

TABLE 1—Système International (SI) units for plasma, serum, or blood concentrations

| Measurement | Conventional unit | Conversion factor | SI unit | Significant digits | Suggested minimum increments |
|--|-------------------|-------------------|---------|--------------------|------------------------------|
| Acetoacetate | mg/dl | 97.95 | μmol/L | XXO | 10 μmol/L |
| Acetone | mg/dl | 172.2 | μmol/L | XXO | 10 μmol/L |
| Adrenocorticotropin | pg/ml | 0.2202 | pmol/L | XX | 1 pmol/L |
| Aldosterone | ng/dl | 27.74 | pmol/L | XXO | 10 pmol/L |
| Amino acids | | | | | |
| Alanine | mg/dl | 112.2 | μmol/L | XXX | 5 μmol/L |
| α-aminobutyric acid | mg/dl | 96.97 | kmol/L | XXX | 5 μmol/L |
| Arginine | mg/dl | 57.40 | μmol/L | XXX | 5 μmol/L |
| Asparagine | mg/dl | 75.69 | μmol/L | XXX | 5 μmol/L |
| Aspartic acid | mg/dl | 75.13 | μmol/L | XXX | 5 μmol/L |
| Citrulline | mg/dl | 57.08 | μmol/L | XXX | 5 μmol/L |
| Cysteine | mg/dl | 41.61 | μmol/L | XXX | 5 μmol/L |
| Glutamic acid | mg/dl | 67.97 | μmol/L | XXX | 5 μmol/L |
| Glutamine | mg/dl | 68.42 | μmol/L | XXX | 5 μmol/L |
| Glycine | mg/dl | 133.2 | μmol/L | XXX | 5 μmol/L |
| Histidine | mg/dl | 64.45 | μmol/L | XXX | 5 μmol/L |
| Hydroxyproline | mg/dl | 76.26 | μmol/L | XXX | 5 μmol/L |
| Isoleucine | mg/dl | 76.24 | μmol/L | XXX | 5 μmol/L |
| Leucine | mg/dl | 76.24 | μmol/L | XXX | 5 μmol/L |
| Lysine | mg/dl | 68.40 | μmol/L | XXX | 5 μmol/L |
| Methionine | mg/dl | 67.02 | μmol/L | XXX | 5 μmol/L |
| Ornithine | mg/dl | 75.67 | μmol/L | XXX | 5 μmol/L |
| Phenylalanine | mg/dl | 60.54 | μmol/L | XXX | 5 μmol/L |
| Proline | mg/dl | 86.86 | μmol/L | XXX | 5 μmol/L |
| Serine | mg/dl | 95.16 | μmol/L | XXX | 5 μmol/L |
| Taurine | mg/dl | 79.91 | μmol/L | XXX | 5 μmol/L |
| Threonine | mg/dl | 83.95 | μmol/L | XXX | 5 μmol/L |
| Tryptophan | mg/dl | 48.97 | μmol/L | XXX | 5 μmol/L |
| Tyrosine | mg/dl | 55.19 | μmol/L | XXX | 5 μmol/L |
| Valine | mg/dl | 85.36 | μmol/L | XXX | 5 μmol/L |
| Amino acid nitrogen | mg/dl | 0.7139 | mmol/L | X.X | 0.1 mmol/L |
| Amylase | U/L | 1.0 | U/L | XXO | 10 U/L |
| Androstenedione | μg/L | 3.492 | nmol/L | XX.X | 0.5 nmol/L |
| Calcitonin | pg/ml | 1.0 | ng/L | XXO | 10 ng/L |
| Calcium | mg/dl | 0.2495 | mmol/L | X.XX | 0.02 mmol/L |
| Calcium ion | meq/L | 0.500 | mmol/L | X.XX | 0.01 mmol/L |
| Carbon dioxide content | meq/L | 1.00 | nmol/L | XX | 1 mmol/L |
| Cholesterol | mg/dl | 0.02586 | mmol/L | X.XX | 0.05 mmol/L |
| Citrate (as citric acid) | mg/dl | 52.05 | μmol/L | XXX | 5 μmol/L |
| Cortisol | μg/dl | 27.59 | nmol/L | XXO | 10 nmol/L |
| C-peptide | ng/mL | 0.331 | nmol/L | X.XX | 10 nmol/L |
| Creatinine | mg/dl | 88.40 | μmol/L | XXO | 10 μmol/L |
| Creatinine clearance | ml/min | 0.01667 | ml/s | X.XX | 0.02 ml/s |
| cyclic AMP | μg/L | 3.038 | nmol/L | XXX | 1 nmol/L |
| cyclic GMP | μg/L | 2.897 | nmol/L | XX.X | 0.1 nmol/L |
| Dehydroepiandrosterone | μg/L | 3.467 | nmol/L | XX.X | 0.2 nmol/L |
| Dehydroepiandrosterone sulfate | ng/ml | 0.002714 | μmol/L | XX.X | 0.1 μmol/L |
| 11-Deoxycortisol | μg/dl | 28.86 | nmol/L | XXO | 10 nmol/L |
| Epinephrine | pg/ml | 5.458 | pmol/L | XXO | 10 pmol/L |
| Estradiol | pg/ml | 3.671 | pmol/L | XXX | 1 pmol/L |
| Estrone | pg/ml | 3.699 | pmol/L | XXX | 5 pmol/L |
| Fatty acids, nonesterified | mg/dl | 0.01 | g/L | X.XX | 0.01 g/L |
| Follicle-stimulating hormone | mIU/ml | 1.00 | IU/L | XX | 1 IU/L |
| Fructose | mg/dl | 0.05551 | mmol/L | X.XX | 0.1 mmol/L |
| Galactose | mg/dl | 0.05551 | mmol/L | X.XX | 0.1 mmol/L |
| Gases | | | | | |
| PO ₂ | mmHg | 0.1333 | kPa | XX.X | 0.1 kPa |
| PCO ₂ | mmHg | 0.1333 | kPa | X.X | 0.1 kPa |
| Gastrin | pg/ml | 1.0 | ng/L | XXO | 10 ng/L |
| Gastroinhibitory polypeptide | pg/ml | 0.201 | pmol/L | XXO | 10 pmol/L |
| Glucagon | pg/ml | 1.0 | ng/L | XXO | 10 ng/L |
| Glucose | mg/dl | 0.05551 | mmol/L | XX.X | 0.1 mmol/L |
| Glycerol, free | mg/dl | 0.1086 | mmol/L | X.XX | 0.01 mmol/L |
| Growth hormone | ng/ml | 1.0 | μg/L | XX.X | 0.5 μg/L |
| β-Hydroxybutyrate (as β-hydroxybutyric acid) | mg/dl | 96.05 | μmol/L | XXO | 10 μmol/L |
| 17α-Hydroxyprogesterone | μg/L | 3.026 | nmol/L | XX.X | 0.5 nmol/L |

