

# appendix C

## Therapeutic Serum Drug Concentrations for Selected Drugs

Listed below are generally accepted therapeutic serum drug concentrations, in conventional and SI units, for several commonly used drugs. In addition, toxic concentrations are

listed for selected drugs. SI units have not been established for some drugs.

Drug	Conventional Units	SI Units
Acetaminophen	0.2–0.6 mg/dL Toxic >5 mg/dL	13–40 µmol/L >300 µmol/L
Amikacin	(peak) 16–32 mcg/mL (trough) ≤8 mcg/mL	20–30 mg/L
Amitriptyline	110–250 ng/mL	375–900 nmol/L
Carbamazepine	4–12 mcg/mL	17–50 µmol/L
Desipramine	125–300 ng/mL	470–825 nmol/L
Digoxin	0.5–2.2 ng/mL	1–2.6 nmol/L
Disopyramide	2–8 mcg/mL	6–18 µmol/L
Ethosuximide	40–110 mcg/mL	280–780 µmol/L
Gentamicin	(peak) 4–8 mcg/mL (trough) ≤2 mcg/mL	5–10 mg/L
Imipramine	200–350 ng/mL	530–950 nmol/L
Lidocaine	1.5–6 mcg/mL	6–21 µmol/L
Lithium	0.5–1.5 mEq/L	0.5–1.5 mmol/L
Maprotiline	50–200 ng/mL	180–270 nmol/L
Netilmicin	(peak) 6–10 mcg/mL (trough) ≤2 mcg/mL	5–10 mg/L
Nortriptyline	50–150 ng/mL	190–570 nmol/L
Phenobarbital	15–50 mcg/mL	65–170 µmol/L
Phenytoin	10–20 mcg/mL	40–80 µmol/L
Primidone	5–12 mcg/mL	25–45 µmol/L
Procainamide	4–8 mcg/mL	17–40 µmol/L
Propranolol	50–200 ng/mL	190–770 nmol/L
Protriptyline	100–300 ng/mL	380–1140 nmol/L
Quinidine	2–6 mcg/mL	4.6–9.2 µmol/L
Salicylate	100–200 mg/L Toxic >200 mg/L	724–1448 µmol/L >1450 µmol/L
Theophylline	10–20 mcg/mL	55–110 µmol/L
Tobramycin	(peak) 4–8 mcg/mL (trough) ≤2 mcg/mL	5–10 mg/L
Valproic acid	50–100 mcg/mL	350–700 µmol/L
Vancomycin	(peak) 30–40 mg/mL (trough) 5–10 mg/mL	(peak) 20–40 mg/L (trough) 5–10 mg/L

mcg, microgram; ng, nanogram; µmol, micromole.