413-713
40Y-49Y 378-678
50Y-59Y 343-643
60Y-69Y 308-608

Filtration Factor *percent* (SI: fraction = 0.01x percent)
18 – 22

Effective 08Mar95 – 05Sep02:
Inulin Clearance (Exogenous) *mL/min** (SI: mL/s = 0.00963 x mL/min)
20Y-29Y 90 – 130
30Y-39Y 86 – 126
40Y-49Y 82 – 122
50Y-59Y 78 – 118
60Y-69Y 74 – 114
PAH Clearance, corrected *mL/min** (SI: mL/s = 0.00963 x mL/min)
20Y-29Y 400 – 700

30Y-39Y 383 – 683
40Y-49Y 366 – 666
50Y-59Y 349 – 649
60Y-69Y 332 – 632
Filtration Factor *percent* (SI: fraction = 0.01x percent)
18 – 22

* Corrected to 1.73 m^2 body surface area

Test Name: Iodine, Free, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Iodide
Reference Ranges:

Iodine, Free, Urine
Performed at Mayo Medical Labs, Rochester MN
Effective 12Dec95 – present:
Iodine Concentration 42 – 350 *µg/L* (SI: µmol/L = 0.078 x µg/L)
Urinary Free Iodine 100 – 460 *µg/24hr* (SI: µmol/d = 0.078 x µg/24hr)

Performed at SmithKline Beecham, Van Nuys CA
Effective 22Jul88 – 11Dec95:
Total Urine Iodine 2 – 48 *µg/dL* (SI: µmol/L = 0.78 x µg/L)

HISTORICAL REFERENCE RANGES

Test Name: Iodine, Serum
Department: Laboratory Medicine
Lab Area:
Synonyms: PBI
Reference Ranges:

Test no longer performed
Iodine, Serum *µg/dL* (SI: nmol/L = 78 x µg/dL)
Performed at SmithKline Beecham, Van Nuys CA
Effective 22Jul88 – 11Dec95:

Inorganic	0.5 - 1.0
Total	4.5 - 9.0
PBI	4.0 - 8.0

HISTORICAL REFERENCE RANGES

Test Name: Iodine, Total, Urine
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer performed. Replaced by Iodine, Urinary Free
Iodine, Total, Urine
Performed at SmithKline Beecham, Van Nuys CA
Effective 22Jul88 – 11Dec95:
Total Urine Iodine 2 – 48 *µg/dL* (SI: µmol/L = 0.78 x µg/L)

HISTORICAL REFERENCE RANGES

Test Name: Iron and Transferrin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Iron and Transferrin
Performed at National Institutes of Health, Bethesda MD
Iron, serum *µg/dL* (SI: µmol/L = 0.179 x µg/dL)
Effective 01Jan79 – present: 50 - 150

Transferrin *mg/dL* (SI: g/L = 0.01 x mg/dL)
Effective 03Jul96 – present: 204 - 345
Effective 01Apr85 - 02Jul96: 230 - 390
Effective 01Jan79 - 31May85: 200 - 400

Transferrin (Iron) Saturation *%*:
Effective 01Jan79 – present: 15-62%

Test Name: Iron, Liver Tissue
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Iron, Liver Tissue
Performed at Mayo Medical Labs, Rochester MN
Effective 25Jun97 – present:
Males 200 – 2400 *µg/g dry weight*
Females 400 – 1600 *µg/g dry weight*
Iron Index 0 – 0.9 *µmol/g/year*

HISTORICAL REFERENCE RANGES

Test Name: Iron, Total, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Iron, Total, Urine *µg/24hr* (SI: µmol/d = 0.0179 x µg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 100 – 300

Performed at SmithKline Beecham, Van Nuys CA
Effective 18Jan90 – 18Sep94: 0 – 300

Test Name: Islet Cell IgG Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Islet Cell IgG Antibody
Performed at ARUP Laboratories, Salt Lake City UT
Effective 19May02 – present: <1:4 No antibody detected.
Islet cell antibodies have been associated with "autoimmune" endocrine disorders and insulin-dependent diabetes. This disorder is characterized by the presence of antibodies in patients that may be detected years before the onset of the clinical symptoms.
To calculate JDF units, multiply the titer x 5. E.g. (1:8 8x5 = 40 JDF units.)

Performed by Specialty Laboratories, Santa Monica CA
Effective 08Dec99 – 18May02: 0 – 4 *JDF units*

Test Name: Itraconazole and Hydroxyitraconazole
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Itraconazole and Hydroxyitraconazole *µg/mL*
Performed at Mayo Medical Labs, Rochester MN
Effective 17Dec97 - present:
Patients receiving doses of 50-400 mg/day generally attain steady-state serum levels of Itraconazole plus hydroxyitraconazole (total combined) in the range of 0.30-7.0 µg/mL.

Test Name: Kanamycin 5.0
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Kanamycin 5.0
Performed at Centers for Disease Control, Atlanta GA
No longer requested as of January 2000.

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HISTORICAL REFERENCE RANGES

Test Name: Ketones, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Acetone
Reference Ranges:

Ketones, Serum

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 - present: Negative

HISTORICAL REFERENCE RANGES

Test Name: Ketones, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Acetone
Reference Ranges:

Ketones, Urine

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 - present: Negative

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HISTORICAL REFERENCE RANGES

Test Name: Lactate, L-, Whole Blood
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Lactic acid
Reference Ranges:

Lactate, L-, Whole Blood ***mmol/L*** (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jul01 - present: 0.5 - 2.2

HISTORICAL REFERENCE RANGES

Test Name: Lactate, L-, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Lactic Acid
Reference Ranges:

Lactate, **CSF *mmol/L*** (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 25Jun97 – present: 1.1 – 2.4
Effective 14Nov85 – 24Jun97: 0.2 - 0.4
Effective 01Jan79 – 13Nov85: 0.5 - 2.2

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HISTORICAL REFERENCE RANGES

Test Name: Lactate, L-, Plasma
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: L-Lactic acid
Reference Ranges:

Lactate, L-, Plasma ***mmol/L*** (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 18Oct79 – present: 0.5 – 2.2

Effective 01Jan79 - 17Oct79: 5 - 20 *mg/dL* (SI: mmol/L = 0.0111 x mg/dL)

HISTORICAL REFERENCE RANGES

Test Name: Lamotrigine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Lamictal
Reference Ranges:

Lamotrigine *µg/mL* (SI: mg/L = 1.0 x µg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 10May00 – present:
Trough 1.0 – 4.0
Peak 12.0 – 20.0
Automatic call-back >= 20.0

Patients receiving doses within the recommended range (50-400 mg/day) usually have lamotrigine concentrations between 1 and 4 µg/mL.

A therapeutic range and toxic level have yet to be established for lamotrigine. The serum concentration should be interpreted in the context of the patient's clinical response and may provide useful information in patients showing poor response (noncompliance?) or adverse effects, particularly when lamotrigine is co-administered with other anticonvulsant drugs.

HISTORICAL REFERENCE RANGES

Test Name: LD Isoenzymes
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: LDH, Lactate Dehydrogenase
Reference Ranges:

LD Isoenzymes % (SI: frac activity = 0.01 x %)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
LD1 13 – 25
LD2 29 – 39
LD3 15 – 29
LD4 9 – 17
LD5 6 – 16

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HISTORICAL REFERENCE RANGES

Test Name: LD, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: LDH, Lactate Dehydrogenase
Reference Ranges:

LD, Fluid ***U/L***
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: 113-226 U/L

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HISTORICAL REFERENCE RANGES

Test Name: LD, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: LDH, Lactate Dehydrogenase
Reference Ranges:

LD, Serum *U/L* (SI: U/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 – present: 113 – 226
Effective 01Jul85 - 30Nov88: 114 - 213
Effective 01Jan79 - 30Jun85: 133 - 248

HISTORICAL REFERENCE RANGES

Test Name: Lead, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Lead, Urine ***µg/24hr*** (SI: µmol/d = 0.00483 x µg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 0 – 79
Interpretation:
Normal: <80
Inconclusive: 80-400
Abnormal: >400
The reference value is for a 24-hour collection. Specimens collected for other than a 24-hour period are reported in units of µg/L (SI: µmol/L = 0.00483 x µg/L), for which reference values are not established.

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Nov85 – 18Sep94: <80 *µg/L*
Effective 01Jan79 – 13Nov85: <100 *µg/L*

HISTORICAL REFERENCE RANGES

Test Name: Lead, Whole Blood
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Lead, Whole Blood ***µg/dL*** (SI: µmol/L = 0.0483 x µg/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
1D-15Y 0.0 – 9.0
16Y-150Y 0.0 – 19.0

Toxic Concentration
1D-15Y >= 20
16Y-150Y >= 70

Performed at SmithKline Beecham, Van Nuys CA
Effective 23Dec91 – 18Sep94:
1D-6Y <10
7Y-150Y <25

Effective 22Jul88 – 22Dec91: <25

Effective 01Jul85 – 21Jul88:
1D-11Y <19
>= 12Y <39

Effective 01Jan79 – 30Jun85:
1D-6Y <30
7Y-150Y <60

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HISTORICAL REFERENCE RANGES

Test Name: Lee-White
Department: Laboratory Medicine
Lab Area:
Synonyms: Lee White
Reference Ranges:

Test no longer performed
Lee-White ***minutes***
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 22Dec91: 7 – 10

Test Name: Legionella Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Legionella Antibody
Performed at Mayo Medical Labs, Rochester MN
Effective 26Sep02 - present:
Results reported as Positive, Negative or Equivocal

Effective 21Mar00 - 26Sep02:
Titers of <1:64 are reported as negative.
Titers of 1:64 are considered not significant.
Seroconversion requires a foufold rise in titer to >=1:128. A single titer of >=1:256 may be compatible with current or past infection. A change in titer between an acute and convalescent serum is the best evidence of current infection.

Effective 19Sep94 - 21Mar00:
May indicate current or past infection: >1:256
Seroconversion requires a fourfold rise in titer to >=1:128. A change in titer between an acute and convalescent serum is the best evidence of current infection.
A single titer of >= 1:256 may be compatible with current or past infection. A four-fold rise in titer between an acute and convalescent serum is the best evidence of current infection.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective 02Mar87 - 31Aup90: No ranges available

Performed at Centers for Disease Control, Atlanta GA
Effective until 01Mar86: No ranges available

Test Name: Legionella ATG
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Legionella urinary antigen
Reference Ranges:

Legionella ATG
Performed at National Institutes of Health, Bethesda MD
Effective 06Nov96 – present:
Negative for Legionella pneumophila serogroup 1 by EIA

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 05Nov96: Noted on report

Performed at American Medical Labs, Chantilly VA
Effective 01Aug90 – 18Sep94: Noted on report

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HISTORICAL REFERENCE RANGES

Test Name: Legionella Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Legionella Culture, Blood
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No Legionella isolated

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HISTORICAL REFERENCE RANGES

Test Name: Legionella Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Thoracentesis
Reference Ranges:

Legionella Culture, Pleural Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No Legionella isolated

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HISTORICAL REFERENCE RANGES

Test Name: Legionella pneumophila PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Legionnaire's Diseae
Reference Ranges:

Legionella pneumophila PCR, Bronchial Lavage
Performed at National Institutes of Health, Bethesda MD
Effective 15Sep99 – present
Negative for Legionella pneumophila by PCR

Test Name: Legionella pneumophila PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Legionella pneumophila PCR, Sputum
Performed at National Institutes of Health, Bethesda MD
Effective 15Sep99 – present
Negative for Legionella pneumophila by PCR

HISTORICAL REFERENCE RANGES

Test Name: Leishmaniasis Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Kala-Azar
Reference Ranges:

Leishmaniasis Antibody
L.donovani, L.braziliensis, L.mexicana, L.tropicalis
Performed at Focus Technologies, Cypress CA
Effective 19Sep94 - present:
IgG < 1:16
IgM < 1:20

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No ranges available

Test Name: Leptin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Leptin ***ng/mL***
Performed at Mayo Medical Labs, Wilmington MA
Effective 13Aug03 – present:
No reference ranges available

Performed at Esoterix Endocrinology, Calabasas Hills CA
Effective 12Feb03 – 122Aug03:
Male >=18Y 0.7 - 5.3
Female >=18Y 3.3 - 18.3

Test Name: Leptospira Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Leptospira Antibody ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
<1:50 Negative; no serologic evidence of leptospirosis

1:50 Borderline Positive; patients should be evaluated for clinical correlations with active or recent leptospirosis. Follow-up specimens should be ordered for serology and isolation of live leptospires.

> or = 1:100 Positive for leptospiral antibody. Serological evidence of active or recent leptospirosis.

Performed at SmithKline Beecham, Van Nuys CA
Leptospira Antibody, Agglutination
Effective 01Sep90 – 18Sep94: Negative

Performed at American Medical Labs, Chantilly VA
Effectove 02Mar86 – 31Aug90: Negative

Performed at Center for Disease Control, Atlanta GA
Effective until 01Mar86:
Leptospira Factor: Negative

HISTORICAL REFERENCE RANGES

Test Name: Leucine Arylamidase
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Leucine Aminopeptidase
Reference Ranges:

Leucine Arylamidase ***U/mL*** (SI: kU/L = 1.0 x U/mL)
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 19Sep94 – present: 1.0 – 3.3

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 18Sep94: 8 - 22 *mU/mL*

HISTORICAL REFERENCE RANGES

Test Name: Leukocyte Alkaline Phosphatsase
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: LAP
Reference Ranges:

Leukocyte Alkaline Phosphatsase ***score***
Performed at National Institutes of Health, Bethesda MD
Effective 13Mar02 – present:
Low: 0 – 27
Normal: 28 – 166
Elevated: >=167

Effective 18Sep86 – 12Mar02:
Low: 0 – 35
Normal: 36 – 91
Elevated: >=92

HISTORICAL REFERENCE RANGES

Test Name: Levetiracetam
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Keppra
Reference Ranges:

Levetiracetam *µg/mL* (µg/mL = mg/L)
Performed Mayo Medical Labs, Rochester MN
Effective 13Feb03 – present:
Peak Concentration: 10-63 µg/mL
Trough Concentration: 3-34 µg/mL

Performed by Medtox Labs, St. Paul MN
Effective 12Jul01 – 11Feb03:
Expected steady state trough concentrations in patients receiving recommended daily dosages:
5-45 µg/mL
Toxic range has not been established.

Test Name: Lidocaine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Xylocaine
Reference Ranges:

Lidocaine ***mg/L*** (SI: µmol/L = 4.27 x mg/L) (mg/L=µg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 31May95 – present:
Therapeutic 2.0 – 5.0
Toxic >= 6.0

Performed at American Medical Labs, Chantilly VA
Effective until 30May95:
Therapeutic 1.5 – 6.0
Toxic:
CNS, Cardiovascular Depression 6.0 – 8.0
Seizures, Obtundation, and Decreased Cardiac Output >8.0

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HISTORICAL REFERENCE RANGES

Test Name: Lipase, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Lipase, Fluid ***U/L***
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: 9 - 58

(Reportable range: 3-3300)

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HISTORICAL REFERENCE RANGES

Test Name: Lipase, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Lipase, Serum *U/L* (SI: U/L)
Performed at National Institutes of Health, Bethesda MD
Effective 15Aug99 – present: 9 - 58
Effective 06Dec95 – 22Aug99: 21 - 132
Effective 06Feb92 – 05Dec95: 48 - 281
Effective 01Jan79 – 05Feb92: 60 - 320

Test Name: Lipid Panel
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Lipid Panel
Cholesterol, Total *mg/dL* (SI: mmol/L = 0.0259 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 07Feb96 – present:

Desirable	<200
Borderline high risk	200-239
High risk	>=240

Effective 12Jul89 – 06Feb96: 100 – 200

Effective 01Dec88 – 11Jul89: 75 – 200

Effective 04Nov87 – 30Nov88:

2Y-19Y	75 – 175
20Y-29Y	75 – 206
30Y-39Y	75 – 226
>=40Y	75 – 247

Effective 08Jan81 – 04Nov87: 163 – 263

Effective 01Jan79 – 07Jan81: 150 – 250

Cholesterol, LDL *mg/dL* (SI: mmol/L = 0.0259 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Jun01 – present:

Optimal	<100
Near or above optimal	100-129
Borderline high risk	130-159
High risk	160-189
Very high risk	>=190

Effective 24Jan95 – 12Jun01:

Desirable:	65 – 129
Moderate Risk:	130 – 159
High Risk:	>=160

Effective 07Feb96 – 12Jun01:
Optimal in CHD: <=100
Higher than Optimal in CHD: >100

Cholesterol, HDL *mg/dL* (SI: mmol/L = 0.0259 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Jun01 – present:
Low (high risk) <40
High (low risk) >=60

Effective 07Feb96 – 12Jun01:
Negative risk >=60
Average risk 35 – 59
Major risk <35

Effective 10Oct91 – 06Feb96:
M/F Decreased Risk >=35

Effective 04Jan89 – 09Oct91:
Male
Decreased Risk >45
Increased Risk <45
Average Risk 45
Female
Decreased Risk >55
Increased Risk <55
Average Risk 55

Effective 01Oct87 – 03Jan89:
5Y-19Y F: 35 – 74 M: 30 – 74
20Y-29Y F: 33 – 83 M: 30 – 63
30Y-39Y F: 34 – 82 M: 28 – 63
40Y-49Y F: 34 – 88 M: 27 – 67
50Y-59Y F: 37 – 92 M: 28 – 71
60Y-69Y F: 35 – 98 M: 30 – 78
>70Y F: 33 – 92 M: 31 – 75

Effective 06Nov85 – 30Sep87:
0Y-19Y F: 30 – 70 M: 30 – 65
20Y-29Y F: 35 – 75 M: 35 – 70
30Y-39Y F: 35 – 85
40Y-49Y F: 40 – 95
>49Y F: 35 – 85
>29Y M: 30 – 65

Effective 26Mar80 – 05Nov85: 29 – 77

Triglycerides ***mg/dL*** (SI: mmol/L = 0.0113 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Jun01 – present:

Normal	<150
Borderline high risk	150-199
High risk	200-499
Very high risk	>=500

Effective 01Jan79 – 12Jun01:

0Y-9Y	not establ.
10Y-29Y	10 - 140
30Y-39Y	10 – 150
40Y-49Y	10 – 160
50Y-59Y	10 – 190
>59Y	not established

Test Name: Lipid & Starch, Feces
Department: Laboratory Medicine
Lab Area:
Synonyms: Malabsorption Screen, Excess Fat, Lipid Qualitative
Reference Ranges:

Tests no longer performed

Lipid & Starch, Feces
Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jul92 – 18Sep94:
Lipid, Fecal, Qualitative
Normal Results: No Fat Observed, Few Neutral Fat Globules, Few Large Fatty Acid Globules, Few Soaps, Any am't of Small Fatty Acid Globules

Malabsorption Screen, Fecal
Performed at MetPath Labs, Rockville MD
Effective 02Aug89 – 30Jun92:
Good Digestion 0
Poor Digestion 1 - 4

Test Name: Lipoprotein Electrophoresis
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Lipoprotein Electrophoresis ***%*** (SI: Mass fr = 0.01 x %)
Performed at National Institutes of Health, Bethesda MD
Effective 02Dec92 – present:

Alpha	17 – 46
Pre-beta	2 – 32
Beta	39 – 66
Chylomicrons	0 – 2

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HISTORICAL REFERENCE RANGES

Test Name: Lithium
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Lithium *mmol/L* (SI: mmol/L) (mEq/L = mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 07May92 – present:
Therapeutic 0.6 – 1.2
Toxic >2.0

Effective until 06May92:
Therapeutic 0.6 – 1.2 *mEq/L*
Toxic >1.5

HISTORICAL REFERENCE RANGES

Test Name: Lithium, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Lithium, CSF *mmol/L* (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Therapeutic Not defined
Toxic Not defined

Test Name: Liver/Kidney Microsomal Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Anti-L/K
Reference Ranges:

Liver/Kidney Microsome Type 1 Antibody ***units***
Performed at Mayo Medical Labs, Rochester MN
Effective 02Apr02 – present:
Negative <=20.0
Equivocal 20 – 24.9
Positive >=25.0

Effective 19Sep94 – 01Apr02: Negative, titer done if positive

Performed at SmithKline Beecham, Van Nuys CA
Effective 10Feb91 – 18Sep94: Negative, titer done if positive

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HISTORICAL REFERENCE RANGES

Test Name: Loa loa PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Loa loa PCR
Performed at National Institutes of Health, Bethesda MD
Effective 07Dec94 – present: Negative for Loa loa by PCR

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HISTORICAL REFERENCE RANGES

Test Name: Lupus Anticoagulant - DRVV
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Dilute Russell's Viper Venom
Reference Ranges:

Lupus Anticoagulant - DRVV
Performed at National Institutes of Health, Bethesda MD
Effective 02Feb00 – present
Page beeper 104-2359-7, Hematology Consultant for interpretation.

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HISTORICAL REFERENCE RANGES

Test Name: Lupus Anticoagulant - Staclot LA
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Lupus Anticoagulant - Staclot LA
Performed at National Institutes of Health, Bethesda MD
Effective 02Feb00 – present
Page beeper 104-2359-7, Hematology Consultant for interpretation.

HISTORICAL REFERENCE RANGES

Test Name: Luteinizing Hormone
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: LH
Reference Ranges:

Luteinizing Hormone *U/L* (SI:U/L) (mIU/mL = U/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Sep93 – present:

Male Adult	2 – 12
Female	
Follicular	2 – 12
Mid-Cycle Peak	>20
Luteal	1 – 13
Post menopausal	15 – 59

Effective 02May91 – 31Aug93: *mIU/mL*

Male Adult	6 - 17
Male/Female Child	0 - 9
Female	
Follicular	3 - 20
Ovulatory	>35
Luteal	3 - 22
Post menopausal	>25

Performed at SmithKline Beecham, Van Nuys CA
Effective 04Jan89 – 01May91: *mIU/mL*

Male Adult	6 - 17
Male/Female Child	0 - 9
Female	
Follicular	3 - 20
Ovulatory	>35
Luteal	3 - 22
Post menopausal	>25

Effective 01Oct87 – 03Jan89: *mIU/mL*

Male Adult	0 - 12
Male/Female Child	0 - 4
Female	
Follicular	0 - 15
Ovulatory	13 - 145
Luteal	0 - 15

Post menopausal 20 - 200

HISTORICAL REFERENCE RANGES

Test Name: Lyme Antibody Elisa NEMC
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Borrelia Burgdorferi
Reference Ranges:

Lyme Antibody Elisa NEMC
Performed at New England Medical Center, Boston MA
Effective 08May96 – present

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HISTORICAL REFERENCE RANGES

Test Name: Lyme Disease
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Performed at New England Medical Center

HISTORICAL REFERENCE RANGES

Test Name: Lyme Disease Antibody ELISA NEMC
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Borrelia Burgdorferi
Reference Ranges:

Lyme Antibody Elisa NEMC
Performed at New England Medical Center, Boston MA
Effective 08May96 – present

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HISTORICAL REFERENCE RANGES

Test Name: Lyme Disease Antibody ELISA SB
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Borrelia Burgdorferi
Reference Ranges:

Lyme Disease Antibody ELISA SB
Performed at Stony Brook Medical Center, Stony Brook NY
Effective 08May96 – present

Test Name: Lyme Disease Antibody, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Borrelia burgdorferi, Western blot
Reference Ranges:

Lyme Disease Antibody
Performed at Mayo Medical Labs, Rochester MN
Effective 08Jul03 – present:
IgG: nonconfirmatory <=4 bands
if reactive, >= 5 bands is confirmatory
IgM: normal value is negative
EIA (Enzyme Immunoassay): Results reported as Positive, Negative or Equivocal.