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|-------------------------------------|---|-------------------|--|--------------------|---|
| Insulin | μU/ml | 6.0 | pmol/L | XXX | 5 pmol/L |
| Lactate (as lactic acid) | mEq/L | 1.0 | mmol/L | X.X | 0.1 mmol/L |
| Lipase | U/L | 1.0 | U/L | XXX | 1 U/L |
| Lipoproteins | | | | | |
| LDL (as cholesterol) | mg/dl | 0.02586 | mmol/L | X.XX | 0.05 mmol/L |
| HDL (as cholesterol) | mg/dl | 0.02586 | mmol/L | XXX | 0.05 mmol/L |
| Luteinizing hormone | mIU/ml | 1.0 | IU/L | X.XX | 1 IU/L |
| Norepinephrine | pg/ml | 0.005911 | nmol/L | XXX | 0.01 nmol/L |
| Osmolality | mOsm/kg | 1.0 | mmol/kg | XX | 1 mmol/k |
| Pancreatic polypeptide | pg/ml | 0.239 | pmol/L | | 1 pmol/L |
| Phosphate (as inorganic phosphorus) | mg/dl | 0.3229 | mmol/L | X.XX | 0.05 mmol/L |
| Phospholipid phosphorus | mg/dl | 0.3229 | mmol/L | XX | 0.05 mmol/L |
| Progesterone | ng/ml | 3.180 | nmol/L | XX | 2 nmol/L |
| Prolactin | ng/ml | 1.0 | μg/L | XX | 1 μg/L |
| Protein, total | g/dl | 10.0 | g/L | XX | 1 g/L |
| Pyruvate (as pyruvic acid) | mg/dl | 113.6 | μmol/L | XXX | 1 μmol/L |
| Renin | ng · ml ⁻¹ · h ⁻¹ | 0.2778 | ng · L ⁻¹ · s ⁻¹ | X.XX | 0.02 ng · L ⁻¹ · s ⁻¹ |
| Serotonin | μg/dl | 0.05675 | μmol/L | X.XX | 0.05 μmol/L |
| Somatostatin | pg/ml | 0.611 | pmol/L | XX | 1 pmol/L |
| Testosterone | ng/ml | 3.467 | nmol/L | XX.X | 0.5 nmol/L |
| Thyroid-stimulating hormone | μU/dl | 1.0 | mU/L | X.X | 0.1 mU/L |
| Thyroxine | μg/dl | 12.87 | nmol/L | XXX | 1 nmol/L |
| Triiodothyronine | ng/dl | 0.01536 | nmol/L | X.X | 0.1 nmol/L |
| Urea nitrogen | mg/dl | 0.3570 | mmol/L | X.X | 0.5 mmol/L |
| Vasoactive intestinal polypeptide | pg/ml | 0.331 | pmol/L | X.X | 1 pmol/L |

Largely from Young DS: *Ann Intern Med* 106:114–29, 1987. For insulin see Vølund A, Brange J, Drejer K, Jensen I, Markussen J, Ribøl V, Sørensen AR, Schlichtkrull J: In vitro and in vivo potency of insulin analogues designed for clinical use. *Diabetic Med* 8:839–47, 1991.