

Clinical Biochemistry Reference Ranges

Common Routine Tests

Profile	Analyte	Units	Age/Sex	Reference Range	Alert Limits
UE	SODIUM	mmol/L		133 - 146	120 - 150
	POTASSIUM	mmol/L		3.5 - 5.3	3.0 - 6.0
	UREA	mmol/L		2.5 - 7.8	0 - 20.0
	CREATININE	umol/L	upto 17 >17	varies 60 - 120	0 - 300 0 - 300
LFT	TOTAL BILIRUBIN	umol/L		6.0 - 28	
	TOTAL PROTEIN	g/L		60 - 80	
	ALBUMIN	g/L		35 - 50	
	ALP	IU/L		30 - 130	
	ALT	IU/L	Male Female	0 - 63 0 - 54	0 - 300
BONE	CALCIUM	mmol/L		2.1 - 2.6	1.5 - 3.0
	ALBUMIN	g/L		35 - 50	
CE	CREATINE KINASE	IU/L	Male Female	0 - 170 0 - 140	
LIP	CHOLESTEROL	mmol/L		3.0 - 6.5	>5.2 risk factor
	TRIGLYCERIDES	mmol/L		0.2 - 1.9	
	HDL CHOLESTEROL	mmol/L		0 - 0.9	
	FASTING GLUCOSE	mmol/l		3.0 - 6.0	2.0 - 20.0
	AMYLASE	IU/L		28 - 100	
	BILIRUBIN (CONJUGATED)	umol/L		0 - 5	
	CRP	mg/L		0 - 7.5	
	MAGNESIUM	mmol/L		0.7 - 1.0	
	OSMOLALITY (BLOOD ONLY)	mOS/Kg		275 - 295	
	PHOSPHATE	mmol/L		0.80 - 1.50	
	URATE	µmol/L	Male Female	200 - 430 140 - 360	

Endocrinological Tests

Profile	Analyte	Units	Age	Reference Range	Critical Range
TFT	FREE T4	pmol/L		7.8 - 17.0	
	TSH	mU/L		0.34 - 5.60	
	FREE T3	pmol/L		3.7 - 6.7	
	CORTISOL	nmol/L	0900 hrs Midnight	185 – 624 0 – 276	
	CA125 TESTOSTERONE	U/ml nmol/L	male female	0 - 35 6.1 - 27.1 0 – 2.6	
LFA	FSH	U/L	Male	1.3 – 19.3	
			Female	3.9 – 8.8	Follicular phase
				4.5 – 22.5	Mid – cycle peak
				1.8 – 5.1	Luteal phase
				16.7 – 113.6	Post – menopausal
	LH	U/L	Male	1.5 - 9.3	
			Female	1.2 – 10.9	Follicular phase
				19.2 – 103.0	Mid – cycle peak
				1.2 – 12.9	Luteal phase
				10.9 – 58.6	Post – menopausal

Therapeutic Drug Monitoring Tests

Profile	Analyte	Units	Age	Therapeutic Range	Critical Range
	CARBAMAZEPINE	ug/ml		4.0 -12.0	>12
	DIGOXIN	nmol/L		0.5 - 1.0	>2.5 >2.0 if K ⁺ is low
	LITHIUM	mmol/L		0.6 - 1.0	>1.40
	PHENYTOIN	ug/ml		10.0 - 20.0	>25
	THEOPHYLLINE	ug/ml		10.0 - 20.0	>25