Note: The Western blot assay for IgG antibody and the indirect immunofluorescence assay (IFA) for IgM antibodies to B. burgdorferi are automatically performed to confirm positive EIA results.

Western Blot
IgG: Nonconfirmatory <=4 bands
IgM, IFA: Negative (reported as positive or negative)

Note: According to recent recommendations by the Centers for Disease Control, the identification of five or more Western blot protein species by IgG is confirmation of infection with B.burgdorferi and is consistent with late Lyme disease. A positive assay for IgM is confirmatory for infection with B. burgdorferi and is more likely to be useful during early disease.
Protein species used for the interpretation of Western blots include the following: 18, OspC(9-22), 28, 30, 39, 41, 45, 58, 66, 93.

Effective 27Aug96 – 07Jul03:
IgG: nonconfirmatory <=4 bands
if reactive, >= 5 bands is confirmatory
IgM: normal value is negative
ELFA (Enzyme-Linked Fluorescent Immunoassay): Results reported as Positive or Negative.

Effective 19Sep94 – 26May95:
Nonreactive <249 ABR
Weakly reactive 250 – 999 ABR
Reactive >= 1000 ABR

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: Negative

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Negative

HISTORICAL REFERENCE RANGES

Test Name: Lysozyme, Plasma
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Muramidase
Reference Ranges:

Lysozyme, Plasma *µg/mL* (SI: mg/L = 1.0 x µg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 0.2 – 15.8

Performed at SmithKline Beecham, Van Nuys CA
Effective 01May86 – 18Sep94: 2.8 - 8.0

Effective 01Jan79 - 30Apr86: 0.0 - 10.0

HISTORICAL REFERENCE RANGES

Test Name: Lysozyme, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Muramidase
Reference Ranges:

Lysozyme, Urine *mg/24hr* (SI: mg/d = 1.0 x mg/24hr)
Lysozyme, Urine *µg/mL* (SI: mg/L = 1.0 x µg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 0.0 – 3.0 *mg/24hr*

Performed at SmithKline Beecham, Van Nuys CA
Effective 01May86 – 18Sep94: 0.0 – 1.9 *µg/mL*
Effective 01Jan79 – 30Apr86: 0.0 – 2.0 *µg/mL*

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HISTORICAL REFERENCE RANGES

Test Name: Magnesium, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Mg
Reference Ranges:

Magnesium, CSF *mmol/L* (SI: mmol/L = 0.411 x mg/dL or, mmol/L = 0.5 x mEq/L)
Performed at National Institutes of Health, Bethesda MD
Effective 31Jul90 – present: 1.0 - 1.35
Effective 12Apr89 – 30Jul90: 2.0 - 2.7 *mEq/L*
Effective 14Nov85 – 11Apr89: 2.4 - 3 *mEq/L*
Effective 01Jan79 – 13Nov85: 2.0 - 2.7 *mEq/L*

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HISTORICAL REFERENCE RANGES

Test Name: Magnesium, Ionized
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: iMg
Reference Ranges:

Magnesium, Ionized *mmol/L* (SI: mmol/L = 0.411 x mg/dL or, mmol/L = 0.5 x mEq/L)
Performed at National Institutes of Health, Bethesda MD
Effective 10May00 – present: 0.44 – 0.60

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Magnesium, Ionized, Whole Blood
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Magnesium, Ionized, Whole Blood *mmol/L* (SI: mmol/L = 0.411 x mg/dL ; or, mmol/L = 0.5 x mEq/L)
Performed at National Institutes of Health, Bethesda MD
Effective 10May00 - present: 0.44 - 0.60

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Magnesium, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Mg
Reference Ranges:

Magnesium, Serum *mmol/L* (SI: mmol/L = 0.411 x mg/dL or, mmol/L = 0.5 x mEq/L)
Performed at National Institutes of Health, Bethesda MD
Effective 06Dec95 – present: 0.75 – 1.00
Effective 01Aug90 - 05Dec95: 0.65 - 1.05
Effective 14Nov85 - 31Jul90: 1.3 - 2.1 *mEq/L*
Effective 01Jan79 - 13Nov85: 1.4 - 2 *mEq/L*

HISTORICAL REFERENCE RANGES

Test Name: Magnesium, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Magnesium, Urine

Performed at National Institutes of Health, Bethesda MD
Effective 01Aug00 – present: 3.0-4.25 *mmol/24hr* (SI: mmol/24hr)
Effective 02Mar02 – present: Random *mmol/L*: No ranges established

Effective 01Aug90 – 01Mar02: Random 0.1 - 12.5 *mmol/L*
Effective 02Jun82 – 31Jul00: 6.0 – 8.5 *mEq/24hr* (mmol x 2 = mEq)

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HISTORICAL REFERENCE RANGES

Test Name: Malarial Smear
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Blood parasites
Reference Ranges:

Malarial Smear

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No parasites seen

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National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Measles Antibody IgG
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: Anti-Rubeola
Reference Ranges:

Measles Antibody IgG ***units***
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug97 – present:
Negative: <=0.900
Equivocal: 0.901 - 1.099
Positive: >=1.100

Effective 02Jul92 – 31Jul97:
Negative <=0.900 *units*
Equivocal 0.901 - 0.999 *units*
Positive >=1.000 *units*

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 01Jul92: No Ranges Available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No Ranges Available

Test Name: Meningococcal IgG Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Meningococcal IgG Antibody ***µg/mL*** (SI: mg/L = 1.0 x µg/mL)
Performed at Focus Technologies, Cypress CA
Effective 06Mar99 - present:
Serogroup A: <4.0
Serogroup B: <1.0
Reference ranges apply to pre-vaccination samples only.

The response to meningococcal vaccination is best assessed by comparing antibody levels in pre-vaccination and post-vaccination sera tested in parallel. Post-vaccination IgG levels should be at least four-fold greater than pre-vaccination levels for both serogroups. Meningococcal IgG levels peak approximately one month post-vaccination, but decline markedly by two years.

HISTORICAL REFERENCE RANGES

Test Name: Mercury, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Mercury, Urine *µg/24hr* (SI: mmol/d = 00.00499 x µg/24hr)
Mercury, Urine *µg/L* (SI: mmol/L = 00.00499 x µg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 31Mar95 – present: 0.0 – 9.9 *µg/24hr*
Toxic concentration >50 *µg/24hrs*
The concentration at which toxicity is expressed is widely variable between patients. 50 µg/24 hours is the lowest concentration at which toxicity is usually apparent.

The reference value is for a 24-hr collection. Specimens collected for other than a 24-hr time period are reported in units of µg/L, for which reference values are not established.

Effective 19Sep94 – 30Mar95: 0.0 – 19.0 *µg/24hr*

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 18Sep94: 0.0 – 20.0 *µg/L*

Test Name: Metanephrines, Fractionated, 24hr Ur
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Normetanephrines, unconjungated, total metanephrines

Reference Ranges:

Metanephrines, Fractionated, Urine ***µg/24hr***
Performed at Mayo Medical Labs, Rochester MN
Effective 18Apr02 – present:
Metanephrine, Unconjugated (SI: nmol/d = 5.07 x µg/24hr)
Males
3Y-8Y 29 - 92
9Y-12Y 59 - 188
13Y-17Y 69 - 221
>= 18Y 44 - 261
Females
3Y-8Y 18 - 144
9Y-12Y 43 - 122
13Y-17Y 33 - 185
>= 18Y 30 - 180
Hypertensive adults: <400
Normetanephrine (SI: nmol/d = 5.46 x µg/24hr)
Males
3Y-8Y 34 - 169
9Y-12Y 84 - 422
13Y-17Y 91 - 456
Females
3Y-8Y 29 - 145
9Y-12Y 55 - 277
13Y-17Y 57 - 286
M & F
18Y-29Y 103 - 390
30Y-39 Y 111 - 419
40Y-49Y 119 - 451
50Y-59Y 128 - 484
60Y-69Y 138 - 521
70+ Y 148 - 560
Hypertensive adults: <900
Total Metanephrines (SI: nmol/d = 5.07 x µg/24hr)
Males
3Y-8Y 47 - 223

9Y-12Y 201 - 528
13Y-17Y 120 - 603
18Y-29Y 190 - 583
30Y-39Y 200 - 614
40Y-49Y 211 - 646
50Y-59Y 222 - 680
60Y-69Y 233 - 716
70+ Y 246 - 753
Females
3Y-8Y 57 - 210
9Y-12Y 107 - 394
13Y-17Y 113 - 414
18Y-29Y 142 - 510
30Y-39Y 149 - 535
40Y-49Y 156 - 561
50Y-59Y 164 - 588
60Y-69Y 171 - 616
70+ Y 180 - 646
Hypertensive adults: <1300

Effective 15Dec97 – 17Apr02:
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Metanephrines Unconjugated
>= 18Y Males 26 - 230
>= 18Y Females 19 - 140
Normetanephrines
>= 18Y Males 44 - 540
>= 18Y Females 52 - 310
Total Metanephrines
>= 18Y Males 90 - 690
>= 18Y Females 95 - 475

Effective 15Dec95 – 17Apr02:
Metanephrines Unconjugated
3Y-8Y 9 - 86
9Y-12Y 26 - 156
13Y-17Y 31 - 156
Normetanephrines
3Y-8Y 20 - 186
9Y-12Y 10 - 319
13Y-17Y 71 - 395
Total Metanephrines
3Y-8Y 47 - 260
9Y-12Y 72 - 410
13Y-17Y 130 - 520

Effective 19Sep94 – 14Dec97:
Metanephrines >=18Y 45 - 290
Normetanephrines >=18Y 82 - 500
Total Metanephrines >=18Y 120 - 700

Effective 19Sep94 – 14Dec95:
Metanephrines Unconjugated
3Y-8Y 5 - 113
9Y-12Y 21 - 154
13Y-17Y 32 - 167
>=18Y 45 - 290
Normetanephrines
3Y-8Y 13 - 252
9Y-12Y 32 - 346
13Y-17Y 63 - 402

Test Name: Metanephrines, Fractionated, Random Ur
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Normetanephrine
Reference Ranges:

Metanephrines, Fractionated, Random Ur ***ug/g Creat***
Performed at Mayo Medical Labs, Rochester MN
Effective 18Apr02 to present:

Metanephrine

0Y-2Y	82 - 418
3Y-8Y	65 - 332
9Y-12Y	41 - 209
13Y-17Y	30 - 154
18Y+	29 - 158

Normetanephrine

0Y-2Y	121 - 946
3Y-8Y	92 - 718
9Y-12Y	53 - 413
13Y-17Y	37 - 286
Males	
18Y-29Y	53 - 190
30Y-39Y	60 - 216
40Y-49Y	69 - 247
50Y-59Y	78 - 282
60Y-69Y	89 - 322
70Y+	102 - 367
Females	
18Y-29Y	81 - 330
30Y-39Y	93 - 379
40Y-49Y	107 - 436
50Y-59Y	122 - 500
60Y-69Y	141 - 574
70Y+	161 - 659

Total Metanephrine

0Y-2Y	241 - 1272
3Y-8Y	186 - 980
9Y-12Y	110 - 582
13Y-17Y	78 - 412
Males	
18Y-29Y	96 - 286
30Y-39Y	106 - 316

40Y-49Y	117 - 349
50Y-59Y	130 - 386
60Y-69Y	143 - 427
70Y+	159 - 472
Females	
18Y-29Y	131 - 467
30Y-39Y	147 - 523
40Y-49Y	164 - 585
50Y-59Y	184 - 655
60Y-69Y	206 - 733
70Y+	230 - 821

Test Name: Metanephrines, Plasma, Fractionated
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Metanephrines, Plasma, Fractionated ***pg/mL***
Performed at National Institutes of Health, Bethesda MD
Effective 11Apr01 – present:
Normetanephrine, Free 18 – 112 (SI: nmol/L = 0.0056 x pg/mL)
Metanephrine, Free 12 – 61 (SI: nmol/L = 0.0052 x pg/mL)

HISTORICAL REFERENCE RANGES

Test Name: Metanephrines, Total, Conjugated (Obsolete)
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer performed as of Apr 17, 2002
Metanephrine, free + conjugated *mg/24hr* (µmol/d= 5.07 x mg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 01Jun94 – 17Apr02: 0.0 – 1.2

Performed at SmithKline Beecham, Van Nuys CA
Effective 04Jan89 - 31May94: < 0.9
Effective 01Jan79 - 03Jan89: 0.3 – 0.9

Fractionated Urine Metanephrines, which includes the total should be ordered instead.

HISTORICAL REFERENCE RANGES

Test Name: Methemoglobin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: hgb, hb
Reference Ranges:

Methemoglobin ***percent*** (SI: Mass fr = 0.01 x percent)
Performed at National Institutes of Health, Bethesda MD
Effective 19Feb03 – present:
Normal <2

Performed at Quest Diagnostics, Baltimore MD
Effective 13Nov02 – 18Feb03:
Normal <3
Toxic 35-50
Lethal 70

Performed at American Medical Labs, Chantilly VA
Effective 20Jan99 – 12Nov02: 0 - 1.6
Hemoglobin g/dL
Male/Female 4Y-6Y 11.0 - 14.5
Male/Female 7Y-12Y 11.5 - 15
Female >= 13Y 11.5 - 15
Male:
13Y-14Y 12.0 - 15.0
15Y-19Y 12.0 - 16.8
20Y-39Y 13.0 - 17.2
40Y-49Y 12.8 - 17.2
50+ Y 12.4 - 17.2

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 19Jan99: 0 - 1.9

HISTORICAL REFERENCE RANGES

Test Name: Methotrexate, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Methotrexate,CSF *µmol/L* (SI: µmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 03Feb93 - present:
Therapeutic not defined
Toxic depends on dose and infusion

Consult study PI or clinical pharmacist for level interpretation.

HISTORICAL REFERENCE RANGES

Test Name: Methotrexate, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Methotrexate, Serum *µmol/L* (SI: µmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 03Feb93 - present:
Therapeutic not defined
Toxic
1-2 wk after low dose therapy >0.02
24 hr after hi dose therapy >=5
48 hr after hi dose therapy >=0.5
72 hr after hi dose therapy >=0.05

Minimum toxic concentration >0.01
Toxic: depends on dose and infusion. Consult study PI or clinical pharmacist for level interpretation.

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HISTORICAL REFERENCE RANGES

Test Name: Methylmalonic Acid, Quantitative
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Methylmalonic Acid, Quantitative *µmol/L* (SI: µmol/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 21Aug96 – present: 0 – 0.4

HISTORICAL REFERENCE RANGES

Test Name: Mexiletine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Mexiletine ***mg/L*** (SI: µmol/L = mg/L x 5.58)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
Therapeutic 0.75 – 2.0
Toxic >2.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 02Apr92 - 18Sep94:
Therapeutic 0.7 – 2.0
Toxic >2.0

Effective until 18Sep94:
Therapeutic 0.7 – 2.0
Toxic not listed

Test Name: MHPG, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: 3-Methoxy-4-Hydroxy-Phenylglycol
Reference Ranges:

MHPG, Urine ***mg/24hrs*** (SI: µmol/d = 5.43 x mg/24hrs)
Performed at Mayo Medical Labs, Rochester MN
Effective 02Oct96 – present: 0.9 – 3.5

THERAPEUTIC INDICATIONS
Subclass I: <1.9 mg/24 hrs
Subclass II: >2.5 mg/24 hrs
Subclass III: 1.9-2.5 mg/24 hrs

NOTE: Creatinine value between 16-25 mg/kg/d verifies 24-hour collection, if renal function is within normal range.

HISTORICAL REFERENCE RANGES

Test Name: Microalbumin, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Microalbumin, Urine
Performed at National Institutes of Health, Bethesda MD
Effective 03Apr96 – present:
Excretion rate 0 – 19.9 µg/min

Effective 10May00 – present:
Microalbumin random 0 – 20.9 mg/L

Effective 10Jun98 – 09May00:
Microalbumin random 0 – 29.9 mg/L

Performed at Mayo Medical Labs, Rochester MN
Effective 03Apr96 – 09Jun98:
Excretion rate <30 mg/24hr

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HISTORICAL REFERENCE RANGES

Test Name: Microalbumin/Creatinine Ratio
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Microalbumin/Creatinine Ratio ***mg/g creat***
Performed at National Institutes of Health, Bethesda MD
Effective 10Jun98 – present: 0.0 – 16.9

Test Name: Mineral Panel
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Mineral Panel
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present:
Albumin 3.7-4.7 *g/dL*
Calcium 2.05-2.5 *mmol/L* (includes supine and upright normal subjects)
Magnesium 0.75-1.00 *mmol/L*
Phosphorus 2.5-4.8 *mg/dL* (>18 yrs)

Effective 01Dec88 – 10Jun03:
Albumin 3.7-4.7 *g/dL*
Calcium 2.05-2.5 *mmol/L* (includes supine and upright normal subjects)
Magnesium 0.75-1.00 *mmol/L*
Phosphorus 2.3-4.3 *mg/dL* (>18 yrs)

HISTORICAL REFERENCE RANGES

Test Name: Mitochondrial (M2) Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: AMA
Reference Ranges:

Mitochondrial (M2) Antibody *units* (SI: units)
Performed at Mayo Medical Labs, Rochester MN
Effective 24Nov03 - Present:
Negative: <1.0

Effective 06Sep00 - 23Nov03:
Negative <1.0
Positive: >=1.0

Effective 19Sep94 - 05Sep00: (Method not specific for M2)
None detected <1:20 *titer*

Performed at SmithKline Beecham, Van Nuys CA
Effective 20May91 - 18Sep94: None detected <1:20 *titer*
Effective 20May91 - 14Aug00:
Intermediate 1:20 - 1:80 titer
Elevated >=1:160 titer
Effective 03Jan89 - 19May91: Negative at 1:40 *titer*
Effective 01Oct87 - 03Jan89: 0 *titer*

Test Name: Mitotane
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Lysodren
Reference Ranges:

Mitotane ***µg/mL*** (SI: mg/L = 1.0 x µg/mL)
Performed at Medtox Labs, St. Paul MN
Effective 08Mar00 – present:
Therapeutic and Toxic ranges have not been established. Usual therapeutic doses produce Mitotane serum concentrations of less than 100 µg/mL.

Performed at National Medical Services, Willow Grove PA
Effective 01Dec93 – 07Mar00:
Following daily doses of 5-15 gms 7.0 – 90.0

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Mononucleosis Test
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: Mono, Epstein Barr Virus
Reference Ranges:

Mononucleosis Test

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 - present: Negative

Test Name: Mucopolysaccharides, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: GAGS
Reference Ranges:

Mucopolysaccharides, Urine ***g/mol creat*** (SI: g/mol creat)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:

0M-2M	0.0 - 39.9
3M-4M	0.0 - 24.9
5M-6M	0.0 - 19.9
7M-11M	0.0 - 17.4
12M-23M	0.0 - 12.3
2Y-3Y	0.0 - 11.0
4Y-5Y	0.0 - 9.5
6Y-7Y	0.0 - 7.9
8Y-9Y	0.0 - 6.6
10Y-11Y	0.0 - 5.3
12Y-13Y	0.0 - 4.0
>=14Y	0.0 - 3.3

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep93 - 18Sep94:
14y and up 0 - 13 µg glucuronic acid/mg creat. (SI: not available)
<14y age dependent; each reference range is indicated on report.

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HISTORICAL REFERENCE RANGES

Test Name: Multiple Endo Neoplasia 2A Molicular Analysis
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: MEN 2A
Reference Ranges:

Multiple Endo Neoplasia 2A Molicular Analysis
Performed at Mayo Medical Labs, Rochester MN
Effective 10Sep03 – present

Test Name: Mumps Virus Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Mumps Virus Antibody
Performed at Mayo Medical Labs, Rochester MN
Effective 16Jan02 – present:
IgG Negative
IgM Negative
The presence of IgM class antibodies indicates recent infection.
The presence of demonstrable IgG in the absence of IgM generally indicates past exposure and immunity.

Effective 19Sep94 – 15Jan02:
IgG <1:5 titer
IgM <1:10 titer

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: no ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: no ranges available

Test Name: Mycobacterial Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB Culture, MAC,TB
Reference Ranges:

Mycobacterial Culture - Autopsy
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: AFB culture: No growth of acid-fast bacilli in 6 weeks

Test Name: Mycobacterial Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture - Blood
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: AFC culture: No growth of acid-fast bacilli in 6 weeks

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HISTORICAL REFERENCE RANGES

Test Name: Mycobacterial Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture - Bone Marrow
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: AFB Culture: No growth of acid-fast bacilli in 6 weeks

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Catheter Exit Site
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB stain: No acid-fast bacilli seen
AFB culture: No growth of acid fast bacilli in 6 weeks.

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HISTORICAL REFERENCE RANGES

Test Name: Mycobacterial Culture/ Acid-fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Abscess
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB stain: No acid fast bacilli seen
AFB culture: No growth of acid-fast bacilli in 6 weeks

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB.MAC,TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Biopsy
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB stain: No acid fast bacilli seen.
AFC culture: No growth of acid-fast bacilli in 6 weeks

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Bronchial Brush
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB Stain: No acid fast bacilli seen
Culture: No growth of acid -fast bacilli in 6 weeks.

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Bronchial Wash
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB Stain: No acid fast bacilli seen.
AFB Culture: No growth of acid -fast bacilli in 6 weeks.

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - CSF (Spinal Fluid)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB stain: No acid fast bacilli seen
AFB culture: No growth of acid-fast bacilli in 6 weeks

HISTORICAL REFERENCE RANGES

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Drainage
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB Stain: No acid fast bacilli seen
AFB Culture: No growth of acid fast bacilli in 6 weeks

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Gastric Aspirate
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB stain: No acid-fast bacilli seen
AFB culture: No growth of acid-fast bacilli in 6 weeks.

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Joint Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB stain: No acid-fast bacilli seen
AFB culture: No growth of acid fast bacilli in 6 weeks

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Pericardial Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB stain: No acid-fast bacilli seen
AFB culture: No growth of acid fast bacilli

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Peritoneal Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB stain: No acid-fast bacilli seen
AFB culture: No growth of acid -fast bacilli in 6 weeks

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Pleural Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB stain: No acid-fast bacilli seen
AFB culture: No growth of acid fast bacilli

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HISTORICAL REFERENCE RANGES

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Sinus
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB stain: No acid-fast bacilli seen
AFB culture: No growth of acid fast bacilli in 6 weeks

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HISTORICAL REFERENCE RANGES

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Sputum
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB Stain: No acid fast bacilli seen.
AFB Culture: No growth of acid-fast bacilli in 6 weeks

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Tracheal Aspirate and Transtracheal
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB Stain: No acid fast bacilli seen.
AFB Culture: No growth of acid -fast bacilli in 6 weeks.

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB Stain: No acid fast bacilli seen
AFB Culture: No growth of acid-fast bacilli in 6 weeks

Test Name: Mycobacterial Culture/ Acid-Fast Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB, MAC, TB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Wound
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB Stain: No acid fast bacilli seen.
AFB Culture: No growth of acid -fast bacilli in 6 weeks.

Test Name: Mycobacterial Culture/ AFB Smear
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: AFB
Reference Ranges:

Mycobacterial Culture/ Acid-Fast Stain - Bronchial Lavage
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
AFB Smear: No acid fast bacilli seen
AFB Culture: No growth of acid -fast bacilli in 6 weeks.

