

TABLE 3 TOXICOLOGY AND THERAPEUTIC DRUG MONITORING (CONTINUED)

Drug	Therapeutic Range		Toxic Level	
	SI Units	Conventional Units	SI Units	Conventional Units
Tacrolimus (FK506) (trough)				
Kidney and liver transplant				
Initiation	12–19 nmol/L	10–15 ng/mL	>25 nmol/L	>20 ng/mL
Maintenance	6–12 nmol/L	5–10 ng/mL	>25 nmol/L	>20 ng/mL
Heart transplant				
Initiation	19–25 nmol/L	15–20 ng/mL		
Maintenance	6–12 nmol/L	5–10 ng/mL		
Theophylline	56–111 µg/mL	10–20 µg/mL	>168 µg/mL	>30 µg/mL
Thiocyanate				
After nitroprusside infusion				
Nonsmoker	103–499 µmol/L	6–29 µg/mL	860 µmol/L	>50 µg/mL
Smoker	17–69 µmol/L	1–4 µg/mL		
	52–206 µmol/L	3–12 µg/mL		
Tobramycin				
Peak	11–22 µg/L	5–10 µg/mL	>26 µg/L	>12 µg/mL
Trough	0–4.3 µg/L	0–2 µg/mL	>4.3 µg/L	>2 µg/mL
Topiramate (trough)	5.9–58.9 µmol/L	2.0–20.0 µg/mL	Toxic range not well established	
Valproic acid	346–693 µmol/L	50–100 µg/mL	>693 µmol/L	>100 µg/mL
Vancomycin				
Peak	14–28 µmol/L	20–40 µg/mL	>55 µmol/L	>80 µg/mL
Trough	3.5–10.4 µmol/L	5–15 µg/mL	>14 µmol/L	>20 µg/mL
Zonisamide (trough)	47–188 µmol/L	10–40 µg/mL	Toxic range not well established	

TABLE 4 VITAMINS AND SELECTED TRACE MINERALS

Specimen	Analyte	Reference Range	
		SI Units	Conventional Units
Aluminum	S	<0.2 µmol/L	<5.41 µg/L
Arsenic	WB	0.0–0.17 µmol/L	0–13 µg/L
Cadmium	WB	<44.5 nmol/L	<5.0 µg/L
Coenzyme Q10 (ubiquinone)	P	433–1532 µg/L	433–1532 µg/L
β-Carotene	S	0.07–1.43 µmol/L	4–77 µg/dL
Copper	S	11–22 µmol/L	70–140 µg/dL
Folic acid	RC	340–1020 nmol/L cells	150–450 ng/mL cells
Folic acid	S	12.2–40.8 nmol/L	5.4–18.0 ng/mL
Lead			
Adult		<0.5 µmol/L	<10 µg/dL
Children		<0.25 µmol/L	<5 µg/dL
Mercury	WB	0–50 µmol/L	0–10 µg/L
Selenium	S	0.8–2.0 µmol/L	63–160 µg/L
Vitamin A	S	0.7–3.5 µmol/L	20–100 µg/dL
Vitamin B ₁ (thiamine)	S	0–75 nmol/L	0–2 µg/dL
Vitamin B ₂ (riboflavin)	S	106–638 nmol/L	4–24 µg/dL
Vitamin B ₆	P	20–121 nmol/L	5–30 ng/mL
Vitamin B ₁₂	S	206–735 pmol/L	279–996 pg/mL
Vitamin C (ascorbic acid)	S	23–57 µmol/L	0.4–1.0 mg/dL
Vitamin D 1,25-dihydroxy, total	S, P	36–180 pmol/L	15–75 pg/mL
Vitamin D 25-hydroxy, total	P	75–250 nmol/L	30–100 ng/mL
Vitamin E	S	12–42 µmol/L	5–18 µg/mL
Vitamin K	S	0.29–2.64 nmol/L	0.13–1.19 ng/mL
Zinc	S	11.5–18.4 µmol/L	75–120 µg/dL

Abbreviations: P, plasma; RC, red cells; S, serum; WB, whole blood.