Test Name: Mycophenolic Acid, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: MPA, Mofetil
Reference Ranges:

Mycophenolic Acid, Serum µg/mL (SI: mg/L = 1.0 x µg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 13Feb02 - present:
Therapeutic Ranges:
Mycophenolic Acid (MPA) 1.0 – 3.5
Mycophenolic Glucuronide (MPA-G) 35 – 100

Interpretation:
Trough serum levels of MPA at steady-state (after 2 weeks or more at the same dose) in the range of 1.0-3.5 µg/mL indicate adequate therapy. MPA-G levels in the range of 35-100 µg/mL indicate that the patient has normal phase II metabolic capacity.

Low MPA levels and high MPA-G levels suggest that the patient has an active phase II metabolic capability; higher doses may be required to maintain therapeutic levels of MPA. Because MPA-G is inactive, these levels indicate only the patient's metabolic status.

Trough serum MPA levels exceeding 4.0 µg/mL indicate that the patient may be overimmunosuppressed and susceptible to systemic infections. Decreased dosages may be indicated in these cases.

MPA-G levels are usually in the range of 100-250 µg/mL during the 2 weeks following transplantation. MPA-G levels are usually lower after this initial post-transplant phase. The drug is being evaluated for liver transplantation.

At steady-state (5 days after therapy is initiated) with a typical dosage of one gram twice daily of mycophenolate mofetil, the trough serum level of mycophenolic acid ranges from 1.0-3.5 µg/mL. The MPA-G value ranges from 35-100 µg/mL.

Patients who have low phase II hepatic conjugating capability may be overimmunosuppressed, indicated by a trough serum MPA level exceeding 4.0 µg/mL and a MPA-G level <40 µg/mL.

Some patients have a high phase II metabolic capacity. These patients may require one gram three times a day to maintain trough serum MPA levels in the range of 1.0-3.5 µg/mL. They are likely to have MPA-G levels ranging from 80-150 µg/mL.

HISTORICAL REFERENCE RANGES

Test Name: Mycoplasma Culture
Department: Laboratory Medicine
Lab Area:
Synonyms: Mycoplasma T Culture
Reference Ranges:

No longer performed
Mycoplasma Culture and Mycoplasma T Culture
Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: Mycoplasma Pneumoniae Antibody IgG, IgM
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Mycoplasma Pneumoniae Antibody IgG, IgM ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
IgG <1:10
IgM <1:10
The presence of IgM antibodies or a fourfold or greater rise in paired sera IgG titer indicates recent infection. The presence of demonstrable IgG generally indicates past exposure.

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HISTORICAL REFERENCE RANGES

Test Name: Mycoplasma pneumoniae PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Mycoplasma pneumoniae PCR
Performed at National Institutes of Health, Bethesda MD
Effective 01Feb00 – present: Negative for Mycoplasma pneumoniae by PCR

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HISTORICAL REFERENCE RANGES

Test Name: Mycoplasma pneumoniae PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Mycoplasma pneumoniae PCR
Performed at National Institutes of Health, Bethesda MD
Effective 01Feb00 – present: Negative for Mycoplasma pneumoniae by PCR

HISTORICAL REFERENCE RANGES

Test Name: Myelin Basic Protein, CSF
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: MBP
Reference Ranges:

Myelin Basic Protein, CSF *ng/mL* (SI: µg/L= 1.0 x ng/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 17Mar98 - present: 0 – 1.4
Effective 19Sep94 - 16Mar98: <=4.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan88 - 18Sep94:
Negative <4
Weakly Positive 4 - 8
Positive >8

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HISTORICAL REFERENCE RANGES

Test Name: Myoglobin Screen, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Myoglobin Screen, Urine
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Negative

Test Name: Myoglobin, Quantitative, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Myoglobin, Quantitative, Urine ***ng/mL*** (SI: µg/mL = 0.001 x ng/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Jul01 – present: 0 – 24

Performed at SmithKline Beecham, Van Nuys CA
Effective 19Sep94 – 18Jul01: 0 – 2000

An elevated level of myoglobin in urine does not identify the clinical disorder.

HISTORICAL REFERENCE RANGES

Test Name: Myoglobin, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Myoglobin, Serum ***ng/mL*** (SI: µg/L = 1.0 x ng/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 0.0 – 90.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Oct91 - 18Sep94: <55

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HISTORICAL REFERENCE RANGES

Test Name: N-Acetyl-b-Glucosamidase, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: NAG
Reference Ranges:

N-Acetyl-b-Glucosamidase, Urine ***U/L*** (SI: U/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 0 – 5.9
Results are for research purposes only.

Performed at SmithKline Beecham, Van Nuys CA
Effective 09Oct90 – 18Sep94: 0 – 5.9
Results are for research purposes only.

HISTORICAL REFERENCE RANGES

Test Name: N-Methyl histamine, U
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

N-Methylhistamine, Urine ***µg/g creat*** (SI: µg/g creat)
Performed at Mayo Medical Labs, Rochester MN
Effective 17Jul02 – present:
0Y - 5Y: 120 - 510
6Y - 16Y: 70 - 330
>16y: 30 - 200

Performed at Vanderbilt University, Nashville TN
Effective 20Jan99 – 16Jul02: 50 – 230
(Creatinine: 1-2 g/L)

HISTORICAL REFERENCE RANGES

Test Name: N-MIAA, U
Department: Laboratory Medicine
Lab Area:
Synonyms: N-Methylindolacetic Acid
Reference Ranges:

N-MIAA, Urine *mg/24hr* (SI: mg/d = 1.0 x mg/24hr)
No longer performed as of 19Jan99. Was replace by N-Methylhistamine, Urine.
Performed at Mayo Medical Labs, Rochester MN
Effective 28May97 – 19Jan99: 0 – 4.9

HISTORICAL REFERENCE RANGES

Test Name: Neuraminidase, Fibroblasts
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Neuraminidase, Fibroblasts
Performed at Mayo Medical Labs, Rochester MN
Effective 09Oct96 – present: Normal control noted on report

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HISTORICAL REFERENCE RANGES

Test Name: Nose Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Nose Culture - Nose (Anterior Nares)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No Staphylococcus aureus

For information on Antibiotic Susceptibility on significant isolates, click here

HISTORICAL REFERENCE RANGES

Test Name: NTx-Telopeptide, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

NTx-Telopeptide, Urine
Performed at Mayo Medical Labs, Rochester MN
Effective 19Jul00 – present:
Males 20-40Y: 21-66 *nmol Bone Collagen Equivalents/mmol Creatinine*
Females 20Y-40Y: 19-63 *nmol Bone Collagen Equivalents/mmol Creatinine*
Reference values were determined in subjects 20-40 years old.
Higher values may be found in older patients, but results are generally interpreted relative to the younger age groups.
Also reported: Creatinine in *mg/dL* and NTX in *pmol/mL*

Effective 25Jun97 – 18Jul00:
Male 0 – 64 *pm/µm creat*
Female Premenopausal 0 – 64 *pm/µm creat*
Female Postmenopausal 0 – 130 *pm/µm creat*

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HISTORICAL REFERENCE RANGES

Test Name: Occult Blood
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Occult Blood
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Negative

HISTORICAL REFERENCE RANGES

Test Name: Onchocerca volvulus PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Onchocerca volvulus PCR
Performed at National Institutes of Health, Bethesda MD
Effective 15Sep99 – present
Negative for Onchocera volvulus by PCR.

Test Name: Organic Acid Screen, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Organic Acid Screen, Urine
Performed at Mayo Medical Labs, Rochester MN
Effective 18Jul00 – present:
A narrative report will be issued. In normal subjects, the excretion of most pathologic organic acids is typically below the detectability of the method (approx. 2 mmol/mol creatinine).

Effective 02Oct96 – 17Jul00: *µg/mg creat*
3-OH Butyric Acid: 0 – 40

Lactic Acid
1D-6M 0 – 200
7M-11M 0 – 100
12M-15Y 0 – 50
16Y-150Y 0 – 37

Pyruvic Acid
1D-11M 0 – 80
12M-15Y 0 – 25
16Y-150Y 0 – 10

Fumaric Acid: 0 – 15

2-Ketoglutaric Acid
1D-15Y 0 – 196
16Y-150Y 0 – 96

Ethylmalonic Acid
1D-15Y 0 – 20
16Y-150Y 0 – 10

Glutaric Acid: 0 – 6

Adipic Acid
1D-15Y 0 – 30
16Y-150Y 0 – 45

Octenedioic Acid: 0 – 15

Suberic Acid
1D-15Y 0 – 12
16Y-150Y 0 – 4

Sebacic Acid: 0 – 3

3-0H Sebacic Acid: 0 – 12

3-0H Dodecanedioic Acid: 0 – 4

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HISTORICAL REFERENCE RANGES

Test Name: Organic Acids, Plasma
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Organic Acids, Plasma
Performed at Mayo Medical Labs, Rochester MN
Effective 09Oct96 – 30Aug99: Normals noted on report.

HISTORICAL REFERENCE RANGES

Test Name: Organic Acids, QN, CSF
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Organic Acids, QN, CSF

Performed at Children's Hospital, Philadelphia PA
Effective 09Oct96 – present: Reference ranges are sent with the report.

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HISTORICAL REFERENCE RANGES

Test Name: Osmolality, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Osmolality, CSF *mOsm/kg* (SI: mmol/kg = 1 x mOsm/kg)
Effective 01Jan79 - present: 280 - 295

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HISTORICAL REFERENCE RANGES

Test Name: Osmolality, Feces
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Osmolality, Feces ***mosmol/kg*** (SI: mmol/kg = 1.0 x mOsm/kg)
Performed at Mayo Medical Labs, Rochester MN
Effective 15Mar95 - present: 220-280

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HISTORICAL REFERENCE RANGES

Test Name: Osmolality, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Osmolality, Fluid *mOsm/kg* (SI: mmol/kg = 1.0 x mOsm/kg)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Not established

HISTORICAL REFERENCE RANGES

Test Name: Osmolality, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Osmolality, Serum *mOsm/kg* (SI: mmol/kg = 1 x mOsm/kg)
Performed at National Institutes of Health, Bethesda MD
Effective 30Nov87 - present: 278 – 298

Effective 01Jan79 – 29Nov87:
Male 285 – 295
Female 280 – 290

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HISTORICAL REFERENCE RANGES

Test Name: Osmolality, Sweat
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Osmolality, Sweat ***mOsm/kg*** (SI: mmol/kg = 1.0 x mOsm/kg)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Not established

HISTORICAL REFERENCE RANGES

Test Name: Osmolality, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Osmolality, Urine *mOsm/kg* (SI: mmol/kg = 1.0 x mOsm/kg)
Performed at National Institutes of Health, Bethesda MD
Effective 02Aug86 - present :
Average fluid intake: 300 – 900
12 hr fluid restriction: 850 – 1200

Effective 01Jan79 - 01Aug86: 300 – 1000

Test Name: Osmotic Fragility, RBC
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Erythrocyte Osmotic Fragility
Reference Ranges:

Osmotic Fragility, RBC ***% hemol*** (SI: hemol frac = 0.01 x % hemol)
Performed at Mayo Medical Labs, Rochester MN
Effective 01Jul03 – present:
0.50 g/dL NaCl (unincubated)
Male 0.0 – 47.8
Female 0.0 – 31.1

0.60 g/dL NaCl (unincubated)
Male 18.7 – 67.4
Female 10.9 – 65.5

0.65 g/dL NaCl (incubated)
Male 4.4 – 36.6
Female 0.2 – 39.3

0.75 g/dL NaCl (incubated)
Male 0.8 – 9.1
Female 0.0 – 10.9

Interpretation:
Increased lysis in more than two concentrations of NaCl indicates increased red cell fragility. Infrequently, other hemolytic disorders may be associated with positive results, as in patients with congential nonspherocytic hemolytic anemia due to G-6-PD or pyruvate kinase deficiency. Patients with an immunohemolytic anemia, or who have recently received a blood transfusion may also have increased RBC lysis.

Performed at Mayo Medical Labs, Rochester MN
Effective 11Apr01 – present:
0.50 g/dL NaCl (unincubated)
Male 0.5 – 24.7
Female 0 – 23.1

0.60 g/dL NaCl (unincubated)
Male 18 – 55.2
Female 2.2 – 59.3

0.65 g/dL NaCl (incubated)
Male 4 – 24.8
Female 0.5 – 28.9

0.75 g/dL NaCl (incubated)
Male 0.5 – 8.5
Female 0.1 – 9.3

Interpretation:
Increased lysis in more than two concentrations of NaCl indicates increased red cell fragility. Infrequently, other hemolytic disorders may be associated with positive results, as in patients with congential nonspherocytic hemolytic anemia due to G-6-PD or pyruvate kinase deficiency. Patients with an immunohemolytic anemia, or who have recently received a blood transfusion may also have increased RBC lysis.

Performed at National Institutes of Health, Bethesda MD
Effective until 11Apr01: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Osteocalcin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Osteocalcin *ng/mL* (SI: µg/L = 1 x ng/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jul01 – present:
Male >=19Y 1.1 – 7.2
Female Adult Premenopausal 0.5 – 7.0

Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 21Jun00 – 10Jul01:
Male >=19Y 8.0 – 52.0
Female Adult:
Premenopausal 5.8 – 41.0
Postmenopausal 8.0 – 56.0
Pediatric:
2M-12M 27.0 – 149.0
1Y-4Y 23.0 – 105.0
5Y-9Y 24.0 – 123.0
Tanner Stage I 20.0 – 89.0
Tanner Stage II
Male 26.0 – 90.0
Female 44.0 – 144.0
Tanner Stages III-IV
Male 48.0 – 123.0
Female 31.0 – 91.0

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 20Jun00:
0Y-1Y Not established
2Y-10Y 10.0 – 43.0
11Y-19Y Not established
20Y-50Y 2.0 – 15.0
Male 51Y-70Y 2.0 – 10.0
Female 51Y-80Y 6.0 – 22.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 07Jul93 - 18Sep94: 5.1 - 23.0

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HISTORICAL REFERENCE RANGES

Test Name: Ova + Parasites
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Ova + Parasites

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No parasites seen

HISTORICAL REFERENCE RANGES

Test Name: Ova+Parasites
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Ova+Parasites - Duodenal Fluid/Asp

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No parasites seen

HISTORICAL REFERENCE RANGES

Test Name: Oxalate, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Oxalate, Urine ***mg/24hr*** (SI: µmol/d = 11.4 x mg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 9.7 – 40.5

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep93 – 18Sep94: 0 – 40

Effective 13May91 – 31Aug93:
Male <67
Female <45

Effective 01Jan79 – 12May91: <40

HISTORICAL REFERENCE RANGES

Test Name: Oxcarbazepine Metabolite (MHC)
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Trileptal
Reference Ranges:

Oxcarbazepine Metabolite (MHC) ***µg/mL*** (SI: mg/L = 1.0 x µg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 14Jan04 – present:
Trough Value 6-10
Peak Value <40

Oxcarbazepine ***µg/mL*** (SI: mg/L = 1.0 x µg/mL)
Performed at Medtox Laboratories, St. Paul MN
Effective 12Jul01 - 13Jan04:
Therapeutic 10.0-35.0
Therapeutic efficacy has been demonstrated in patients with trough 10-Hydroxy metabolite concentrations of 10.0-35.0 µg/mL.
Toxic concentrations have not been established.

HISTORICAL REFERENCE RANGES

Test Name: Pancreatic Polypeptide
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Pancreatic Polypeptide ***pg/mL*** (SI: ng/L = 1 x pg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 10Jun98 – present:
0Y-19Y: not established
20Y-29Y: 0 – 227
30Y-39Y: 0 – 248
40Y-49Y: 0 – 269
50Y-59Y: 0 – 290
60Y-69Y: 0 – 311
70Y-79Y: 0 – 331
>=80Y: not established

Test Name: Paracoccidiodes CSF
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Paracoccidiodes CSF
Paracoccidiodes Agar CSF
Performed at American Medical Labs, Chantilly VA
Effective until 31Nov 92

HISTORICAL REFERENCE RANGES

Test Name: Paracoccidioides Antibody, Serum
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer performed
Paracoccidioides Antibody, Serum
Performed at American Medical Labs, Chantilly VA
Effective until 05Oct82: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Parainfluenza Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Parainfluenza Antibody ***titer*** (SI: titer)
Performed at Focus Technologies, Cypress CA
Effective 06Mar99 – present: 0 – 7

Effective 19Sep94 - 06Mar99: No ranges available

Test Name: Paraneoplastic Autoantibody Evaluation
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: ANNA-1, ANNA-2, ANNA-3, PCA-1, PCA-2, PCA-Tr

Reference Ranges:

Paraneoplastic Autoantibody Evaluation
Performed at Mayo Medical Labs, Rochester MN
Effective 14Jan04 – present:
Anti-Neuronal Nuclear Ab, Type 1 (ANNA-1) Negative at <1:60
Anti-Neuronal Nuclear Ab, Type 2 (ANNA-2) Negative at <1:60
Anti-Neuronal Nuclear Ab, Type 3 (ANNA-3) Negative at <1:60
Purkinje Cell Cytoplasmic Ab Type 1 (PCA-1) Negative at <1:60
Purkinje Cell Cytoplasmic Ab Type 2 (PCA-2) Negative at <1:60
Purkinje Cell Cytoplasmic Ab Type Tr (PCA-Tr) Negative at <1:60
Amphiphysin Ab Negative at <1:60

CRMP-5-IgG Negative at <1:60
Titers lower than 1:60 are detectable by recombinant CRMP-5 western blot analysis. CRMP-5 western blot analysis will be done on request on stored serum (held 4 weeks).

Striational (Striated Muscle) Ab <1:60
Calcium Channel Bind Ab, P/Q Type <20 pmol/L
Calcium Channel Bind Ab, N-Type <20 pmol/L
ACh Receptor (Muscle) Binding Ab 0 - 0.02 nmol/L

Test Name: Parasitic Serology
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer performed as a battery. Order individual tests.
Parasitic Serology
Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective 02Mar86 – 31Aug90: No ranges available

Performed at Center for Disease Control, Atlanta GA
Effective until 01Mar86: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Parathyroid Hormone, C-Terminal, Mid-Molecule
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: PTH-C
Reference Ranges:

Parathyroid Hormone, C-Terminal, Mid-Molecule *pg/mL* (SI: ng/L = 1.0 x pg/mL)
To convert to pmol/L multiply the result by 0.353
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 18May00 – present:
17Y-150Y 70 – 270
2Y-16Y 54 – 230
Method not sensitive below 50 pg/mL.

Effective 17Apr00 – 17May00: 50 - 330

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan90 – 16Apr00: 50 - 340
Effective 01Oct87 - 13Jan90: 0 - 340 pg/mL

Calcium:
>17Y: 8.8-10.1 mg/dL
7Y-17Y: 8.7-10.8 mg/dL

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HISTORICAL REFERENCE RANGES

Test Name: Parathyroid Hormone, Intact
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: PTH
Reference Ranges:

Parathyroid Hormone, Intact *pg/mL* (SI: ng/L = 1.0 x pg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Nov02 – present: 6 – 40
Effective 15Sep99 – 12Nov02: 10 – 65

Performed at Mayo Medical Labs, Rochester MN
Effective 05Dec94 – 14Sep99: 9.4 – 49
Effective 19Sep94 – 04Dec94: 9.4 – 47

Performed at SmithKline Beecham, Van Nuys CA
Effective 06Feb91 – 18Sep94: 10 – 65

HISTORICAL REFERENCE RANGES

Test Name: Parathyroid Hormone, N-Terminal
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: PTH-N
Reference Ranges:

Parathyroid Hormone, N-Terminal *pg/mL* (SI: ng/L = 1 x pg/mL)
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 17Apr00 – present: 8 – 24
(Calcium: 8.8-10.1 mg/dL)

Performed at SmithKline Beecham, Van Nuys CA
Effective 22Jul88 – 16Apr00: 4 - 19
(Calcium: 8.8-10.1 mg/dL)

HISTORICAL REFERENCE RANGES

Test Name: Parietal Cell Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Antiparietal Cell
Reference Ranges:

Parietal Cell Antibody *titer* (SI: titer)
Performed at Mayo Medical Labs, Rochester MN

Effective 24Nov03 - Present:
Negative: <1.0

Effective 19Sep94 – 23Nov03:
Negative: <1:20
Weakly Pos: 1:20 – 1:40
Positive: >=1:80

Performed at SmithKline Beecham, Van Nuys CA
Effective 10Oct91 – 18Sep94:
Negative: <1:20
Weakly Pos: 1:20 – 1:40
Positive: >=1:80

Effective 31Jul90 – 09Oct91: Negative <1:10

Effective 01Oct87 – 30Jul90: Negative <1:20

Effective 01Oct87 – 03Jan89:
Weakly Pos: 1:20 – 1:40
Positive: >=1:80

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HISTORICAL REFERENCE RANGES

Test Name: Partial Thromboplastin Time
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: APTT, PTT
Reference Ranges:

Partial Thromboplastin Time *seconds*
Performed at National Institutes of Health, Bethesda MD
Effective 20Jan99 – present:
Automated: 23.4 – 34.5
Fibrometer: 24.4 - 35.6

Effective 08Aug95 – 19Jan99: Automated 23.7 – 35.0
Effective 08Sep83 - 07Aug95: Automated 22.5 - 34.8 .6
Effective 01Jan79 - 19Jan99: Fibrometer 25.8 - 38.6

Test Name: Parvovirus B19 Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Parvovirus B19 Antibody *titer* (SI: titer)
Performed at Focus Technologies, Cypress CA
Effective 14Mar01 – present:
IgG: <1:64
IgM: <1:10
Interpretation:
Parvovirus infection is associated with several distinct clinical manifestations, including erythema infectiosum (fifth disease), aplastic crisis, hydrops fetalis, fetal anemia stillbirth, and probably some forms of arthritis. The presence of IgG antibody alone indicates past infection and probably immunity to parvovirus. The presence of IgM antibody, either in the presence or absence of IgG antibody, indicates recent parvovirus infection (within the preceding 3 months).

Performed at Mayo Medical Labs, Rochester MN
Effective 14Sep94 – 13Mar01:
IgG: Negative
IgM: Negative

HISTORICAL REFERENCE RANGES

Test Name: Pentobarbital
Department: Laboratory Medicine
Lab Area: Quest Diagnostics
Synonyms:
Reference Ranges:

Pentobarbital *µg/mL* (SI: mg/L = 1 x µg/mL)
Performed at Quest Diagnostics, Baltimore MD
Effective 13Nov02 – present:
Expected values: 1.0 – 5.0
Detection limit: 0.1

Performed at American Medical Labs, Chantilly VA
Effective 01Aug01 - 12Nov02:
Expected values: 1.0 – 5.0
Detection limit: 0.1

Test Name: Peroxisomal Panel
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Essential Fatty Acids
Reference Ranges:

Peroxisomal Panel *µmol/L* (SI: µmol/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 28Oct96 – present:
C22:0 0 – 96.3
C24:0 0 – 91.4
C26:0 0 – 1.30
C24:0/C22:0 0 – 1.39 ratio
C26:0/C22:0 0 – 0.023 ratio

Pristanic Acid
0M-4M 0 – 0.60
5M-8M 0 – 0.84
9M-12M 0 – 0.77
13M-24M 0 – 1.47
>24M 0 – 2.98

Phytanic Acid
0M-4M 0 – 5.28
5M-8M 0 – 5.70
9M-12M 0 – 4.40
13M-24M 0 – 8.62
>24M 0 – 9.88

Pristanic/Phytanic Ratio
0M-4M 0 – 0.35
5M-8M 0 – 0.28
9M-12M 0 – 0.23
13M-24M 0 – 0.24
>24M 0 – 0.39

Effective 09Oct96 – 24Jun97:
Phytanic Acid
Negative 0.0 - 0.09
Indeterminate 0.1 - 0.30
Suggests Refsum's Disease >0.30

HISTORICAL REFERENCE RANGES

Test Name: Phenobarbital, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Barbiturates
Reference Ranges:

Phenobarbital ***mg/L*** (SI: µmol/L = 4.31 x mg/L) (mg/L = µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 02Apr92 - present:
Therapeutic 15 – 40
Toxic:
Slowness, ataxia, nystagmus 35 – 80
Coma with reflexes 65 – 117
Coma without reflexes >100

Effective 07Feb81 - 01Apr92: Therapeutic: 15 – 40

Performed at MetPath Labs, Rockville MD
Effective until 06Feb81: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Phenobarbital, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Barbiturates
Reference Ranges:

Phenobarbital, Fluid ***mg/L*** (SI: µmol/L = 4.31 x mg/L) (mg/L = µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 07Feb81 - present

Performed at MetPath Labs, Rockville MD
Effective until 06Feb81

HISTORICAL REFERENCE RANGES

Test Name: Phenytoin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Dilantin, Diphenylhydantoin
Reference Ranges:

Phenytoin *mg/L* (SI: µmol/L = 3.96 x mg/L)
Performed at National Institutes of Health, Bethesda MD
Effective 02Apr92 - present:
Therapeutic 10 – 20
Toxic:
Far lateral nystagmus >20
Nystagmus at 45 angle >30
Depressed mental capacity >40

Effective until 07Dec79 - 01Apr92:
Therapeutic 10 – 20
Toxic >29

Performed at MetPath Labs, Rockville MD
Effective until 06Dec79: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Phenytoin, Free
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Phenytoin, Free *mg/L* (SI: µmol/L = 3.96 x mg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
Therapeutic 1.0 – 2.0
Toxic >=2.5

Performed at SmithKline Beecham, Van Nuys CA
Effective 18Mar88 - 18Sep94:
Therapeutic 1.0 – 2.0
Toxic not listed

Performed at MetPath Labs, Rockville MD
Effective until 18Sep94:
Therapeutic 1.0 – 2.0
Toxic not listed

HISTORICAL REFERENCE RANGES

Test Name: Phosphorus, Inorganic
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Phosphorus, Inorganic, CSF *mg/dL* (SI: mmol/L = 0.323 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 14Nov85 - present: 1.2 - 2.0
Effective 28May81 - 13Nov85: 1.4 - 2.4
Effective 01Jan79 - 27May81: 1.3 - 2.1

HISTORICAL REFERENCE RANGES

Test Name: Phosphorus, Inorganic, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Phosphate
Reference Ranges:

Phosphorus, Urine *g/24hr* (SI: mmol/d = 32.3 x g/24hr)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jun82 – present: 0.4 – 1.3
Random: Not established

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HISTORICAL REFERENCE RANGES

Test Name: Phosphorus, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Phosphate
Reference Ranges:

Phosphorus, Serum *mg/dL* (SI: mmol/L = 0.323 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present:
>=18Y 2.5 – 4.8

Effective 01Dec88 – 10Jun03:
>=18Y 2.3 – 4.3

Effective 28May81 - 30Nov88:
>=18Y 2.4 - 4.4

Effective 01Jan79 - 27May81:
>=19Y 2.1 - 3.8

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HISTORICAL REFERENCE RANGES

Test Name: pH, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

pH, CSF
Performed at National Institutes of Health, Bethesda MD
Effective 12Apr89 - present: 7.35 - 7.4

Effective 14Jan85 - 11Apr89:
Lumbar 7.28 - 7.4
Cisternal 7.32 - 7.34

Effective 01Jan79 - 13Nov85: 7.35 - 7.7

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HISTORICAL REFERENCE RANGES

Test Name: pH, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

pH, Fluid

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present

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HISTORICAL REFERENCE RANGES

Test Name: pH, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

pH, Urine

Performed at National Institutes of Health, Bethesda MD
Effective 06Mar99 – present: 5.0 - 8.0
Effective 01Jan79 – 05Mar99: 4.8 - 7.8

HISTORICAL REFERENCE RANGES

Test Name: Pinworm Exam
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Scotch Tape Prep
Reference Ranges:

Pinworm Exam
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No Enterobius

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HISTORICAL REFERENCE RANGES

Test Name: Pinworm Exam
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Scotch Tape Prep
Reference Ranges:

Pinworm Exam
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No Enterobius

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HISTORICAL REFERENCE RANGES

Test Name: PKU, Urine
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer performed.
PKU, Urine ***mg/dL***
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 01Apr92: 2.0 - 4.0

Test Name: Placental Lactogen
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: HPL
Reference Ranges:

Placental Lactogen *µg/mL* (SI: mg/L = 1.0 x µg/mL)
Performed at Cambridge Biomedical Clinical Reference Lab, Brighton MA
Effective 15Jul00 – present:

Males and non-Preg Females	0 – 0.1
1st trimester of preg	0.2 – 2.1
2nd trimester of preg	0.5 – 6.7
3rd trimester of preg	4.5 – 12.8

Effective 21Nov88 – 14Jul00:

Males and non-Preg Females	0 – 0.1

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 14Jul00:

Females Preg 25-41 wks	1.5 – 12.6

Performed at SmithKline Beecham, Van Nuys CA
Effective 21Nov88 – 18Sep94:
No ranges available

Females Preg 5-38 wks	0.5 – 11

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HISTORICAL REFERENCE RANGES

Test Name: Plasma Hemoglobin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: hgb, hb
Reference Ranges:

Plasma Hemoglobin *mg/dL* (SI: µmol/L = 0.155 x mg/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 11Jun03 – present:
Reference values:
0-13D 39 mg/dL (mean)*
2-11W 22 mg/dL (mean)*
3-23M 16 mg/dL (mean)*
2-17Y 10 mg/dL (mean)*
>=18Y 0-15 mg/dL

*Literature derived normals

Performed at National Institutes of Health, Bethesda MD
Effective 02Dec00 – 10Jun03: 0 – 17.5
Effective 01Jan79 – 01Dec00: 0 – 5.0

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HISTORICAL REFERENCE RANGES

Test Name: Plasminogen
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Plasminogen %
Performed at National Institutes of Health, Bethesda MD
Effective 12Oct00 – present: 77.0 - 124.0

Call 104-2359-7 for interpretation.

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HISTORICAL REFERENCE RANGES

Test Name: Plasminogen Activator Inhibitor-1 Antigen
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: PAI-1
Reference Ranges:

Plasminogen Activator Inhibitor-1 Antigen ***ng/mL***
Performed at Esoterix Coagulation, Aurora CO
Effective 08Jan03 – present: 4.0 - 43.0
Reference ranges represent adult values.

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HISTORICAL REFERENCE RANGES

Test Name: Platelet Function Analyzer
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Platelet Function Analyzer
Performed at National Institutes of Health, Bethesda MD
Effective 12May04 – present:
EPI: 86-154 sec.
ADP: 73-129 sec.

Interpretation: Call 104-2359-7 for interpretation

Test Name: Pneumococcal Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Streptococcus Pneumoniae; Pneumococcal IgG Serotypes
Reference Ranges:

Pneumococcal Antibody *µg/mL* (SI: mg/L = 1 x µg/mL)
Performed at Focus Technologies, Cypress CA
Effective 04Apr03 – present:
Post-vaccination: >1.6
Interpretive Criteria:
<= 1.6 Non-protective antibody level
> 1.6 Protective antibody level
Pneumococcal vaccine response testing should be performed with paired pre- and post-vaccination sera. The MAID procedure measures IgG antibodies recognizing 12 type-specific pneumococcal polysaccharide antigens included in the polyvalent vaccine. Based on the findings of Schmid et al (J infect Dis 143:590,1981), IgG levels >1.6 µg/mL (equivalent to 250 ng Antibody N/mL) are considered protective. Individual pre-vaccination IgG levels are highly variable due to age and exposure history; in general, however, approximately 50% of individuals exhibit non-protective IgG levels (<= 1.6 µg/mL) prior to vaccination. A two-fold or greater increase for at least one serotype is expected when comparing post-vaccination to pre-vaccination results.

Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 01Jun99 – 03Apr03:
Random: No ranges established
Pre (Unimmunized) 0 - 1.4
Post: 2Y - 7Y

Serotype 1	>= 3.0
Serotype 3	>= 3.0
Serotype 4	>= 1.5
Serotype 6	>= 1.5
Serotype 8	>= 3.0
Serotype 9N	>= 3.0
Serotype 12	>= 1.5
Serotype 14	>= 3.0
Serotype 19F	>= 1.5
Serotype 23F	>= 1.5
Serotype 51 (7F)	>= 1.5
Serotype 56	>= 3.0

Post: 8Y - 14Y

Serotype 1	>= 3.0
Serotype 3	>= 4.5
Serotype 4	>= 1.5
Serotype 6	>= 3.0
Serotype 8	>= 4.5
Serotype 9N	>= 4.5
Serotype 12	>= 3.0
Serotype 14	>= 4.5
Serotype 19F	>= 1.5
Serotype 23F	>= 4.5
Serotype 51 (7F)	>= 1.5
Serotype 56	>= 3.0

Post: >= 15Y

Serotype 1	>= 4.5
Serotype 3	>= 4.5
Serotype 4	>= 1.5
Serotype 6	>= 3.0
Serotype 8	>= 4.5
Serotype 9N	>= 4.5
Serotype 12	>= 3.0
Serotype 14	>= 4.5
Serotype 19F	>= 3.0
Serotype 23F	>= 4.5
Serotype 51 (7F)	>= 1.5
Serotype 56	>= 3.0

Performed at Specialty Labs, Santa Monica CA
Effective 25May95 – 31May99:
Protective Range for types 1,3,4,6B,7F,8,9N,12F,14,18C,19F,23F
200 – 300 ng AB

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 24May95:

Preimmune AB level	<10 AU
Low-Mod AB level for type 14	10 – 25 AU
Low-Mod AB level for types 3,8,12	10 – 50 AU
High AB level for type 14	>25 AU
High AB level for types 3,8,12	>50 AU

Performed at Specialty Labs, Santa Monica CA
Effective 22Jul91 – 18Sep94:
Protective Range: 200 – 300 ng AB

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HISTORICAL REFERENCE RANGES

Test Name: Pneumocystis carinii PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: PCP-PCR
Reference Ranges:

Pneumocystis carinii PCR
Performed at National Institutes of Health, Bethesda MD
Effective 01Feb00 – present: Negative for Pneumocystis carinii by PCR

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HISTORICAL REFERENCE RANGES

Test Name: Pneumocystis Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: PCP
Reference Ranges:

Pneumocystis Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Negative

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HISTORICAL REFERENCE RANGES

Test Name: Pneumocystis Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: PCP
Reference Ranges:

Pneumocystis Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No pneumocystis seen

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HISTORICAL REFERENCE RANGES

Test Name: Pneumocystis Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: PCP
Reference Ranges:

Pneumocystis Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No pneumocystis seen.

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HISTORICAL REFERENCE RANGES

Test Name: PNH Flow Analysis
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: GPI Neg
Reference Ranges:

PNH Flow Analysis %
Performed at National Institutes of Health, Bethesda MD
Effective 14Jul99 – present:
GPI NEG RBC: 0 – <1
GPI NEG NEUT: 0 – <1

Test Name: Poliovirus Antibody, Types 1, 2, 3
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Poliovirus Antibody, Types 1, 2, 3 ***titer*** (SI: titer)
Performed at Focus Technologies, Cypress CA
Effective 06Mar99 – present: 0 – 7
Interpretation:
< 1:8 Antibody not detected.
>= 1:8 Antibody detected.

Effective 19Sep94 - 06Mar99: No ranges available

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Porphobilinogen, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Porphobilinogen, Random *mg/g creat*
Performed at Mayo Medical Labs, Rochester MN
Effective 17Jul02 – present: 0.0-0.5

Porphobilinogen, 24 hour *mg/24hr* (SI: µmol/d = 4.42 x mg/24hr)
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 13Oct99 – present: 0 – 2.7

Porphobilinogen, Random *mg/g creat*
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 13Oct99 – 16Jul02:
Males >= 19Y 0 – 1.1
Females >= 19 0 – 1.5

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 12Oct99:
Qualitative result given: not detectable

Test Name: Porphyrins, Urine (includes Porphobilinogen)
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Porphyrins, Quantitative ***µg/24hr***
Performed at Mayo Medical Labs, Rochester MN
Effective 19Apr01 – present:
Uroporphyrins, Octacarboxyl 3 – 25
Heptacarboxylporphyrins 0 – 7
Hexacarboxylporphyrins 0 – 6
Pentacarboxylporphyrins 0 – 7
Corporphyrins, Tetracarboxyl
Males 25 – 150
Females 8 – 110

Effective 13Oct99 – 18Apr01:
Uroporphyrins, Octacarboxyl
Males 0 – 46
Females 0 – 22
Heptacarboxylporphyrins
Males 0 – 13
Females 0 – 9
Hexacarboxylporphyrins
Males 0 – 5
Females 0 – 4
Pentacarboxylporphyrins
Males 0 – 4
Females 0 – 3
Corporphyrins, Tetracarboxyl
Males 0 – 96
Females 0 – 60

Porphobilinogen ***mg/24hr***
Performed at Mayo Medical Labs, Rochester MN
Effective 19Apr01 – present: 0 – 0.5

Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 13Oct99 – 18Apr01:
Normal 0 – 1.5
Marginal 1.6 – 2

Excess > = 2.1

Porphyrins (Uro-, Proto-, Copro-) Qualitative
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 12Oct99: Not detectable

HISTORICAL REFERENCE RANGES

Test Name: Potassium, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: K
Reference Ranges:

Potassium, CSF *mmol/L* (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 – present: 2.5 - 3.2
Effective 12Apr89 - 31Jul90: 2.5 - 3.2 *mEq/L* (SI: mmol/L = 1 x mEq/L)
Effective 14Nov85 - 11Apr89: 2.6 - 3.0 *mEq/L*

Test Name: Potassium, Feces
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Fecal K
Reference Ranges:

Potassium, Feces, 24H ***mEq/24hrs*** (SI: mmol/d = 1.0 x mEq/24hrs)
Performed at Mayo Medical Labs, Rochester MN
Effective 06Nov96 – present: 0.0 – 29.9
Effective 15Mar95 – 05Nov96: 5.0 – 20.0 *mEq/kg*

Potassium, Feces, Random ***mEq/kg*** (SI: mmol/kg = 1.0 x mEq/kg)
Performed at Mayo Medical Labs, Rochester MN
Effective 06Nov96 – present: 0.0 – 199.9
Effective 15Mar95 – 05Nov96: 5.0 – 20.0 *mEq/kg*

Performed at American Medical Labs, Chantilly VA
Effective 02Jan85 – 14Mar95: Ranges not available

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 01Jan85: Ranges not available

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HISTORICAL REFERENCE RANGES

Test Name: Potassium, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Potassium, Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan80 – present

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HISTORICAL REFERENCE RANGES

Test Name: Potassium, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: K
Reference Ranges:

Potassium, Serum *mmol/L* (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 - present: 3.3 - 5.1
Effective 01Dec88 - 31Jul90: 3.3 - 5.1 mEq/L (mEq/L x 1 = mmol/L)
Effective 01Jan79 - 30Nov88: 3.3 - 4.6 mEq/L

Effective 01Aug90 - present:
Sodium: 135-144 mmol/L
Chloride: 99 – 107 mmol/L
Total CO_2: 21 - 31 mmol/L

HISTORICAL REFERENCE RANGES

Test Name: Potassium, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Potassium, Urine *mmol/24hr* (SI: mmol/d = 1 x mmol/24hr)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 - present: 25 – 125
Effective 01Dec87 – 31Jul90: 25 – 125 *mEq/24hr*
Effective 01Jun82 – 30Nov87: 25 – 120 *mEq/24hr*

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HISTORICAL REFERENCE RANGES

Test Name: Potassium, Whole Blood
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: K
Reference Ranges:

Potassium, Whole Blood ***mmol/L*** (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jul01 - present: 3.3-5.1

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HISTORICAL REFERENCE RANGES

Test Name: Prealbumin
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms:
Reference Ranges:

Prealbumin ***mg/dL*** (SI: mg/L = 10 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present: 17 – 39
Effective 05Oct94 – 10Jun03: 16.0 – 34.0
Effective 04Aug93 – 04Oct94: 15.0 - 32.0

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HISTORICAL REFERENCE RANGES

Test Name: Pregnancy Test, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Beta HCG, Urinary Chorionic Gonadotropin Qualitative

Reference Ranges:

Pregnancy Test, Urine

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Negative

Test Name: Pregnanediol, Urine
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Pregnanediol, Urine ***mg/24hr*** (SI: µmol/d = 3.12 x mg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 01Jun90 – 01Sep95:
Male & Female
0Y-2Y < 0.1
3Y-5Y < 0.3
6Y-9Y < 0.5
Male
10Y-15Y 0.1 – 1.2
>=16Y 0.0 – 1.9
Female
10Y-15Y 0.1 – 0.7
>=16Y 0.0 – 4.5

Effective 01Jun88 – 31May90:
Male 0 – 1.5
Female
Follicular 0 – 1.5
Luteal 2 – 7
Postmenopausal 0.2 – 1

HISTORICAL REFERENCE RANGES

Test Name: Pregnanetriol, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

This test no longer performed beginning May 4, 2004
Pregnanetriol, Urine ***mg/24hr*** (SI: µmol/d = 2.97 x mg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 04May04:
0Y-5Y < 0.1
6Y-9Y < 0.3

Male
10Y-15Y 0.2 - 0.6
>=16Y 0.2 - 2

Female
10Y-15Y 0.1 - 0.6
>= 16Y 0 - 1.4

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jun90 - 18Sep94:
0Y-5Y < 0.1
6Y-9Y < 0.3

Male
10Y-15Y 0.2 - 0.6
>=16Y 0.2 - 2

Female
10Y-15Y 0.1 - 0.6
>= 16Y 0 - 1.4

Effective 04Jan89 - 31May90:
Infant 0 - 0.19
Child 0 - 0.99
Adult 0 - 1.9
>= 13Y 0 - 2

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HISTORICAL REFERENCE RANGES

Test Name: Primidone
Department: Laboratory Medicine
Lab Area:
Synonyms: Mysoline
Reference Ranges:

Primidone ***mg/L*** (SI: µmol/L = 4.58 x mg/L) (mg/L = µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 24Feb81 - 10Jan01
Therapeutic 5 – 12
Toxic >15

Performed at MetPath Labs, Rockville MD
Effective until 24Feb81:
Therapeutic 5 – 12
Toxic >15

HISTORICAL REFERENCE RANGES

Test Name: Procainamide and N-Acetyl-Procainamide
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Pronestyl, NAPA
Reference Ranges:

NO LONGER OFFERED AS OF MARCH 12, 2003
Procainamide *mg/L* (SI: µmol/L = 4.23 x mg/L) (mg/L = µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 24Feb81 - 11Mar03:
Therapeutic 4 – 10
Toxic >10-12
NAPA *mg/L* (SI: µmol/L = 3.61 x mg/L) (mg/L = µg/mL)
Effective 24Feb81 - present:
Therapeutic 5 – 30
Toxic >40

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HISTORICAL REFERENCE RANGES

Test Name: Procollagen Peptide-I
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: PCP-I
Reference Ranges:

Test no longer available effective 9/10/2003
Procollagen Peptide-I *µg/L*
Performed at Quest Diagnostics, San Juan Capistrano CA
Effective 08Jan03 – 10Sep03:
Males: 45 - 240
Females: 45 - 190

HISTORICAL REFERENCE RANGES

Test Name: Progesterone
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Progesterone *ng/mL* (SI: nmol/L = 3.18 x ng/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 17Oct01 – present:

Males >=16Y	0.27 – 0.9
Females:	
Follicular	0.33 – 1.20
Luteal	0.72 – 17.8
Postmenopausal	<0.2 – 1
Oral Contraceptives	0.34 – 0.92
Males & Females:	
Cord	350 – 750
1D-3M	0.25 – 17
4M-12M	<0.2 – 2
1Y-9Y	<0.2 – 1.3

Performed at Mayo Medical Labs, Rochester MN
Effective 06Apr98 – 16Oct01:

F/M Cord Blood	569 – 1107
F/M 0M-23M	0.87 – 3.37
Female:	
2Y-9Y	0.2 – 0.24
10Y-17Y	values increase thru puberty & adoles.
Follicular	0 – 1.50
Luteal	2 – 20
Postmenopausal	0 – 1.1
Male:	
2Y-9Y	0.12 – 0.14
10Y-17Y	Adult values attained by puberty
>= 18Y	0 – 1.2

Effective 19Sep94 – 05Mar98:

F/M Cord Blood	569 – 1107
F/M 0Y-1Y	0.87 – 3.37
Female:	
2Y-9Y	0.2 – 0.24
10Y-18Y	values increase thru puberty & adoles.

Follicular 0 – 0.70
Luteal 2 – 20
Male:
2Y-9Y 0.12 – 0.14
10Y-18Y Adult values attained by puberty
>= 19Y 0 – 1.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 15Jan90 – 18Sep94:
Female Follicular 0.1 - 1.5 (20May91 – 18Sep94)
Luteal 2.5 - 28
Postmenopausal <0.2
1st Trimester 9 - 47
2nd Trimester 17 - 146
3rd Trimester 55 - 255
Male: <0.4 (20May91 – 18Sep94)

Effective 15Jan90 – 19May91:
Female, follicular <1.5
Male <0.5

Effective 04Jan89 – 14Jan90:
Female:
Follicular 0 - 149
Luteal 250 - 2800
Postmenopausal 0 - 19
1st Trimester 900 - 4700
2nd Trimester 1700 - 14600
3rd Trimester 5000 - 25000
Male: 0 - 49

Effective 14Jan88 – 03Jan89:
Female:
Follicular 0.2 - 0.9
Luteal 3 - 36
Postmenopausal 0 - 0.3
1st Trimester 12 - 45
2nd Trimester 45 - 80
3rd Trimester 80 - 160
Prepub 0 - 3.4
Male
Adult 0 - 0.31
Prepubertal 0 - 0.26

HISTORICAL REFERENCE RANGES

Test Name: Progesterone, 17-OH
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Progesterone, 17-OH ***ng/dL*** (SI: nmol/L = 0.03 x ng/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:

Newborns	0 – 629
Female, follicular	0 – 79
Female, luteal	0 – 284
Postmenopausal	0 – 50
Female, prepubertal	0 – 99
Male, prepubertal	0 – 109
Male, adult	0 – 219

Performed at SmithKline Beecham, Van Nuys CA
Effective 20May91 - 18Sep94:

Infant, 1D-8D	<150
Infant, 1M-12M	<220
Female, follicular	<80
Postmenopausal	<50
Female, prepubertal	<200
Male, prepubertal	<110

Effective 04Jan89 - 18Sep94:

Infant, 1D-8D	90 - 630
Female, luteal	30 - 290
Female, follicular	10 - 80
Postmenopausal	0 - 19
Male, adult	30 - 220

Effective 31Mar88 - 03Jan89:

Infant, 1D-8D	0 - 2
Infant, 1M-12M	0 - 2.2
Female, prepubertal	0 - 2
Female, follicular	0 - 0.8
Female, luteal	0.3 - 2.9
Postmenopausal	0 - 0.5
Male, prepubertal	0 - 1.1
Male, adult	0.3 - 2.2

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HISTORICAL REFERENCE RANGES

Test Name: Proinsulin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Proinsulin ***pmol/L*** (SI: µg/L = 0.0097 x pmol/L) and (µg/L = ng/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 14Jun00 - present: 3 - 20

Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 19Sep94 - 13Jun00: 0 - 0.2 *ng/mL*

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: 0 - 0.2 *ng/mL*
Effective 25Mar88 - 30Apr90: 0 - 0.5 *ng/mL*

HISTORICAL REFERENCE RANGES

Test Name: Prolactin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Prolactin *µg/L* (SI: µg/L) and (ng/mL = µg/L)
Performed at National Institutes of Health, Bethesda MD
Effective 14Jan04 - present: 1 - 25
Effective 07Feb96 - 13Jan04: 1 - 11
Effective 01Sep93 - 06Feb96: 2 - 16
Effective 10Oct91 - 31Aug93: <20 *ng/mL*

Performed at SmithKline Beecham, Van Nuys CA
Effective 30Jul88 - 09Oct91: <20 *ng/mL*
Effective 01Oct87 - 29Jul88: 0 - 25 *ng/mL*
Effective 01Jan79 - 30Sep87:
Female 3 - 15 *ng/mL*
Male 2 - 11 *ng/mL*

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HISTORICAL REFERENCE RANGES

Test Name: Properdin Factor B
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Complement Component 3 Proactivator
Reference Ranges:

Properdin Factor B ***mg/dL*** (SI: mg/dL = 0.01 x g/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 30Jul97 – present: 18 – 46

HISTORICAL REFERENCE RANGES

Test Name: Propranolol
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Inderal
Reference Ranges:

Propranolol *µg/L* (SI: nmol/L = 3.86 x µg/L) (µg/L = ng/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
Therapeutic 50 - 100
Toxic >=1000

Performed at SmithKline Beecham, Van Nuys CA
Effective 18Mar88 - 18Sep94:
Therapeutic 50 - 100
Toxic not defined

Test Name: Prostatic Acid Phosphatase (PAP), Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Prostatic Acid Phosphatase (PAP), Serum ***ng/mL*** (SI: U/L = 0.23 x ng/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 14Jan04 - present: 0.0 - 2.1
Effective 04Sep02 - present: 0.0 - 2.7

Serum markers are not specific for malignancy and values may vary by method.

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HISTORICAL REFERENCE RANGES

Test Name: Prostatic Fluid Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Prostatic Fluid Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen
Culture: No growth

For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Prostatic Specific Antigen
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: PSA
Reference Ranges:

Prostatic Specific Antigen *µg/L* (SI: µg/L) (µg/L = ng/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 09Jun93 – present: <4

Performed at SmithKline Beecham, Van Nuys CA
Effective 25Mar88 - 08Jun93: <4 *ng/mL*

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HISTORICAL REFERENCE RANGES

Test Name: Protein C
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Protein C % (SI: fraction= 0.01 x %)
Performed at National Institutes of Health, Bethesda MD
Effective 20Jan99 – present: 72 – 149
Effective 18Mar98 – 19Jan99: 80 – 160

Test Name: Protein Quantitative, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Protein Quantitative, Urine *mg/24hr* (SI: mg/d = 1 x mg/24hr)
Performed at National Institutes of Health, Bethesda MD
Effective 13Jun01 – present: Excretion 30 – 150
Effective 30Jul97 – 12Jun01: Excretion 30 – 100
Effective 02Aug86 - 29Jul97: Excretion 0.03 – 0.1 *g/24hr*
Effective 01Jun82 - 01Aug86: Excretion 0.05 – 0.1 *g/24hr*

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HISTORICAL REFERENCE RANGES

Test Name: Protein S
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Protein S % (SI: fraction= 0.01 x %)
Performed at National Institutes of Health, Bethesda MD
Effective 20Jan99 – present: 64 – 131
Effective 18Mar98 – 19Jan99: 57 – 173

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HISTORICAL REFERENCE RANGES

Test Name: Proteinase-3 Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: PR3, PR-3
Reference Ranges:

Proteinase-3 Antibody U/mL (SI: U/mL)
Performed at Mayo Medical Labs, Rochester MN.
Effective18Nov03 - present:
<=5.0 EU/mL is Negative
5.1 - 14.9 EU/mL is Equivocal
>15.0 EU/mL is Positive

Effective18Jun02 - 17Nov03:
<=5.0 EU/mL is Negative
>5.0 EU/mL is Positive

Performed at FOCUS Technologies, Cypress CA
Effective 07May01 - 17Jun02:
Ab not detected <3.5 U/mL
Ab detected >=3.5 U/mL

Performed at Microbiology Reference Labs, Cypress CA
Effective 08Nov00 - 06May01: <0.90 ELISA units

Interpretation:
PR-3 (proteinase 3) antibody is a marker for Wegener's granulomatosis and is rarely detected in microscopic polyarteritis. The quantity of PR-3 antibody generally parallels disease activity, where an increase in disease activity is accompanied by increasing values of PR-3 antibody. Antibody to PR-3, an elastinolytic neutral serine protease, is responsible for the cytoplasmic pattern of anti-neutrophil cytoplasmic antibodies.

HISTORICAL REFERENCE RANGES

Test Name: Protein, Total, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Protein, Total, CSF *mg/dL* (SI: mg/L = 10 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 14Nov85 - present:
Lumbar 15 - 45
Cisternal 15 - 25 (12Apr89 - present)
Ventric 5 - 15

Effective 14Nov85 - 11Apr89: 12 - 25
Effective 01Jan79 - 13Nov85: 15 - 45

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HISTORICAL REFERENCE RANGES

Test Name: Protein, Total, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Protein, Total, Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present

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HISTORICAL REFERENCE RANGES

Test Name: Protein, Total, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Protein, Total, Serum ***g/dL*** (SI: g/L = 10 x g/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 – present: 6.0 - 7.6
Effective 01Jan79 - 30Nov88: 6.1 - 7.7

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HISTORICAL REFERENCE RANGES

Test Name: Protein/Creatinine Ratio, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Protein/Creatinine Ratio, Urine
Performed at National Institutes of Health, Bethesda MD
Effective 11Mar98 – present: 0.001 – 0.160

HISTORICAL REFERENCE RANGES

Test Name: Proteus OxK, Ox19, Ox2
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer performed
Proteus OxK, Ox19, Ox2
Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No ranges available

Test Name: Prothrombin 20210 Mutation Analysis
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Factor II 20210 mutation, PT20210 mutation (G20210A)

Reference Ranges:

Prothrombin 20210 Mutation Analysis
Performed at National Institutes of Health, Bethesda MD
Effective 13Jun01 – present:
An interpretive report will indicate whether or not results are consistent with a diagnosis of PT 20210 of the Prothrombin gene.

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HISTORICAL REFERENCE RANGES

Test Name: Prothrombin Time
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Protime, PT
Reference Ranges:

Prothrombin Time ***sec.***
Performed at National Institutes of Health, Bethesda MD
Effective 15Sep99 – present: Automated 11.8 – 14.7
Effective 08Aug95 – 19Jan99: Automated 11.2 – 12.8
Effective 01Sep83 - 07Aug95: Automated 9.4 - 13.7

Effective 20Jan99 – present: Fibrometer 11.3 – 14.0
Effective 01Jan79 – 19Jan99: Fibrometer 10.5 – 13.2

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HISTORICAL REFERENCE RANGES

Test Name: Protoporphyrins, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Obsolete test as of 12Oct99. Order Porphyrins, Quantitative, Urine
Protoporphyrins, Urine
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 12Oct99: Not detectable

HISTORICAL REFERENCE RANGES

Test Name: Psittacosis Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Psittacosis Antibody *titer* (SI: titer)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
IgM <1:10
IgG <1:64

Performed at Centers for Disease Control, Atlanta GA
Effective until 01Mar86: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Psittacosis Serology CSF
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Psittacosis Serology CSF
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 05Mar95

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

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HISTORICAL REFERENCE RANGES

Test Name: PT Mixing Study
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Prothrombin Time ***sec.***
Performed at National Institutes of Health, Bethesda MD
Effective 15Sep99 – present: Automated 11.8 – 14.7
Effective 08Aug95 – 19Jan99: Automated 11.2 – 12.8
Effective 01Sep83 - 07Aug95: Automated 9.4 - 13.7

Effective 20Jan99 – present: Fibrometer 11.3 – 14.0
Effective 01Jan79 – 19Jan99: Fibrometer 10.5 – 13.2

HISTORICAL REFERENCE RANGES

Test Name: PTH-Related Peptide
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: PTH-RP
Reference Ranges:

PTH-Related Peptide *pmol/L* (SI: pmol/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 14Jun00 – present: 0.00 – 1.90

Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 20Sep94 – 13Jun00: 0.00 – 1.30
Effective 04Aug93 – 19Sep94: 0.00 – 1.49

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HISTORICAL REFERENCE RANGES

Test Name: PTH Intra-operative Serial
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Quick PTH, Bioactive
Reference Ranges:

PTH Intra-operative Serial ***pg/mL*** (SI: ng/L = 1.0 x pg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Nov02 – present: 6 - 40
Effective 01Feb00 – 12Nov02: 25 - 80

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HISTORICAL REFERENCE RANGES

Test Name: PTT Long Incubation
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

PTT Long Incubation ***seconds***
Performed at National Institutes of Health, Bethesda MD
Effective 24Jul02 - present: 23.4 - 34.5

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HISTORICAL REFERENCE RANGES

Test Name: PTT Mixing Study
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

PTT Mixing Study
Partial Thromboplastin Time *seconds*
Performed at National Institutes of Health, Bethesda MD
Effective 20Jan99 – present:
Automated: 23.4 – 34.5
Fibrometer: 24.4 - 35.6

Effective 08Aug95 – 19Jan99: Automated 23.7 – 35.0
Effective 08Sep83 - 07Aug95: Automated 22.5 - 34.8
Effective 01Jan79 - 19Jan99: Fibrometer 25.8 - 38.6

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HISTORICAL REFERENCE RANGES

Test Name: Purkinje Cell Cytoplasmic Antibody Type 1
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: PCA-1, Anti-Yo
Reference Ranges:

Purkinje Cell Cytoplasmic Antibody Type 1 ***titer*** (SI: titer)
Performed at Mayo Medical Labs, Rochester MN
Effective 11Mar98 – present: Negative at < 1:60

HISTORICAL REFERENCE RANGES

Test Name: Pyridinium Cross-Links
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Deoxypyridinoline, Pyridinoline
Reference Ranges:

Pyridinium Cross-Links ***µmol/mol creat*** (SI: µmol/mol creat)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
Deoxpyridinoline
Male 22Y - 80Y 5 – 14
Female 20Y - 50Y 5 – 22
M&F all other ages not established
Pyridinoline
Male 22Y - 80Y 18 – 40
Female 20Y - 50Y 20 – 62
M&F all other ages not established

Performed at SmithKline Beecham, Van Nuys CA
Effective 07Jul93 – 18Sep94:
Deoxpyridinoline
2Y-10Y 31.0 - 110.0
11Y-14Y 17.0 - 100.0
15Y-17Y 0.0 - 59.0
Male 18Y-50Y 4.0 - 19.0
Female 18Y-50Y 4.0 - 21.0
Pyridinoline
2Y-10Y 160.0 - 440.0
11Y-14Y 105.0 - 400.0
15Y-17Y 42.0 - 200.0
Male 18Y-50Y 20.0 - 61.0
Female 18Y-50Y 22.0 - 89.0

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HISTORICAL REFERENCE RANGES

Test Name: Pyruvate
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Pyruvic Acid
Reference Ranges:

Pyruvate ***mg/dL*** (SI: µmol/L = 114 x mg/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 05Jun96 - present: 0.7 – 1.4
Effective 15Jan90 - 04Jun96: 0.3 - 0.9

Performed at SmithKline Beecham, Van Nuys CA
Effective 18Oct79 - 14Jan90: 0.034 - 0.102 *mmol/L*
Effective 01Jan79 - 17Oct79: 0.3 - 0.9 *mmol/L*

Test Name: Q Fever Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: C. burnetti
Reference Ranges:

Q Fever Antibodies ***titer*** (SI: titer)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
IgG <1:10 patient not infected w/ C.burnetii
IgG >=1:10 patient has been infected w/ C. burnetii
IgG >=1:160 patient has recent or active infection w/C.burnetii
IgM >=1:10 patient has recent or active infection w/C.burnetii

Interpretation:
A fourfold or greater rise in paired sera IgG titer indicates recent or active infection with C.burnetii.

Test Name: Quantitative Epstein-Barr Virus PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Quantitative EBV PCR
Reference Ranges:

Quantitative Epstein-Barr Virus PCR
Performed at National Institutes of Health, Bethesda MD
Effective 13Feb02 – present:
Calculated EBV genome equivalents of up to 200 copies per one million human cells can be detected using this assay with WBC preparations from normal healthy EBV seropositive adults.

Range: Calculated less than 20 EBV genome equivalents per one million human cells to 1X10(6) EBV genome equivalents per one million human cells.

Performed at Mayo Medical Labs, Rochester MN
Effective 06Mar99 – 12Feb02: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Quantitative Orthopoxvirus PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Orthopoxvirus PCR
Reference Ranges:

Quantitative Orthopoxvirus PCR
Performed at National Institutes of Health, Bethesda MD
Effective 09Apr03 – present: Negative for Orthopoxvirus

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National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Quantitative Orthopoxvirus PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Orthopoxvirus PCR
Reference Ranges:

Quantitative Orthopoxvirus PCR
Performed at National Institutes of Health, Bethesda MD
Effective 09Apr03 – present: Negative for Orthopoxvirus

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HISTORICAL REFERENCE RANGES

Test Name: Quantitative Orthopoxvirus PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Orthopoxvirus PCR
Reference Ranges:

Quantitative Orthopoxvirus PCR
Performed at National Institutes of Health, Bethesda MD
Effective 09Apr03 – present: Negative for Orthopoxvirus

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HISTORICAL REFERENCE RANGES

Test Name: Quantitative Orthopoxvirus PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Orthopoxvirus PCR
Reference Ranges:

Quantitative Orthopoxvirus PCR
Performed at National Institutes of Health, Bethesda MD
Effective 09Apr03 – present: Negative for Orthopoxvirus

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HISTORICAL REFERENCE RANGES

Test Name: Quantitative Orthopoxvirus PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Orthopoxvirus PCR
Reference Ranges:

Quantitative Orthopoxvirus PCR
Performed at National Institutes of Health, Bethesda MD
Effective 09Apr03 – present: Negative for Orthopoxvirus

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HISTORICAL REFERENCE RANGES

Test Name: Quantitative Orthopoxvirus PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Orthopoxvirus PCR
Reference Ranges:

Quantitative Orthopoxvirus PCR
Performed at National Institutes of Health, Bethesda MD
Effective 09Apr03 – present: Negative for Orthopoxvirus

Test Name: Quinidine
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Quinidine ***mg/L*** (SI: µmol/L = 3.08 x mg/L) (mg/L = µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 24Feb81 – 10Jan01:
Therapeutic 2 – 5
Toxic >6

HISTORICAL REFERENCE RANGES

Test Name: Reducing Substances
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Reducing Substances
Performed at Mayo Medical Labs, Rochester MN
Effective 14Apr04 - present:
Trace: Normal <0.25 g/dL
Grade 1: Suspicious 0.25-0.50 g/dL
Grades 2-4: Abnormal >0.50 g/dL

Effective 19Sep94 - 13Apr04:
Normal digestion: negative
Abnormal digestion: trace 1+, 2+, 3+, 4+

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jul92 - 18Sep94

Performed at MetPath Labs, Rockville MD
Effective until 30Jun92

HISTORICAL REFERENCE RANGES

Test Name: Renin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Renin ***ng/mL/hr*** (SI: µg/L/hr = 1.0 x ng/mL/hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
Na-depleted, upright (peripheral vein)
18Y-39Y 2.9 – 24.0
>=40Y 2.9 – 10.8
Na-replete, upright (peripheral vein)
18Y-39Y 0.6 – 4.3
>=40Y 0.6 – 3.0

Direct Renin ***micro U/mL***
Performed at National Institutes of Health, Bethesda MD
Effective 10Dec03 – present:
Upright/sitting posture 3.3-41
Supine posture 2.4-29

Performed at SmithKline Beecham, Van Nuys CA
Effective 30Mar88 - 18Sep94:
Norm diet (75-150 mmol Na/day)
Supine 0.2 - 2.3
Upright 1.3 - 4.0
Low Salt Diet (30-75 mmol Na/day)
Upright 4.1 - 7.7

HISTORICAL REFERENCE RANGES

Test Name: Renin Esoterix
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: PRAKE
Reference Ranges:

Renin Esoterix ***ng/dL/hr*** (SI: ng/dL/hr x 0.01 = µg/L/hr)
Performed at Esoterix Endocrinology, Calabasas Hills CA
Effective 10Sep03 – present:

0-30D	Varies
31D-11M	235-3700
12M-2Y	171-1115
3-4Y	100-650
5-9Y	50-585
10-14Y	50-330
>=15Y	Varies
Adults, supine	20-160
Adults, upright	70-330

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Reptilase
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Reptilase ***seconds***
Performed at National Institutes of Health, Bethesda MD
Effective 13Jun01 – present: 20 - 29

HISTORICAL REFERENCE RANGES

Test Name: Resin T3 Uptake
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer performed
Resin T3 Uptake ***ratio***
Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 03Jan89: 0.83 - 1.18

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Resistant Enterococcus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: VRE culture
Reference Ranges:

Resistant Enterococcus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No vancomycin-resistant Enterococcus isolated

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Resistant Enterococcus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: VRE culture
Reference Ranges:

Resistant Enterococcus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No vancomycin-resistant Enterococcus isolated

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Respiratory Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Respiratory Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present:
Gram Stain: No WBCs, No organisms seen
Culture: Oro/pharyngeal flora or No growth.
For information on Antibiotic Susceptibility on significant isolates, click here

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Respiratory Syncytial Virus - Rapid Test
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: RSV
Reference Ranges:

Respiratory Syncytial Virus - Rapid Test
Performed at National Institutes of Health, Bethesda MD
Effective 07Dec94 – present:
Negative for RSV by DFA

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Respiratory Syncytial Virus - Rapid Test
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: RSV-DFA
Reference Ranges:

Respiratory Syncytial Virus - Rapid Test
Performed at National Institutes of Health, Bethesda MD
Effective 07Dec94 – present:
Negative for RSV by DFA

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Respiratory Syncytial Virus - Rapid Test
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: RSV-RAPID
Reference Ranges:

Respiratory Syncytial Virus - Rapid Test
Performed at National Institutes of Health, Bethesda MD
Effective 07Dec94 – present:
Negative for RSV by EIA

Test Name: Respiratory Syncytial Virus Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: RSV
Reference Ranges:

Respiratory Syncytial Virus Antibodies *titer* (SI: titer)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
IgG <1:10
IgM <1:10

Interpretation:
The presence of IgM class antibodies or a fourfold or greater rise in paired sera IgG titer indicates recent infection. The presence of demonstrable IgG generally indicates past exposure and immunity.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No ranges available

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Respiratory Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Respiratory Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present: No virus isolated

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 01Nov91

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: Respiratory Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Respiratory Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present: No virus isolated

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 01Nov91

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: Respiratory Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Respiratory Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present: No virus isolated

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 01Nov91

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Respiratory Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Respiratory Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present: No virus isolated

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 01Nov91

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

HISTORICAL REFERENCE RANGES

Test Name: Reticulin Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Celiac Disease
Reference Ranges:

Reticulin Antibodies

Performed at Mayo Medical Labs, Rochester MN
Effective 17Apr00 - present: Negative
Reticulin Abs are found in patients with gluten-sensitive enteropathy dermatis herpetiformis, and Crohn's disease.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Reticulocyte Count
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Retic
Reference Ranges:

Reticulocyte Count % (SI: fraction= 0.01 x %)
Performed at National Institutes of Health, Bethesda MD
Effective 23Sep93 - present: 0.7 - 2.4
Retic Absolute *K/µL*: 31.7 - 104.6
Effective 05Apr90 - 22Sep93:
Male: 0.8 - 2.7
Female: 0.6 - 2.9
Effective 18Sep86 - 04Apr90:
Male: 0.2 - 1.9
Female: 0.2 - 2
Effective 01Jan79 - 17Sep86: 0.5 - 1.5

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Retinol
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Vitamin A
Reference Ranges:

Retinol *µg/dL* (SI: µmol/L = 0.0349 x µg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 15Sep99 – present: 36 – 120

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 14Sep99: 36 – 120

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Apr85 – 18Sep94: 30 - 95
Effective 01Jan79 – 31Mar85: 65 - 275 *IU/dL*

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HISTORICAL REFERENCE RANGES

Test Name: Rheumatoid Factor
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: RF
Reference Ranges:

Rheumatoid Factor ***IU/mL*** (SI: kU/L = IU/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present: 0 - 20
Effective 05Oct94 – 10Jun03: < 20
Effective 03May91 – 04Oct94: < 25

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 02May91: Done as titer. No ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Done as titer. No ranges available

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Rheumatoid Factor, Fluid
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms:
Reference Ranges:

Rheumatoid Factor, Fluid ***IU/mL*** (SI: kU/L = IU/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 03May91 – present

Test Name: Ribosomal P Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Ribosomal P Antibody
Performed at Focus Technologies, Cypress CA
Effective 24Nov03 - Present:
Negative: <1.0

Effective 12Feb03 – 23Nov03:
<0.90 Antibody not detected
0.90 - 1.10 Equivocal; submission of a second specimen (collected 3-4 weeks after initial specimen) suggested if clinically warranted.
>1.10 Antibody Detected

The presence of ribosomal P antibody has been reported to occur in up to 20% of systemic lupus erythematosus (SLE) patients. Ribosomal P antibody may be associated with the neuropsychiatric manifestations of SLE; however, this association has not been confirmed by all investigators. Lupus hepatitis is also associated with the presence of ribosomal P antibody.

Test Name: Rickettsia Battery
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test is no longer offered as a battery. Order individual tests.
Rickettsia Battery Complement Fixation
Performed at American Medical Labs, Chantilly VA
Effective 02Mar86 – 31Aug90: No ranges available

Performed at Center for Disease Control, Atlanta GA
Effective until 01Mar86: No ranges available

Test Name: Rocky Mountain Spotted Fever Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Rickettsial Ab
Reference Ranges:

Rocky Mountain Spotted Fever Antibody ***titer*** (SI: titer)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
IgG <= 1:32

Interpretation:
Detectable antibody in a single serum specimen indicates exposure to Rickettsia rickettsii. A fourfold or greater rise in paired sera IgG titer indicates recent infection.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective 02Mar86 – 31Aug90: No ranges available

Performed at Center for Disease Control, Atlanta GA
Effective until 01Mar86: No ranges available

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Rotavirus EIA
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Rotavirus EIA
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan90 – present: Negative for Rotavirus by EIA

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: RPR, Serum
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: Syphilis, VDRL
Reference Ranges:

RPR, Serum

Performed at National Institutes of Health, Bethesda MD
Effective 19May82 – present: Nonreactive

HISTORICAL REFERENCE RANGES

Test Name: Rubella Culture
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Rubella Culture

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

Test Name: Rubella Virus Antibody IgG, CSF
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: German three day measles
Reference Ranges:

Rubella Virus Antibodies IgG, CSF
Performed at Focus Technologies, Cypress CA
Effective 19Sep94 – present:
IgG: reported as immune or nonimmune.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: Ranges not available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Ranges not available

Test Name: Rubella Virus Antibody IgG, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: German three day measles
Reference Ranges:

Rubella Virus Antibody IgG, Serum
Performed at Mayo Medical Labs, Rochester MN
Effective 12May04 – present: Positive

Effective 19Sep94 – 11May04:
IgG: reported as immune or nonimmune.
Interpretation:
Assay results of <10 IU/mL are "nonimmune".
Results of >= 10 IU/mL are "immune".

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: Ranges not available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Ranges not available

HISTORICAL REFERENCE RANGES

Test Name: Rubella Virus Antibody IgM
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: German three day measles
Reference Ranges:

Rubella Virus Antibody IgM
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: Negative
The presence of IgM class antibodies indicates congenital or recent infection.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: Negative

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Negative

HISTORICAL REFERENCE RANGES

Test Name: Rubeola Culture
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Rubeola Culture

Performed at American Medical Labs, Chantilly VA
Effective until 01Nov91

Test Name: SAAD Toxicology Screen, U
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Drug Screen
Reference Ranges:

SAAD Toxicology Screen, U
Performed at Mayo Medical Labs, Rochester MN
Effective 30Sep03 – present: None detected
Cutoff concentrations:

Alcohol	300 ug/mL
Amphetamines	1000 ng/mL
Barbiturates	200 ng/mL
Benzodiazepines	200 ng/mL
Cocaine	300 ng/mL
Opiates	300 ng/mL
Propoxyphene	300 ng/mL
Tetrahydrocannabinol	20 ng/mL

Reported as Negative or Positive:
Amitriptyline/Nortriptyline
Desipramine/Imipramine
Doxepin/Nordoxepin
Fluoxetine

Effective 30Sep02 – present: None detected
Cutoff concentrations:

Alcohol	300 ug/mL
Amphetamines	1000 ng/mL
Barbiturates	200 ng/mL
Benzodiazepines	100 ng/mL
Cocaine	300 ng/mL
Opiates	300 ng/mL
Propoxyphene	300 ng/mL
Tetrahydrocannabinol	20 ng/mL

Reported as Negative or Positive:
Amitriptyline/Nortriptyline
Desipramine/Imipramine
Doxepin/Nordoxepin
Fluoxetine
Chlorpheniramine
Bromphenirmine
Diphenhydramine

Promethazine
Caffeine
Pseudoephedrine
Ephedrine
Phenylpropanolamine
Propranolol

Effective 03May95 – 29Sep02: None detected
Cutoff concentrations:

Alcohol	0.03 g/dL
Amphetamines	500 ng/mL
Barbiturates	200 ng/mL
Benzodiazepines	200 ng/mL
Cocaine	300 ng/mL
Opiates	300 ng/mL
Propoxyphene	300 ng/mL
Tetrahydrocannabinol	20 ng/mL

Reported as Negative or Positive:
Amitriptyline/Nortriptyline
Desipramine/Imipramine
Doxepin/Nordoxepin
Fluoxetine
Chlorpheniramine
Bromphenirmine
Diphenhydramine
Promethazine
Caffeine
Pseudoephedrine
Ephedrine
Phenylpropanolamine
Propranolol

Performed at American Medical Labs, Chantilly VA
Effective 06Feb92 – 03May95: None detected

HISTORICAL REFERENCE RANGES

Test Name: Salicylate
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Aspirin, Salicylic Acid
Reference Ranges:

Salicylate *mg/L* (SI: mmol/L = 0.00724 x mg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 31May95 – present:
Therapeutic 20 – 200
Toxic >=500

Performed at American Medical Labs, Chantilly VA
Effective 02Apr92 – 30May95
Therapeutic as analgesic and antipyretic <100
Therapeutic as antiinflammatory agent 150 – 300
Toxic as antiinflammatory >300

Performed at MetPath Labs, Rockville MD
Effective until 03Sep87 – 01Apr92
Thera as analgesic and antipyretic <100 µg/mL
Thera as antiinflammatory agent 150 – 300 µg/mL
Toxic as antiinflammatory >300 µg/mL

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 02Sep87: <100

HISTORICAL REFERENCE RANGES

Test Name: Salicylate, Fluid
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Aspirin, Salicylic Acid
Reference Ranges:

Salicylate *mg/L* (SI: mmol/L = 0.00724 x mg/L) also (ug/mL = mg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 31May95 – present:
Therapeutic 20 – 200
Toxic >=500

Performed at American Medical Labs, Chantilly VA
Effective 02Apr92 – 30May95
Therapeutic as analgesic and antipyretic <100
Therapeutic as antiinflammatory agent 150 – 300
Toxic as antiinflammatory >300

Performed at MetPath Labs, Rockville MD
Effective until 03Sep87 – 01Apr92
Thera as analgesic and antipyretic <100 *µg/mL*
Thera as antiinflammatory agent 150 – 300 *µg/mL*
Toxic as antiinflammatory >300 *µg/mL*

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 02Sep87: <100

HISTORICAL REFERENCE RANGES

Test Name: Salmonella A,B,E,H
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Salmonella A,B,E,H
Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90

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HISTORICAL REFERENCE RANGES

Test Name: Schilling Test I & II
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Test no longer performed
Schilling Test I & II ***percent*** (SI: fraction = 0.01 x percent)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 09Oct02: 10 - 40 %

HISTORICAL REFERENCE RANGES

Test Name: Schilling Test I, II (Obsolete)
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Test no longer performed as of Oct 2, 2000
Schilling Test I, II % (SI: fraction= 0.01 x %)
Performed at National Institutes of Health, Bethesda MD
SCHILLING TEST I:
Effective 27Jun84 - 01Oct00: 10 - 40

SCHILLING TEST II:
Effective 27Jun84 - 01Oct00: 10 - 40

Test Name: Schistosoma Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Schistosoma Antibody
Performed at Center for Disease Control, Atlanta GA
Effective 12Jun02 – present

Performed at Focus Technologies, Cypress CA
Effective 26Jan96 – 11Jun02: Negative <1.0
Effective 04Jan89 – 25Jan96: Antibody not detected <10

Schistosomiasis Indirect Fluoresent Ab
Performed at American Medical Labs, Chantilly VA
Effective 01Sep90 – 18Sep94

Schistosomiasis Mansoni Ab
Performed at American Medical Labs, Chantilly VA until 18May82.

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HISTORICAL REFERENCE RANGES

Test Name: Schistosoma Exam
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Schistosoma Exam
Performed at National Institutes of Health, Bethesda MD
Effective 13Oct99 – present: Negative for Schistosoma

Test Name: Scl 70 Autoantibodies, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Topoisomerase, Scleroderma
Reference Ranges:

Scl 70 Autoantibodies, Serum
Performed at Mayo Medical Labs, Rochester MN
Effective 09Apr03 – present:
<20.0 Units (negative)
20.0-24.9 Units (borderline)
> or = 25.0 Units (positive)

HISTORICAL REFERENCE RANGES

Test Name: Scrub Typhus Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Rickettsial Ab
Reference Ranges:

Scrub Typhus Antibody *titer* (SI: titer)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: <=1:40

Interpretation:
Negative to a titer of 1:40 is normal.
A fourfold or greater rise in paired sera titer indicates recent infection.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective 02Mar86 – 31Aug90: No ranges available

Performed at Center for Disease Control, Atlanta GA
Effective until 01Mar86: No ranges available

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Serotonin, Whole Blood
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Serotonin, Whole Blood *ng/mL* (SI: µmol/L = 0.00568 x ng/mL)
Performed at ARUP Laboratories, Salt Lake City UT
Effective 08Dec99 – present: 50 – 200

Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 19Sep94 – 07Dec99: 55 – 260

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Aug89 – 18Sep94: 46 – 319
Effective 04Jan89 – 31Jul89: 50 – 185
Effective 08Mar88 – 03Jan89: 50 – 175

Test Name: Sex Hormone Binding Globulin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: SHBG
Reference Ranges:

Sex Hormone Binding Globulin *nmol/L* (SI: nmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 10Mar04 – present:
Male 13 – 71
Female 18 – 114 (non-pregnant)

Children (from Elmlinger)
Males

Tanner Stages:	Age, mean	nmol/L
Stage I*:	7.1(pre-pubertal)	28-150
Stage II:	11.5	44-160
Stage III:	13.6	5.5-163
Stage IV:	15.1	13-88
Stage V:	18.0	10-60

*Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for boys at a median age of 11.5 (+/– 2) years. For boys there is no definite proven relationship between puberty onset and body weight or ethnic origin. Progression through Tanner stages is variable. Tanner stage 5 (young adult) should be reached by age 18.

Females

Tanner Stages:	Age, mean	nmol/L
Stage I*:	7.1(pre-pubertal)	39-176
Stage II:	10.5	7.2-107
Stage III:	11.6	28-171
Stage IV:	12.3	28-149
Stage V:	14.5	20-130

*Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for girls at a median age of 10.5 (+/– 2) years. There is evidence that it may occur up to 1 year earlier in obese girls and in African American girls. Progression through Tanner stages is variable. Tanner stage 5 (young adult) should be reached by age 18.

Effective 13Jan04 – 09Mar04:
Male 10 – 60
Female 20 – 130 (non-pregnant)

Children (from Elmlinger)
Males

Tanner Stages:	Age, mean	nmol/L
Stage I*:	7.1(pre-pubertal)	28-150
Stage II:	11.5	44-160
Stage III:	13.6	5.5-163
Stage IV:	15.1	13-88
Stage V:	18.0	10-60

*Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for boys at a median age of 11.5 (+/– 2) years. For boys there is no definite proven relationship between puberty onset and body weight or ethnic origin. Progression through Tanner stages is variable. Tanner stage 5 (young adult) should be reached by age 18.

Females

Tanner Stages:	Age, mean	nmol/L
Stage I*:	7.1(pre-pubertal)	39-176
Stage II:	10.5	7.2-107
Stage III:	11.6	28-171
Stage IV:	12.3	28-149
Stage V:	14.5	20-130

*Puberty onset (transition from Tanner stage 1 to Tanner stage 2) occurs for girls at a median age of 10.5 (+/– 2) years. There is evidence that it may occur up to 1 year earlier in obese girls and in African American girls. Progression through Tanner stages is variable. Tanner stage 5 (young adult) should be reached by age 18.

Effective 06Jul99 – 12Jan04:
Male 10 – 60
Female 20 – 130

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 05Jul99:
Male 10 – 80
Female 20 – 130

Performed at SmithKline Beecham, Van Nuys CA
Effective 25Mar88 – 18Sep94:
Male 8 – 49
Female 20 – 106

Test Name: Sialic Acid, Free, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Sialic Acid, Free, Urine
Performed at University of Alabama at Birmingham
Effective 21Sep01 – present: Reported as Normal or Abnormal

Performed at E.K. Shriver Center, Lysosomal Storage Diseases Lab, Waltham MA
Effective 09Oct96 – 20Sep01:
1D-11M 308 – 1036 *nmol/mg creat*
1Y-2Y 41 – 595 *nmol/mg creat*
3Y-9Y 50 – 194 *nmol/mg creat*
10Y-14Y 16 – 162 *nmol/mg creat*
15Y-150Y 10 – 108 *nmol/mg creat*

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HISTORICAL REFERENCE RANGES

Test Name: Sickle Cell Solubility
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Sickle Cell Solubility
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Negative

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HISTORICAL REFERENCE RANGES

Test Name: Sinus Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Sinus Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen
Culture: No growth
For information on Antibiotic Susceptibility on significant isolates, click here

HISTORICAL REFERENCE RANGES

Test Name: Sirolimus
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Rapamycin
Reference Ranges:

Sirolimus *ng/mL* (SI: µg/L = 1.0 x ng/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 20Apr04 - present:
Therapeutic 4.0 – 20.0 (Trough)

Assay has a limit of sensitivity of 2 ng/mL.

Optimal response to Sirolimus is usually associated with trough blood concentration in the range of 4-20 ng/mL.
Dose is adjusted to achieve steady-state trough Sirolimus blood concentrations in the range of 12-20 ng/mL for liver transplantation or 4-10 ng/mL for renal transplantation.
Maintaining a concentration >20 ng/mL for prolonged periods predisoposes patients to increased infection.
Steady-state target concentrations are defined by clinical protocol and concentrations frequently deviate from the ranges given here as dose is adjusted to address acute or chronic rejection events and chronic infection.

The method is specific for sirolimus and does not cross-react with metabolites. LC/MS/MS measurement of sirolimus generates results that are 30% lower that when measured by immunoassay.

Effective 10May00 - 19Apr04:
Therapeutic 3.0 – 20.0 (Trough)
Assay has a limit of sensitivity of 2 *ng/mL*.

Optimal response to sirolimus is usually associated with trough blood concentration in the range of 3-20 *ng/mL*.
Dose is adjusted to achieve steady-state trough sirolimus blood concentrations in the range of 12-20 *ng/mL* for liver transplantation or 3-10 *ng/mL* for renal transplantation.
Maintaining a concentration >20 *ng/mL* for prolonged periods predisoposes patients to increased infection.
Steady-state target concentrations are defined by clinical protocol and concentrations frequently deviate from the ranges given here as dose is adjusted to address acute or chronic rejection events and chronic infection.

The method is specific for sirolimus and does not cross-react with metabolites. LC/MS/MS

measurement of sirolimus generates results that are 30% lower that when measured by immunoassay.

HISTORICAL REFERENCE RANGES

Test Name: Sodium, CSF
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Na
Reference Ranges:

Sodium, CSF *mmol/L* (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 – present: 138-150
Effective 12Apr89 - 31Jul90: 138 - 150 *mEq/L* (SI: mmol/L = 1 x mEq/L)
Effective 14Nov85 - 11Apr89: 136 - 150 *mEq/L*
Effective 01Jan79 - 13Nov85: 138 - 150 *mEq/L*

Test Name: Sodium, Feces
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Fecal Na
Reference Ranges:

Sodium, Feces
Performed at Mayo Medical Labs, Rochester MN
Effective 06Nov96 – present:
24 Hrs 0.0 – 19.9 *mEq/24hr* (SI:mmol/d = 1 x mEq/24hr)
Random 0.0 – 159.9 *mEq/kg* (SI:mmol/kg = 1 x mEq/kg)

Effective 15Mar95 – 05Nov96:
24 Hrs 10.0 – 20.0 *mEq/kg* (SI:mmol/kg = 1 x mEq/kg)
Random 10.0 – 20.0 *mEq/kg* (SI:mmol/kg = 1 x mEq/kg)

Performed at American Medical Labs, Chantilly VA
Effective 02Jan85 – 14Mar95: Ranges not available

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 01Jan85: Ranges not available

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HISTORICAL REFERENCE RANGES

Test Name: Sodium, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Sodium, Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan80 – present

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

HISTORICAL REFERENCE RANGES

Test Name: Sodium, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Na
Reference Ranges:

Sodium, Serum *mmol/L* (SI: mmol/L)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 - present: 135 – 144
Effective 01Dec88 - 31Jul90: 135 – 144 *mEq/L* (SI: mmol/L = 1 x mEq/L)
Effective 01Jan79 - 30Nov88: 137 – 145 *mEq/L*

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HISTORICAL REFERENCE RANGES

Test Name: Sodium, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Na
Reference Ranges:

Sodium, Urine ***mmol/24hr*** (SI: mmol/d = 1 x mmol/24hr)
Performed at National Institutes of Health, Bethesda MD
Effective 01Aug90 - present: Excretion 40 – 22
Random No ranges established
Effective 01Jun82 - 31Jul90: Excretion 40 – 220 *mEq/24hr*

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HISTORICAL REFERENCE RANGES

Test Name: Specific Gravity, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Specific Gravity, Serum

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 02Nov86: 1.002 - 1.030

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HISTORICAL REFERENCE RANGES

Test Name: Specific Gravity, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Specific Gravity, Urine

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: 1.002 - 1.035

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HISTORICAL REFERENCE RANGES

Test Name: Sterile Fluid Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Synovial fluid
Reference Ranges:

Sterile Fluid Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen
Culture: No growth
For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Sterile Fluid Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Sterile Fluid Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen
Culture: No growth
For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Sterile Fluid Culture/Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Sterile Fluid Culture/Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen
Culture: No growth
For information on Antibiotic Susceptibility on significant isolates, click here

HISTORICAL REFERENCE RANGES

Test Name: Sterile Fluid Culture/Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Sterile Fluid Culture/Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen
Culture: No growth
For information on Antibiotic Susceptibility on significant isolates, click here

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Stool Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Stool Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No Salmonella, Shigella, or Campylobacter isolated
For information on Antibiotic Susceptibility on significant isolates, click here

Test Name: Streptococcal Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Dnase B, Antistreptolysin O, ASO, Anti Dnase-B

Reference Ranges:

Streptococcal Antibody
Performed at Mayo Medical Labs, Rochester MN
Effective 05Jun02 – present:
ASO (Antistreptolysin O) *IU/mL* (SI: IU/mL)
1D-3Y <= 250
4Y-17Y <= 400
>=18Y <= 300
Anti-D-nase B *U/mL* (SI: U/mL)
1D-3Y <= 250
4Y-17Y <= 400
>=18Y <= 300

Effective 12Dec01 – 04Jun02:
ASO (Antistreptolysin O) *units*
1D-4Y <= 85
5Y-18Y <= 170
>=19Y <= 85
ANTI-D-nase B *units*
1D-4Y <= 60
5Y-18Y <= 170
>=19Y <= 85

Performed at National Institutes of Health, Bethesda MD
Effective 21Aug96 – 11Dec01:
ASO (Antistreptolysin O) *IU/mL* (SI: IU/mL)
1D-4Y 0 – 99
5Y-18Y 0 – 249
>=19Y 0 – 199
ANTI-D-nase B *titer*
1D-4Y 0 – 60
5Y-18Y 0 – 170
>=19Y 0 – 85

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 13Aug96:

ASO (Antistreptolysin O) *units*
1D-4Y 1 – 85
5Y-17Y 1 – 170
>=18Y 1 – 85
ANTI-D-nase B *units*
1D-4Y 1 – 60
5Y-17Y 1 – 170
>=18Y 1 – 85

Performed at SmithKline Beecham, Van Nuys CA
Effective 03Nov93 - 18Sep94:
ANTI-D-nase B *titer*
1D-4Y <1:60
5Y-18Y <1:170
>=18Y <1:85

Elevated values for age are consistent with an antecedent infection by group A streptococci.

HISTORICAL REFERENCE RANGES

Test Name: Strongyloides Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Strongyloides Antibody
Performed at Center for Disease Control, Atlanta GA
Effective 12Jun02 - present

Performed at Focus Technologies, Cypress CA
Effective 01Sep90 - 11Jun02:
Antibody not detected < 1.00
Antibody detected >= 1.00

Strongyloides Indirect Hemagglutination
Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Substance P
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Substance P *pg/mL* (SI: ng/L = 1.0 x pg/mL)
Performed at InterScience Institute, Inglewood CA
Effective 10Jun98 - present:
Male 88 – 488
Female 50 – 410

HISTORICAL REFERENCE RANGES

Test Name: Sulfa Levels
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Test no longer available as Sulfa level. Order as Sulfamethoxazole.

Sulfa Levels
Performed at American Medical Labs, Chantilly VA
Effective until 08Mar99

Test Name: Sulfadiazine, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Azulfidine, Suladyne, Sulfasalazine
Reference Ranges:

Sulfadiazine, Serum *µg/mL* (µg/mL = mg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 12Dec01 - present:
Therapeutic 100 - 120 µg/mL
Toxic >=300 µg/mL

Following a typical oral dose of 2 g/day total, administered in two equal doses, the serum concentration peaks at or near 100 ug/mL in approximately 3-4 hours.

MIC of sulfadiazine is invariaby <25 ug/mL for susceptible organisms, whereas toxicity associated with sulfadiazine occurs with prolonged exposure to serum concentrations in excess of 125 ug/mL.

HISTORICAL REFERENCE RANGES

Test Name: Sulfamethoxazole
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Gantrisin
Reference Ranges:

Sulfamethoxazole *µg/mL* (SI: mg/L = 1.0 x µg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 09Mar99 - present:
Therapeutic 90 – 100
Toxic >=300

Performed at American Medical Labs, Chantilly VA
Effective until 08 Mar00: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Sulfonamides
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Gantrisin
Reference Ranges:

Sulfonamides *µg/mL* (SI: mg/L = 1.0 x µg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 06Mar99 - present:
Therapeutic 90 – 100
Toxic >=300

HISTORICAL REFERENCE RANGES

Test Name: Syphilis IgG/IgM FTA-ABS, Serum
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: VDRL
Reference Ranges:

Syphilis IgG & IgM FTA-ABS (ordered if RPR is positive)
Performed at Focus Technologies, Cypress CA
Effective 02Feb99 – present:
Treponema Pallidum IgG Antibody: Non-reactive
Treponema Pallidum IgM Antibody: Non-reactive
The Fluorescent Treponema Antibody Absorption IgM test (FTA-ABS-IgM) determines an IgM specific response to T. pallidum. A reactive (positive) result for FTA-ABS-IgM is indicative of a recent infection. A reacitve result for FTA-ABS IgG only is indicative of past infection in adults, or transplacental transfer of maternal FTA-ABS IgG in newborns.

Syphilis FTA-ABS
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 01Feb99: Nonreactive

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: Nonreactive

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Nonreactive

VDRL
Performed at American Medical Labs, Chantilly VA
Effective until 18May82: Nonreactive

HISTORICAL REFERENCE RANGES

Test Name: Syphilis Serology, CSF
Department: Laboratory Medicine
Lab Area: Immunology
Synonyms: VDRL
Reference Ranges:

Syphilis Serology, CSF

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Nonreactive

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HISTORICAL REFERENCE RANGES

Test Name: T3
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Triiodothyronine
Reference Ranges:

T3 ***ng/dL*** (SI: nmol/L = 0.0154 x ng/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Oct99 - present: 82 – 179
Effective 11Mar98 - 12Oct99: 75 – 170
Effective 06Sep95 - 10Mar98: 75 – 153
Effective 18Sep85 - 05Sep95: 88 – 162
Effective 30Apr81 - 17Sep85: 111 – 199
Effective 01Jan79 - 29Apr81: 122 – 213

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HISTORICAL REFERENCE RANGES

Test Name: T3, Free
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Free T3 ***pg/dL*** (SI: pmol/L = 0.0154 x pg/dL)
Effective 12Apr95 – present:
Reference Range 230 – 420

Effective 19Sep94 – 11Apr95:
Reference Range 143 – 468

Effective 01Oct90 – 18Sep94:
Reference Range 250 – 550

Effective 04Jan89 – 30Sep90:
Reference Range 210 – 330

HISTORICAL REFERENCE RANGES

Test Name: T3, Free
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Free T3 ***pg/dL*** (SI: pmol/L = 0.0154 x pg/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 12Apr95 – present: 230 – 420
Effective 19Sep94 – 11Apr95: 143 – 468

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Oct90 – 18Sep94: 250 – 550
Effective 04Jan89 – 30Sep90: 210 – 330

HISTORICAL REFERENCE RANGES

Test Name: T3, Reverse
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Reverse T3 ***ng/dL*** (SI: nmol/L = 0.0154 x ng/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 11.7 – 33.2
Results are for research use only.

Performed at SmithKline Beecham, Van Nuys CA
Effective 09Sep91 – 18Sep94: 2.6 – 18.9
Effective 25Mar88 – 08Sep91: 5.8 – 19.4

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HISTORICAL REFERENCE RANGES

Test Name: T4
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Thyroxine
Reference Ranges:

T4 ***µg/dL*** (SI: nmol/L = 12.9 x µg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Oct99 – present: 4.5 – 12.5
Effective 11Mar98 – 12Oct99: 5.5 – 12.5
Effective 04Oct84 – 10Mar98: 5 – 10
Effective 08Jul82 – 03Oct84: 6 – 11
Effective 01Jan79 – 07Jul82: 4.7 – 11.1

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HISTORICAL REFERENCE RANGES

Test Name: T4, Free
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: FT4, Thyroxin Free
Reference Ranges:

T4, Free *ng/dL* (SI: pmol/L = 12.9 x ng/dL)
Performed at the National Institutes of Health, Bethesda MD
Effective 10Dec03 – present: 18-150Y 0.8 – 1.9
Effective 14Feb01 – 09Dec03: 0.7 – 1.8
Effective 03Sep97 – 13Feb01: 0.9 – 1.6
Effective 20Jun85 – 02Sep97: 1.0 – 1.9

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 19Jun85: 1.0 – 2.3

HISTORICAL REFERENCE RANGES

Test Name: T4, Free by Direct Dialysis
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

T4, Free by Direct Dialysis ***ng/dL*** (SI: pmol/L = 12.9 x ng/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 02Oct96 - present: 1.0 - 2.0

Performed at Endocrine Science Labs, Calabasas Hills CA
Effective 19Sep94 - 01Oct96: 0.8 - 2.3

T4, Free by Equilibrium Dialysis
Performed at SmithKline Beecham, Van Nuys CA
Effective 23Dec91 - 18Sep94: 0.9 - 2.0
Effective 25Mar88 - 22Dec91: 1.0 - 2.3

HISTORICAL REFERENCE RANGES

Test Name: Tacrolimus
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: FK-506, FK506
Reference Ranges:

Tacrolimus *ng/mL* (SI: µg/L = 1.0 x ng/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 06Mar99 – present:
When therapy is at steady state 3.0 – 8.0

Effective 14Jul99 – present:
Upon initiation of therapy (trough) 15.0 – 15.0
Reported acute levels 3.0 – 18.0

15.0 ng/mL is usual upon initiation of therapy (trough level)
3.0-18.0 ng/mL (acute)

Performed at Mayo Medical Labs, Rochester MN
Effective 06Mar99 - 14Jul99:
Steady state level 3.0 - 8.0

Test Name: Testosterone, Free & Total
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Testosterone, Free & Total

Total Testosterone *ng/dL* (SI: nmol/L = 0.0347 x ng/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 25Apr02 - present:
Female 19Y-150Y 12 - 72

Effective 24Feb97 - present:
Male & Female
1D-11M not established
1Y-9Y 0 - 39
Male
10Y-11Y 0 - 199
12Y-13Y 0 - 799
14Y 0 - 1199
15Y-16Y 100 - 1200
17Y-18Y 300 - 1200
19Y-40Y 200 - 950
41Y-150Y 240 - 950
Female
10Y-11Y 0 - 74
12Y-16Y 0 - 119
17Y-18Y 20 - 120

Since this test is sent out to Mayo Medical Labs the reference ranges for Total Testosterone are not the same as Totals done in-house.

Effective 24Feb97 - 24Apr02:
Female 19Y-150Y 20 - 80

Effective 19Sep94 - 23Feb97:
Male 300 - 1200
Female 20 - 80

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Oct87 - 18Sep94:
Female 25 - 95

Effective 03Sep90 - 18Sep94:
Male 225 - 900

Effective 01Oct87 - 02Sep90:
Male 300 - 1000

Effective 01Jan79 - 30Sep87:
Male 300 - 1200
Female 30 - 95

Free Testosterone *pg/mL* (SI: pmol/L = 3.47 x pg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - present:
Male 90 - 300
Female 3 - 19

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan88 - 18Sep94:
Female 3.0 - 13.0

Effective 03Sep90 - 18Sep94:
Male 50 - 260

Effective 14Jan88 - 02Sep90:
Male&Female 80 - 280

% Free Testosterone *percent* (SI: fraction of total = 0.01 x percent)
Performed at Mayo Medical Labs, Rochester MN
Effective 14Oct94 - present:
Male 2.0 - 4.8
Female 0.9 - 3.8

HISTORICAL REFERENCE RANGES

Test Name: Testosterone, Total
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Testosterone, Total *ng/dL* (SI: nmol/L = 0.0347 x ng/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 10Dec03 - present:
Male:
20Y-49Y 262-1593
>=50Y 181-758
Female:
Ovulating <20-80
Postmenopausal <20-62

Effective 17Oct01 - 09Dec03:
Male:
20Y-49Y 286 - 1510
>=50Y 212 - 742
Female:
Ovulating 65 - 119
Oral Contraceptives 54 - 71
Postmenopausal 49 - 102

Performed at Mayo Medical Labs, Rochester MN
Effective 24Feb97 - 16Oct01:
Male:
0M-11M not established
10Y-11Y 0 - 199
12Y-13Y 0 - 799
14Y 0 - 1199
15Y-16Y 100 - 1200
17Y-18Y 300 - 1200
19Y-40Y 300 - 950
>41Y 240 - 950
Female:
0M-11M not established
10Y-11Y 0 - 74
12Y-16Y 0 - 119
17Y-18Y 20 - 120
>18Y 20 - 80

Effective 19Sep94 - 23Feb97:
Male 300 - 1200
Female 20 - 80

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Oct87 - 18Sep94:
Male 225 - 900
Female 25 - 95

Effective 01Oct87 - 02Sep90:
Male 300 - 1000

Effective 01Jan79 - 30Sep87:
Male 300 - 1200
Female 30 - 95

Test Name: Tetanus Toxoid IgG Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Tetanus Antitoxoid
Reference Ranges:

Tetanus Toxoid IgG Antibody ***IU/mL*** (SI: kU/L = 1 x IU/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 15Oct02 - present: >=0.16
Interpretation:
The assay is intended for the assessment of an antibody response to tetanus toxoid vaccine. Results greater than or equal to 0.16 IU/mL suggest a vaccine response.

Effective 06Mar02 - 14Oct02
Interpretation:
The assay is intended for the assessment of an antibody response to tetanus toxoid vaccine. Results between 0.01 IU/mL and the highest standard which is 7.0 IU/mL are considered a positive response to the vaccine. Results reported as <0.01 IU/mL indicate no response to the vaccine.

Performed at Focus Technologies, Cypress CA
Effective 19Sep94 - 05Mar02:
Protective level of AB >= 0.5 U/mL
Indeterminant for protective AB 0.05 - 0.49 U/mL
Antibody not detected < 0.05 U/mL

Performed at SmithKline Beecham, Van Nuys CA
Effective 22Jul91 - 18Sep94: >0.10 IU/mL
Protected > 0.10 IU/mL

HISTORICAL REFERENCE RANGES

Test Name: Theophylline
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Aminophylline
Reference Ranges:

NO LONGER OFFERED AS OF MARCH 12, 2003
Theophylline *mg/L* (SI: µmol/L = 5.55 x mg/L) (mg/L = µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 02Apr92 - 11Mar03:
Adult, Therapeutic:
Bronchodilator 8 – 20
Premature Apnea 6 – 13
Toxic >20

Effective 02Dec82 - 01Apr92
Therapeutic 10 – 20
Toxic >20

Performed at MetPath Labs, Rockville MD
Effective until 02Dec82:
Therapeutic 10 – 20
Toxic >20

HISTORICAL REFERENCE RANGES

Test Name: Thiocyanate
Department: Laboratory Medicine
Lab Area: Quest Diagnostics
Synonyms: Sodium Nitroprusside
Reference Ranges:

Thiocyanate *µg/mL* (SI: µmol/L = 17.2 x µg/mL)
Performed at Quest Diagnostics, Baltimore MD
Effective 13Nov02 – present:
Normals:
Non-smokers 1 – 4
Smokers 3 – 12
Nitroprusside therapeutic range: 6 – 29

Performed at American Medical Labs, Chantilly VA
Effective 20Jan99 – 12Nov02:
Therapeutic unexposed nonsmokers 1 – 4
Therapeutic unexposed smokers 3 – 12
Nitroprusside Therapy:
Therapeutic 3 – 5
Slight symptoms 50 – 100
More serious symptoms 100 – 200
Life threatening intoxication >200

Performed at Mayo Medical Labs, Rochester MN
Effective 31May95 – 19Jan99:
Normal Concentration 4 – 20
Toxic >=60

Performed at American Medical Labs, Chantilly VA
Effective until 30May95:
Therapeutic - Nonsmoker 1 – 4
Therapeutic - Smoker 3 – 12
Therapeutic after nitroprusside infusion: >6 – 29

HISTORICAL REFERENCE RANGES

Test Name: Throat Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Throat Culture

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
No growth, No group A streptococcus
For OP 4-MH service: No beta Streptococcus isolated

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HISTORICAL REFERENCE RANGES

Test Name: Thrombin Time
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: TT
Reference Ranges:

Thrombin Time ***seconds***
Performed at National Institutes of Health, Bethesda MD
Effective 20Jan99 – present: Automated 15.6 - 24.4
Effective 06Mar99 - present: Fibrometer 15.1 - 21.4
Effective 01Jan79 - 19Jan99: Automated 28 - 35

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HISTORICAL REFERENCE RANGES

Test Name: Thrombin Time
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: TT
Reference Ranges:

Thrombin Time (sec.):

Automated:
Effective date: 20 Jan 99 - present
Reference range: 15.6 - 24.4

Fibrometer:
Effective date: 06 Mar 99 - present
Reference range: 15.1 - 21.4

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HISTORICAL REFERENCE RANGES

Test Name: Thyroglobulin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: HTG
Reference Ranges:

Thyroglobulin *ng/mL* (SI: µg/L = 1 x ng/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 10Dec03 – present: 18-150Y 2-60

Anti-Thyroglobulin *IU/mL* (SI: IU/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 10Dec03 – present: 18-150Y 0-2
Anti-thyroglobulin is performed with Thyroglobulin test and if significant is noted on the report.
If Anti-thyroglobulin is greater than 2 IU/mL, interpret Thyroglobulin cautiously.

Effective 13Oct99 – 09Dec03: 1.6 – 59.9

Performed at Mayo Medical Labs, Rochester MN
Effective 20Jan99 – 12Oct99: 0.0 – 55.0

Effective 12Aug96 – 19Jan99:
Normal thyroid 0.0 – 59.4
Athyroidic 0.0 – 4.9
Effective 19Sep94 – 11Aug96:
Normal thyroid 3 – 42
Athyroidic 0 – 5

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan88 - 18Sep94: 0 - 60

Anti-Thyroglobulin *IU/mL* (SI: IU/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Oct99 – 09Dec03: 0.0 – 39.9
Anti-thyroglobulin is performed with Thyroglobulin test and if significant is noted on the report.
If Anti-thyroglobulin is greater than 40.0 IU/mL, interpret Thyroglobulin cautiously.

HISTORICAL REFERENCE RANGES

Test Name: Thyroid Screen
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Thyroid Screen
Performed at National Institutes of Health, Bethesda MD
Effective 10Dec03 – present:
TSH: 0.40-4.00 *µIU/mL* (SI: mU/L = 1 x µIU/mL)
Free T4: 0.8-1.9 *ng/dL* (SI: pmol/L = 12.9 x ng/dL)

Effective 13Oct99 – 09Dec03:
TSH: 0.40-4.00 *µIU/mL* (SI: mU/L = 1.0 x µIU/mL)
Free T4: 0.7-1.8 *ng/dL* (SI: pmol/L = 12.9 x ng/dL)

TSH *µIU/mL* (SI: mU/L = 1 x µIU/mL)
Effective 13Oct99 – present: 0.40-4.00
Effective 03Sep97 – 12Oct99: 0.43 – 4.60
Effective 22Jun94 – 02Sep97: 0.42 – 4.40
Effective 18Mar87 - 23Jun94: 0.4 – 4.6
Effective 16May85 - 17Mar87: 0.5 – 4.6
Effective 01Jan79 - 15May85: 0.0 – 3.9

Free T4 *µg/dL* (SI: pmol/L = 12.9 x ng/dL)
Effective 14Feb01 – present: 0.7 – 1.8
Effective 03Sep97 – 13Feb01: 0.9 – 1.6
Effective 20Jun85 – 02Sep97: 1.0 – 1.9

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 19Jun85: 1.0 – 2.3

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HISTORICAL REFERENCE RANGES

Test Name: Thyroid Stimulating Hormone
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: TSH
Reference Ranges:

Thyroid Stimulating Hormone *µIU/mL* (SI: mU/L = 1 x µIU/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Oct99 – present: 0.40 – 4.00
Effective 03Sep97 – 12Oct99: 0.43 – 4.60
Effective 22Jun94 – 02Sep97: 0.42 – 4.40
Effective 18Mar87 – 23Jun94: 0.4 – 4.6
Effective 16May85 – 17Mar87: 0.5 – 4.6
Effective 01Jan79 – 15May85: 0.0 – 3.9

Test Name: Thyroid Stimulating Immunoglobulin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: TSIG
Reference Ranges:

Thyroid Stimulating Immunoglobulin ***TSI Index***
Performed at Mayo Medical Labs, Rochester MN
Effective 30Sep03 – present:
>=16 years:
Negative <=1.3
Positive >=1.4
0-15Y not established

Effective 19Sep94 – 29Sep03:
Negative 0 – 1.3
Indeterminate 1.4 – 1.8
Positive 1.9 – 99.9

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Oct87 - 18Sep94:
0 – 1.9 *µIU TSH eq/mL* (SI: mU TSH eq/L = 1 x µIU TSH eq/mL)

HISTORICAL REFERENCE RANGES

Test Name: Thyrotropin Binding Inhibitory Immunoglobulin
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: TBII
Reference Ranges:

Thyrotropin Binding Inhibitory Immunoglobulin ***% inhib***
(SI: frac inh = 0.01 x % inhib)
Performed at Quest Diagnostics/Nichols Institute, San Juan Capistrano CA
Effective 09Jan97 - present: 0 – 9.9

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HISTORICAL REFERENCE RANGES

Test Name: Thyroxine Binding Globulin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: TBG
Reference Ranges:

Thyroxine Binding Globulin *µg/mL* (SI: µmol/L = 1.29 x µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 13Oct99 - present: 13 – 39
Effective 04Oct95 - 12Oct99: 12 – 30
Effective 01Jan79 - 03Oct95: 12 – 28

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HISTORICAL REFERENCE RANGES

Test Name: TIBC
Department: Laboratory Medicine
Lab Area:
Synonyms: Total Iron Binding Capacity
Reference Ranges:

Test no longer performed. Order Iron and Transferrin. Also TIBC = 1.40 x Transferrin**.**
Total Iron Binding Capacity *µg/dL* (SI: µmol/L = 0.179 x µg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 - 01Oct91: 250 - 400

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Tissue Plasminogen Activator Antigen
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: TPA
Reference Ranges:

Tissue Plasminogen Activator Antigen ***ng/mL***
Performed at Esoterix Coagulation, Aurora CO
Effective 08Jan03 – present: 0.5 - 14.0
Reference ranges represent adult values.

HISTORICAL REFERENCE RANGES

Test Name: Tobramycin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Tobramycin *mg/L* (SI: µmol/L = 2.14 x mg/L)
Performed at National Institutes of Health, Bethesda MD
Effective 02Apr92 - present:
Therapeutic:
Pre <2
Post 5 – 10
Toxic:
Post >10

Effective until 01Apr92:
Therapeutic:
Pre <2
Post 4 – 10
Toxic:
Post >10

Test Name: Tocainide
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Tocainide *mg/L* (SI: µmol/L = 5.20 x mg/L) (mg/L = µg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 31May95 – present:
Therapeutic 5 – 12
Toxic >=15

Performed at American Medical Labs, Chantilly VA
Effective 02Apr92 - 30May95:
Therapeutic 4 – 10
Toxic not defined

Performed at MetPath Labs, Rockville MD
Effective until 01Apr92:
Therapeutic 4 – 10
Toxic >12

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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HISTORICAL REFERENCE RANGES

Test Name: Total Iron Binding Capacity
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: TIBC
Reference Ranges:

Test no longer performed. Order Iron and Transferrin. Also TIBC = 1.40 x Transferrin**.**
Total Iron Binding Capacity *µg/dL* (SI: µmol/L = 0.179 x µg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 - 01Oct91: 250 - 400

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HISTORICAL REFERENCE RANGES

Test Name: Total STR Chimerism
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Nonseparated Short Tandem Repeat Chimerism

Reference Ranges:

Total Short Tandem Repeat Chimerism
Performed at National Institutes of Health, Bethesda MD
Effective 13Nov02 - present: 0% Chimerism
Normal individuals have no chimerism in blood leukocytes. Leukocytes from transplanted patients have a varying components of donor derived cells.

HISTORICAL REFERENCE RANGES

Test Name: Toxicology Screen, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Drug screen, Acetaminophen, Acetohexamide, Caffeine, Acetylsalicylate, Chlorpropamide, Nicotine, Diclofenac, Tolazamide, Theophylline, Fenoprofen, Tolbutamide, Flurbiprofen, Ibuprofen, Cyclobenzaprine, Indomethacin, Amitriptyline, Disopyramide, Ketoprofen, Bupropion, Diltiazem, Ketorolac, Chlordiazepoxide, Lidocaine, Midazolam, Clomipramine, Metoclopramide, Naproxen, Clozapine, Metronidazole, Phenylbutazone, Desalkyl Flurazepam, Pentoxyfilline, Propoxyphene, Desipramine, Phenyltoloxamine, Salicylate, Diazepam, Quinidine, Sulindac, Fluoxetine, SulfadiazineTolmetin, Flurazepam, Sulfamethoxazole, Tramadol, Imipramine, Sulfapyridine, Lorazepam, Sulfisoxazole, Maprotiline, Ticlopidine, Carbamazepine, Mirtazapine, Trimethoprim, Ethosuximide, Nordiazepam, Verapamil, Felbamate, Nortriptyline, Lamotrigine, Oxazepam, Methsuximide, Sertraline, Phenytoin, Temazepam, Primidone, Trazodone, Topiramate, Trimipramine, Valproic Acid, Venlafaxine, Zolpidem, Allobarbital, Amobarbital, Carisoprodol, Aprobarbital, Diphenhydramine, Barbital, Doxylamine, Butabarbital, Ethchlorvynol, Butalbital, Glutethimide, Mephobarbital, Hydroxyzine, Metharbital, Meprobamate, Pentobarbital, Methyprylon, Phenobarbital, Thiopental

Reference Ranges:

Toxicology Screen, Serum

Performed at Mayo Medical Labs, Rochester MN
No drugs detected; if positive, drugs are quanitated with reference range.

Performed at American Medical Labs, Chantilly VA
Effective 11Oct91 - 14Mar95:
Negatives reported as no drugs detected. Positives quantified.

Performed at MetPath Labs, Rockville MD
Effective until 10Oct91:
Drugs reported as "dectected" or "not detectable"

HISTORICAL REFERENCE RANGES

Test Name: Toxocara Canis Antibody, Serum
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Visceral Larva Migrans
Reference Ranges:

Toxocara Canis Antibody, Serum
Performed at Center for Disease Control, Atlanta GA
Effective 12Jun02 - present: Negative

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 11Jun02: Negative

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: ELISA, Bent Flocculation, and Indrect Hemagglutination

Performed at American Medical Labs, Chantilly VA
Effective 01Mar86 - 31Aug90: ELISA, Bent Flocculation, and Indrect Hemagglutination

Performed at Center for Disease Control, Atlanta GA
Effective until 01Mar86: No data available

HISTORICAL REFERENCE RANGES

Test Name: Toxoplasma Antibodies
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Toxo IgG, IgM
Reference Ranges:

Toxoplasma Antibodies
Performed at Palo Alto Institute, Palo Alto CA
Effective 26Jan98 - present:
IgG - Dye test:
Negative: <1:16

IgM -ELISA
Negative: 0.0 - 1.6
Equivocal: 1.7 - 1.9
Positive: >= 2.0

Effective 09May95 - 25Jan98:
IgG:
no previous infection (except for ocular) <1:16 *titer*
prevalent in general population 1:16 - 1:256 *titer*
suggests recent infection >1:256 *titer*
indicates active infection >1:1024 *titer*
Rising titer of greatest significance
IgM:
indicates active infection (adults) >=1:64 *titer*
newborns: any titer is significant indicating active infection

Effective 02Feb94 - 08May95: 0 - 0.9 *units*

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 01Feb94: IFA; no ranges available

Performed at American Medical Labs, Chantilly VA
Effective 01Mar86 - 31Aug90: IFA; no ranges available

Performed at Center for Disease Control, Atlanta GA
Effective until 01Mar86: Indirect Flourescence; no ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Tracheal Asp/ Transtracheal Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Tracheal Asp/ Transtracheal Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
No WBCs, No organisms seen
Culture: No growth
For information on Antibiotic Susceptibility on significant isolates, click here

HISTORICAL REFERENCE RANGES

Test Name: Trichinella Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Trichinosis Spiralis
Reference Ranges:

Trichinella Antibody
Performed at Center for Disease Control, Atlanta GA
Effective 12Jun02 - present: Negative

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 - 11Jun02: Latex Agglutination; negative

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 19Sep94: Latex Agglutination, ID; negative

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: Negative

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HISTORICAL REFERENCE RANGES

Test Name: Trichomonas Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: Trichomonas
Reference Ranges:

Trichomonas Wet Mount
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No Trichomonas vaginalis trophozoites seen

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HISTORICAL REFERENCE RANGES

Test Name: Trichomonas Wet Mount
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Trichomonas Wet Mount
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No Trichomonas vaginalis trophozoites seen

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HISTORICAL REFERENCE RANGES

Test Name: Triglycerides, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Triglycerides, Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 23Oct03 – present:
>110 mg/dL chylous effusion
60-110 mg/dL indeterminate
<60 mg/dL non-chylous fluid

Effective 01Jan79 – 22Oct03: No range available

HISTORICAL REFERENCE RANGES

Test Name: Triglycerides, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Triglycerides ***mg/dL*** (SI: mmol/L = 0.0113 x mg/dL)
Performed at the National Institutes of Health, Bethesda MD
Effective 13Jun01 – present:
ATP III adopts the following classification for serum triglycerides:

Normal	<150
Borderline high risk	150 – 199
High risk	200 – 499
Very high risk	>=500

Effective 01Jan79 - 12Jun01:

0Y-9Y	not establ.
10Y-29Y	10 – 140
30Y-39Y	10 – 150
40Y-49Y	10 – 160
50Y-59Y	10 – 190
>59Y	not establ.

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HISTORICAL REFERENCE RANGES

Test Name: Troponin I
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Troponin I ***ng/mL*** (SI: µg/L = 1.0 x ng/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 06Mar99 – present: 0.0 – 2.0

Test Name: Troponin T
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Troponin T *ng/mL* (SI: µg/L = 1 x ng/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 14May03 – present: 0.00 – 0.03
Interpretation:
Troponin T values >0.03 ng/mL are abnormal and a prognostic sign in patients with ischemic heart disease.

Performed at Mayo Medical Labs, Rochester MN
Effective 15Aug00 – present: 0.00 – 0.10

Performed at Specialty Labs, Santa Monica CA
Effective 09Jun99 - 14Aug00: 0.00 - 0.09

Interpretation:
Troponin T values >0.10 ng/mL are abnormal and a prognostic sign in patients with ischemic heart disease.

HISTORICAL REFERENCE RANGES

Test Name: Trypsin, Feces
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Trypsin, Feces ***titer*** (SI: titer)
Performed at ARUP, Salt Lake City UT
Effective 04Jan02 – present:
Normal >=1:96
Abnormal <1:96

Performed at Quest/Nichols Institute, San Juan Capistrano CA
Effective 10May01 – 03Jan02:
Normal activity at >=1:10 dilution factor

Effective 15Mar95 – 09May01:
Normal >8.4 U/g (SI: µg tryp/g = 4.762 x U/g)
Pathologic <4.2 U/g
Further investigation needed 4.2 – 8.4 U/g

Peformed at American Medical Labs, Chantilly VA
Effective 13Jan93 - 14Mar95:
<4Y >=1:96
>=4Y not established
Cystic Fibrosis <1:96

Performed at SmithKline Beecham, Van Nuys CA
Effective 22Jul92 - 12Jan93:
Infants <1Y >1:96
Child >1Y >1:48
Child with Cystic Fib. <1:12
Adult not established

HISTORICAL REFERENCE RANGES

Test Name: Trypsin, Fluid
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Trypsin, Fluid ***titer*** (SI: titer)
Performed at ARUP, Salt Lake City UT
Effective 04Jan02 – present:
Normal >=1:96
Abnormal <1:96

Performed at Quest/Nichols Institute, San Juan Capistrano CA
Effective 10May01 – 03Jan02:
Normal activity at >=1:10 dilution factor

Effective 15Mar95 – 09May01:
Normal >8.4 U/g (SI: µg tryp/g = 4.762 x U/g)
Pathologic <4.2 U/g
Further investigation needed 4.2 – 8.4 U/g

Peformed at American Medical Labs, Chantilly VA
Effective 13Jan93 - 14Mar95:
<4Y >=1:96
>=4Y not established
Cystic Fibrosis <1:96

Performed at SmithKline Beecham, Van Nuys CA
Effective 22Jul92 - 12Jan93:
Infants <1Y >1:96
Child >1Y >1:48
Child with Cystic Fib. <1:12
Adult not established

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HISTORICAL REFERENCE RANGES

Test Name: Tryptase
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Mast Cell
Reference Ranges:

Tryptase *ng/mL* (SI: µg/L = 1 x ng/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 15Sep99 – present: 0.00 – 11.49
Results for research use only.

HISTORICAL REFERENCE RANGES

Test Name: Tularemia Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Francisella Ab
Reference Ranges:

Tularemia Antibody *titer* (SI: titer)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: <1:40

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 - 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective until 31Aug90: No ranges available

Test Name: Typhus Murine Antibody
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Rickettsial Ab
Reference Ranges:

Typhus Murine Antibody ***titer***
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: No antibody detected at <1:32
Detectable antibody in a single serum specimen indicates exposure to Rickettsia typhi.
A fourfold or greater rise in paired sera IgG titer indicates recent infection.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Sep90 – 18Sep94: No ranges available

Performed at American Medical Labs, Chantilly VA
Effective 02Mar86 – 31Aug90: No ranges available

Performed at Center for Disease Control, Atlanta GA
Effective until 01Mar86: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: UA, Reagent Strip
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Urinalysis
Reference Ranges:

Urinalysis
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:

Protein =	Negative
Glucose =	Negative
Ketones =	Negative
Hemoglobin =	Negative
Bilrubin =	Negative
Urobilinogen =	Negative
Leukocyte Esterase =	Negative
Nitrite =	Negative
pH =	5-8 (fasting)
Specific Gravity =	1.002-1.035

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HISTORICAL REFERENCE RANGES

Test Name: Unsaturated Iron Binding Capacity
Department: Laboratory Medicine
Lab Area:
Synonyms: UIBC
Reference Ranges:

Test no longer performed
Unsaturated Iron Binding Capacity ***µg/dL***
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – 01Apr85: 150 - 250

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HISTORICAL REFERENCE RANGES

Test Name: Urea Nitrogen, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: BUN
Reference Ranges:

Urea Nitrogen, Fluid

Performed at National Institutes of Health, Bethesda MD
Effective 01Jan80 – present: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Urea Nitrogen, Serum
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: BUN
Reference Ranges:

Urea Nitrogen, Serum ***mg/dL*** (SI: mmol/L = 0.357 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 - present: 8 – 22

Effective 01Jan79 - 30Nov88:
Male 9 – 23
Female 7 – 20

HISTORICAL REFERENCE RANGES

Test Name: Urea Nitrogen, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: BUN, UUN
Reference Ranges:

Urea Nitrogen, Urine *g/24hr* (SI: mol urea/d = 0.0357 x g/24hr)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jun82 – present:
Excretion 12 – 20
Random: not established

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HISTORICAL REFERENCE RANGES

Test Name: Uric Acid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Uric Acid *mg/dL* (SI: mmol/L = 0.059 x mg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 01Dec88 - present:
Male 3.7 – 8.6
Female 2.4 – 5.8

Effective 01Jan79 - 30Nov88:
Male 4.3 – 8.5
Female 2.8 – 8.3

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HISTORICAL REFERENCE RANGES

Test Name: Uric Acid, Fluid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Uric Acid, Fluid
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: No ranges available

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HISTORICAL REFERENCE RANGES

Test Name: Uric Acid, Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Uric Acid, Urine ***g/24hr*** (SI: mmol/d = 5.9 x g/24hr)
Performed at National Institutes of Health, Bethesda MD
Effective 01Jun82 - present: Excretion 0.25 – 0.75

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HISTORICAL REFERENCE RANGES

Test Name: Urinalysis (includes microscopic)
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: UA
Reference Ranges:

Urinalysis
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present

Protein =	Negative
Glucose =	Negative
Ketones =	Negative
Hemoglobin =	Negative
Bilrubin =	Negative
Urobilinogen =	Negative
Leukocyte Esterase =	Negative
Nitrite =	Negative
pH =	5-8 (fasting)
Specific Gravity =	1.002-1.035
RBC's	0 - 3/HPF
WBC's	0 - 5/HPF

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HISTORICAL REFERENCE RANGES

Test Name: Urine Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Urine Culture
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen.
Culture: Less than 1000 col/mL or no growth.

For information on Antibiotic Susceptibility on significant isolates, click here

Test Name: Urobilinogen, Feces
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Urobilinogen, Feces
Performed at Mayo Medical Labs, Rochester MN
Effective 15Mar95 - 21Jun00

Performed at American Medical Labs, Chantilly VA
Effective 17Mar93 - 14Mar95

Performed at SmithKline Beecham, Van Nuys CA
Effective until 06Jan93

Test Name: Urobilinogen, Feces
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

OBSOLETE 6/12/2000 - Test no longer performed
Urobilinogen, feces
Performed at Mayo Medical Labs, Rochester MN
Effective 15Mar95 – 12Jun00: 50 - 300 *mg/24hr* (SI: µmol/d = 1.69 x mg/24hr)

Performed at American Medical Labs, Chantilly VA
Effective 17Mar93 - 14Mar95: 75 - 350 *mg/100g* (SI: EU/kg = 10 x EU/kg)

Performed at MetPath Labs, Rockville MD
Effective 14Nov85 - 16Mar93: 75 - 350 *EU/100g*
Effective 01Jan79 - 13Nov85: 100 - 400 *EU/100g*

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HISTORICAL REFERENCE RANGES

Test Name: Valproic Acid
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Valproic Acid ***mg/L*** (SI: µmol/L = 6.93 x mg/L) (mg/L = µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 02Apr92 - present:
Therapeutic 50 – 100
Toxic >100

Effective until 01Apr92:
Therapeutic 50 – 100 *µg/mL*
Toxic >100 *µg/mL*

Test Name: Valproic Acid, Free and Total
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Valproic Acid, Free and Total *mg/L* (SI: µmol/L = 6.93 x mg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 22Jul98 – present:
Valproic Acid, Free
Therapeutic 4 – 15
Toxic >15
Valproic Acid, Total
Therapeutic 40 (trough) - 100 (peak)
Toxic >120
This test is sent out to a referral laboratory and the therapeutic and toxic ranges for Total Valproic Acid are not the same as Total Valproic Acid done in-house at NIH.

Effective 19Sep94 – 21Jul98:
Free Valproic Acid
Therapeutic 6 – 20
Toxic >=40

Performed at SmithKline Beecham, Van Nuys CA
Effective 17Mar88 - 18Sep94:
Free Valproic Acid
Therapeutic (Normal Antiepileptic) 5 – 10
Toxic not available

Performed at MetPath Labs, Rockville MD
Effective until 16Mar88: No ranges available

HISTORICAL REFERENCE RANGES

Test Name: Vancomycin
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Vancomycin *mg/L* (SI: µmol/L = 0.69 x mg/L) (mg/L = µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 02Apr92 - present:
Therapeutic
Pre 5 – 10
Post 20 – 40
Toxic
Pre >15
Post >80-100

Effective until 01Apr92:
Therapeutic
Pre 5 – 10
Post 20 – 40
Toxic
Pre >15
Post >50

Test Name: Vanillylmandelic Acid
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: VMA
Reference Ranges:

Vanillylmandelic Acid ***mg/24hr*** (SI: µmol/d = 5.05 x mg/24hr)
Performed at Mayo Medical Labs, Rochester MN
Effective 10Jul95 – present: Adults 0.0 – 7.9

Effective 19Sep94 – present:
Children *µg/mg creat* (SI: mmol/mol creat = 0.571 x µg/mg creat)
<1Y 0 – 26.9
>= 1Y 0 – 17.9
2-4Y 0 – 12.9
5-9Y 0 – 8.4
10-14Y 0 – 6.9

Effective 19Sep94 – 09Jul95: Adults 0 – 8.9

Performed at SmithKline Beecham, Van Nuys CA
Effective 20May91 – 18Sep94: 2 – 10
Effective 01Jul85 – 19May91: 2.2 – 10
Effective 01Jan79 – 30Jun85: 0.7 – 6.8

Test Name: Varicella-Zoster Virus Antibodies
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: VZV
Reference Ranges:

Varicella-Zoster Virus Antibodies, IgG and IgM
Performed at Mayo Medical Labs, Rochester MN
Effective 29Nov99 - present:
IgG antibodies (ELISA) reported as positive, negative or equivocal.
IgM antibodies (IFA) reported as positive or negative

Interpretation:
Samples with negative IgG and IgM results indicate nonimmunity. The presence of demonstrable IgG in the absence of IgM generally indicates past exposure and immunity to VZV infection. IgG and IgM positive results indicate recent infection. An equivocal result indicates the need for retesting of a new specimen after 1-2 weeks.

Effective 19Sep94 - 28Nov99:
Nonimmune or no antibody detected:
IgG <1:10 titer
IgM <1:10 titer
borderline immunity:
IgG 1:10 titer
IgM <1:10 titer
indicates immunity:
IgG >=1:40 titer
IgM <1:10 titer
suggests recent infection:
IgG >=1:10 titer
IgM >=1:10 titer
suggests past infection:
IgG >=1:10 titer
IgM <1:10 titer

Performed at SmithKline Beecham, Van Nuys CA
Effective until 18Sep94: No ranges available

Test Name: Varicella -Zoster Virus PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: VZV-PCR
Reference Ranges:

Varicella-Zoster Virus PCR
Performed at National Institutes of Health, Bethesda MD
Effective 01Feb00 – present: Negative for Varicella-zoster virus by PCR.

Performed at Mayo Medical Labs, Rochester MN
Effective 21Aug96 – 31Jan00

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HISTORICAL REFERENCE RANGES

Test Name: Varicella Zoster- DFA
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: VZV-DFA
Reference Ranges:

Varicella Zoster- DFA
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Negative for VZV by DFA

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HISTORICAL REFERENCE RANGES

Test Name: Varicella Zoster Virus- DFA
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: VZV-DFA
Reference Ranges:

Varicella Zoster- DFA
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present: Negative for VZV by DFA

Test Name: Varicella Zoster Virus Culture
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms: VZV
Reference Ranges:

Varicella Zoster Virus Culture
Performed at National Institutes of Health, Bethesda MD
Effective 02Nov91 – present: No virus isolated

Performed at American Medical Labs, Chantilly VA
Effective until 01Nov91: Negative

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HISTORICAL REFERENCE RANGES

Test Name: Vasoactive Intestinal Polypeptide
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: VIP
Reference Ranges:

Vasoactive Intestinal Polypeptide *pg/mL* (SI: ng/L = 1 x pg/mL)
Performed at Mayo Medical Labs, Rochester MN
Effective 10Jun98 – present: 0 – 74

HISTORICAL REFERENCE RANGES

Test Name: Verapamil
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Norverapamil
Reference Ranges:

Verapamil *µg/L* (SI: nmol/L = 2.20 x µg/L)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
Verapamil
Therapeutic 50 – 200
Toxic >=400
Norverapamil
Therapeutic 50 – 200
Toxic >=400

Performed at SmithKline Beecham, Van Nuys CA
Effective 02Apr92 - 18Sep94:
Verapamil
Therapeutic 100 – 500
Toxic not defined
Norverapamil
Therapeutic no data available
Toxic no data available

Effective until 01Apr92:
Verapamil
Therapeutic 50 – 200
Toxic >250
Norverapamil
Therapeutic no data available
Toxic no data available

HISTORICAL REFERENCE RANGES

Test Name: Very Long Chain Fatty Acids
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

No longer performed as a separate test. Order Peroxisomal Panel.
Very Long Chain Fatty Acids *µmol/L*
Effective 28Oct96 – 01Feb97:
C22:0 0 – 96.3
C24:0 0 – 91.4
C26:0 0 – 1.30
C24:0/C22:0 0 – 1.39 *ratio*
C26:0/C22:0 0 – 0.023 *ratio*

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HISTORICAL REFERENCE RANGES

Test Name: Viral Sensitivities
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Test performed by approval only
Viral Sensitivities
Performed at Viromed Laboratories, Minnetonka MN
Effective 19Dec94 – present

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HISTORICAL REFERENCE RANGES

Test Name: Viscosity, Serum
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms:
Reference Ranges:

Viscosity, Serum
Performed at National Institutes of Health, Bethesda MD
Effective 31Jul89 – present: 1.4 - 1.8

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HISTORICAL REFERENCE RANGES

Test Name: Vitamin A and Vitamin E Panel
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Retinol *µg/dL* (SI: µmol/L = 0.0349 x µg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 15Sep99 – present: 36 – 120

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 36 – 120

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Apr85 – 18Sep94: 30 - 95
Effective 01Jan79 – 31Mar85: 65 - 275

Esterfied Retinol
Performed at Mayo Medical Labs, Rochester MN
Effective 06Mar99 – present: 0 – 1

Test Name: Vitamin A and Vitamin E Panel
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Vitamin A and Vitamin E
Retinol *µg/dL* (SI: µmol/L = 0.0349 x µg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 15Sep99 – present: 36 – 120

Vitamin E *µg/mL* (SI: µmol/L = 2.32 x µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 14Sep99 – present:
20-150Y: 5.5-17
1-19Y: Not established

Retinol *µg/dL* (SI: µmol/L = 0.0349 x µg/dL)
Performed at National Institutes of Health, Bethesda MD
Effective 15Sep99 – present: 36 – 120

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 36 – 120

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Apr85 – 18Sep94: 30 - 95
Effective 01Jan79 – 31Mar85: 65 - 275 *IU/dL*

Esterfied Retinol
Performed at Mayo Medical Labs, Rochester MN
Effective 06Mar99 – present: 0 – 1

Vitamin E *µg/mL* (SI: µmol/L = 2.32 x µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 14Sep99 – present:
20-150Y: 5.5-17
1-19Y: Not established

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 14Sep99:
20-150Y: 5.5-17
1-19Y: Not established

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan88 – 18Sep94: 5 – 20

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HISTORICAL REFERENCE RANGES

Test Name: Vitamin B12
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Vitamin B12 ***pg/mL*** (SI: pmol/L = 0.738 x pg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 14Jun00 - present: 220 - 960
Effective 18Oct95 - 13Jun00: 165 - 1000
Effective 30Oct86 - 17Oct95: 200 - 900
Effective 01Jan79 - 29Oct86: 215 - 900

Test no longer performed:
Vitamin B12 Unsaturated Binding Capacity ***pg/mL*** (SI: pmol/L = 0.738 x pg/mL)
Performed at SmithKline Beecham, Van Nuys CA
Effective 25Mar88 - 02Jun93: 1000 - 2000

HISTORICAL REFERENCE RANGES

Test Name: Vitamin B12 Unsaturated Binding Capacity
Department: Laboratory Medicine
Lab Area:
Synonyms:
Reference Ranges:

Test no longer performed:
Vitamin B12 Unsaturated Binding Capacity *pg/mL* (SI: pmol/L = 0.738 x pg/mL)
Performed at SmithKline Beecham, Van Nuys CA
Effective 25Mar88 - 02Jun93: 1000 - 2000

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HISTORICAL REFERENCE RANGES

Test Name: Vitamin C
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: Ascorbic Acid
Reference Ranges:

Vitamin C *mg/dL* (SI: µmol/L = 56.78 x mg/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present: 0.6 – 2.0

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jan79 – 18Sep94: 0.2 - 2.0

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HISTORICAL REFERENCE RANGES

Test Name: Vitamin D 25-Hydroxy
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: 25-OH Vit. D, 25OH
Reference Ranges:

Vitamin D 25-Hydroxy ***ng/mL*** (SI: nmol/L = 2.496 x ng/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 12Dec01 – present:
>=16yrs 10 – 68

Performed at Mayo Medical Labs, Rochester MN
Effective 20Mar00 – 11Dec01:
>=16yrs 8 – 38

Effective 19Sep94 – 19Mar00:
Winter (D2+D3) 14 – 42
Summer (D2+D3) 15 – 80

Effective 19Sep94 – 11Dec01:
Normal values were determined in the wintertime in Rochester, MN. Normal patients who have increased exposure to sunlight may have values above this normal range.

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Dec83 – 18Sep94: 10 – 55

HISTORICAL REFERENCE RANGES

Test Name: Vitamin D, 1, 25-Dihydroxy
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Vitamin D, 1, 25-Dihydroxy *pg/mL* (SI: pmol/L = 2.4 x pg/mL)
Performed at Mayo Medical Labs, Rochester MN
Normal values were determined in the wintertime in Rochester, MN. Normal patients who have increased exposure to sunlight may have values above this normal range.
Effective 09Jan01 – present:
Adult 22 – 67
Pediatric Not Established

Effective 19Sep94 – 08Jan01: 15 – 60

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Dec83 – 18Sep94: 15 – 60

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HISTORICAL REFERENCE RANGES

Test Name: Vitamin E
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms: Alpha-tocopherol
Reference Ranges:

Vitamin E *µg/mL* (SI: µmol/L = 2.32 x µg/mL)
Performed at National Institutes of Health, Bethesda MD
Effective 14Sep99 – present:
20-150Y: 5.5-17
1-19Y: Not established

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 14Sep99:
20-150Y: 5.5-17
1-19Y: Not established

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Jan88 – 18Sep94: 5 – 20

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HISTORICAL REFERENCE RANGES

Test Name: Volume, 24hr Urine
Department: Laboratory Medicine
Lab Area: Chemistry
Synonyms:
Reference Ranges:

Volume, 24hr Urine ***mL***
Performed at National Institutes of Health, Bethesda MD
Effective 06Mar99 – present:
0-1Y 100 – 500
1-5Y 500 – 700
6-150Y 600 – 1800

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HISTORICAL REFERENCE RANGES

Test Name: von Hippel Lindau
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: VHL
Reference Ranges:

von Hippel Lindau
Performed at Chidren's Hospital, Philadelphia PA
Effective 10Sep03 – present

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HISTORICAL REFERENCE RANGES

Test Name: Von Willerbrand Factor Panel
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: vWf, Ristocetin, Cofactors
Reference Ranges:

Von Willerbrand Factor Panel
Performed at National Institutes of Health, Bethesda MD
Effective 11Jun03 – present:
Von Willerbrand Factor Activity: 48-144 %
Von Willerbrand Factor Antigen: 41-132 %

Call 104-2359-7 for interpretation.

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HISTORICAL REFERENCE RANGES

Test Name: WBC STR Profile
Department: Laboratory Medicine
Lab Area: Hematology
Synonyms: Short Tandem Repeat Profile (STR)
Reference Ranges:

WBC STR Profile

Performed at National Institutes of Health, Bethesda MD
Effective 01Aug01 - present: Call lab for interpretation.

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HISTORICAL REFERENCE RANGES

Test Name: Wound Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Wound Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen
Culture: No growth; presence of Skin flora, Oral flora, or Fecal flora.
For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Wound Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Wound Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen
Culture: No growth; presence of Skin flora, Oral flora, or Fecal flora.
For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Wound Culture/ Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Wound Culture/ Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present:
Gram Stain: No WBCs, No organisms seen
Culture: No growth; presence of Skin flora, Oral flora, or Fecal flora.
For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Wound Culture/Gram Stain
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Wound Culture/Gram Stain
Performed at National Institutes of Health, Bethesda MD
Effective 01Jan79 – present
Gram Stain: No WBCs, No organisms seen
Culture: No growth
For information on Antibiotic Susceptibility on significant isolates, click here

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HISTORICAL REFERENCE RANGES

Test Name: Wuchereria bancrofti PCR
Department: Laboratory Medicine
Lab Area: Microbiology
Synonyms:
Reference Ranges:

Wuchereria bancrofti PCR
Performed at National Institutes of Health, Bethesda MD
Effective 01Feb00 – present: Negative for Wuchereria bancrofti by PCR

Test Name: Xylose, D-, Serum or Plasma
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Xylose, D- ***mg/dL*** (SI: mmol/L = 0.0666 x mg/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – present:
25 g loading dose
Adult at 2 hours 30.0 – 52.0

5 g loading dose
Infants (<10 kg) at 1h: >=20
Child (10 kg to 9 yrs) at 1h: >=20

Values for serum will be corrected to whole blood values to account for distribution of water between whole blood and serum.

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jul85 – 18Sep94:
Adult 25g 1 hour 29 – 72
5 g 1 hours 8 – 28

Effective 15Jan90 – 18Sep94
Child 1 hour 15.8 – 39.6

Test Name: Xylose, Urine
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms: d-Xylose
Reference Ranges:

Xylose, Urine
Performed at Mayo Medical Labs, Rochester MN
Effective Dates: 19Sep94 – present
5 gram loading dose
10Y-150Y 23 – 100 % excretion
(SI: fraction = % excretion x 0.01)

5 gram loading dose
10Y-150Y 1.15 – 4.0 g/5hr
(SI: mmol/5hr = g/5hr x 6.66)

25 gram loading dose
10Y-150Y 16 – 100% excretion
(SI: fraction = % excretion x 0.01)

25 gram loading dose
10Y-150Y 4.0 – 8.9 g/5hr
(SI: mmol/5hr = g/5hr x 6.66)

Performed at SmithKline Beecham, Van Nuys CA
Effective 01Jul85 – 18Sep94:
25 gram loading dose: 4.8 – 8.2 g/5hr
5 gram loading dose: 1.2 – 2.4 g/5hr
(SI: mmol/5hr = g/5hr x 6.66)

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HISTORICAL REFERENCE RANGES

Test Name: Zinc
Department: Laboratory Medicine
Lab Area: Mayo Medical Labs
Synonyms:
Reference Ranges:

Zinc *µg/dL* (SI: µmol/L = 0.153 x µg/dL)
Performed at Mayo Medical Labs, Rochester MN
Effective 15Sep99 – present: 66-110

Performed at National Institutes of Health, Bethesda MD
Effective 03Jul96 – 14Sep99: 58 – 100

Performed at Mayo Medical Labs, Rochester MN
Effective 19Sep94 – 02Jul96: 66 – 110

Performed at SmithKline Beecham, Van Nuys CA
Effective 14Mar86 – 18Sep94: 60 – 130
Effective 01Jan79 – 13Mar86: 55 – 150