

REFERENCE RANGES

INTRODUCTION

The reference range and reporting units, including any interpretive information, are specific to the methodology used as well as the patient's sex and age, if appropriate. The laboratory ensures the reference ranges remain current for each test methodology, by using manufactured reference ranges and the Pathology Harmony quoted ranges, where appropriate.

Results may be flagged as being outside the reference range, if very high or very low, and in need of clinical intervention.

All reference ranges are reviewed at regular intervals and are permanently held in our computer system against each patient's results.

Reference ranges are quoted on all reports where appropriate for the test carried out.

Please contact the Customer Service Team at hcalaboratories@hcahealthcare.co.uk if you require further information.

BIOCHEMISTRY REFERENCE RANGES

Test	Reference Range	Units
Albumin	Adult Male 35–50 Adult Female 35–50	g/L
Alkaline Phosphatase	Adult Male 30–130 Adult Female 30–130	IU/L
ALT	Adult Male <41 Adult Female <34	IU/L
AFP	Adult Male <6 Adult Female <6	IU/ml
AST	Adult Male <41 Adult Female <33	IU/L
Bilirubin total	Adult Male <21 Adult Female <21	umol/L
CA125	Adult Female <36	KU/L
CA153	Adult Female <29	KU/L
CA199	Adult Male <35 Adult Female <35	KU/L
Calcium *	Male 2.10–2.55 Female 2.10–2.55	mmol/L
CEA	Adult Male <3.9 Adult Female <3.9	ng/ml
Cholesterol (total)	Male <5.0 Female <5.0	mmol/L
CK	Male 40–320 Female 25–200	IU/L
CKMB	Male <26 Female <26	IU/L
Creatinine	Adult Male 62–106 Adult Female 44–80	umol/L
CRP	Male <5.0 Female <5.0	mg/L
Free T3	Adult Male 3.1–6.8 Adult Female 3.1–6.8	pmol/l
Free Thyroxine (FT4)	Adult Male 12.0–22.0 Adult Female 12.0–22.0	pmol/l
FSH	Adult Male 1.5–12.4 Adult Female: Follicular 3.5–12.5 Ovulatory 4.7–21.5 Luteal 1.7–7.7 Post–Menopausal 25.8–134.8	U/L

* Use same reference range for total and corrected calcium

BIOCHEMISTRY REFERENCE RANGES

Test	Reference Range	Units			
GGT	Adult Male 8–61 Adult Female 5–36	IU/L	Progesterone	Adult Female Follicular <0.7 Ovulation <13.3 Luteal 13.1–46.3 Post–Menopausal <0.6	nmol/L
Glucose (Fasting)	Male 4.1–6.0 Female 4.1–6.0	mmol/L	PSA	3–39 years <1.5 40–49 years <2.1 50–59 years <3.2 60–69 years <4.2 ≥70 years <4.5	ug/l
HCG (Intact + Beta)	Adult Male 0–2 Adult Female <3 Negative 3–25 Equivocal >25 Positive	IU/L	Sodium	Male 133–146 Female 133–146	mmol/L
HDL Cholesterol	Male 0.9–1.5 Female 1.2–1.7	mmol/L	SHBG	Adult Male: 20–49 years 18.3–54.1 >50 years 20.6–76.7 Adult Female: 20–49 years 32.4–128 >50 years 27.1–128	nmol/L
LDH	Adult Male <251 Adult Female <251	IU/L	Testosterone	Adult Male: 20–49 years 8.64–29.0 >50 years 6.68–25.7 Adult Female: 20–49 years 0.3–1.7 >50 years 0.1–1.4	nmol/l
LH	Adult Male 1.7–8.6 Adult Female: Follicular 2.4–12.6 Ovulatory 14.0–95.6 Luteal 1.0–11.4 Post–Menopausal 7.7–58.5	U/L	Thyroid Stimulating Hormone (TSH)	Adult Male 0.27–4.20 Adult Female 0.27–4.20	mU/l
Magnesium	Adult Male 0.7–1.0 Adult Female 0.7–1.0	mmol/L	Total Protein	Adult Male 60–80 Adult Female 60–80	g/L
Oestradiol	Male: <159 Female: Follicular 114–332 Ovulation 222–1959 Luteal 222–854 Postmenopausal <506	pmol/L	Triglycerides	Adult Male <1.7 Adult Female <1.7	mmol/L
Phosphate	Adult Male 0.8–1.5 Adult Female 0.8–1.5	mmol/L	Troponin T	Adult Male: <15 Adult Female: <15	ng/L
Potassium	Adult Male 3.5–5.3 Adult Female 3.5–5.3	mmol/L	Urea	Adult Male 2.5–7.8 Adult Female 2.5–7.8	mmol/L

HAEMATOLOGY REFERENCE RANGES

FULL BLOOD COUNT REFERENCE RANGE FOR ADULTS

Test	Units	Adult Male Range	Adult Female Range	Test	Units	Adult Male Range	Adult Female Range
HGB	g/L	130–170	120–150	MPV	fL	9.0–12.0	9.0–12.0
HCT	L/L	0.40–0.50	0.36–0.46	WBC	X 10 ⁹ /L	4.0–10.0	4.0–10.0
RBC	X 10 ¹² /L	4.5–5.5	3.8–4.8	NEUT #	X 10 ⁹ /L	2.0–7.0	
*MCV	fL	81–101	81–101	LYMPH #	X 10 ⁹ /L	1.0–3.0	
MCH	pg	27–32	27–32	MONO #	X 10 ⁹ /L	0.2–1.0	
MCHC	g/L	315–345	315–345	EOSINO #	X 10 ⁹ /L	0.02–0.5	
RDW	%	11.6–14.0	11.6–14.0	BASO #	X 10 ⁹ /L	0.02–0.1	
PLAT	X 10 ⁹ /L	150–410	150–410	Reticulocytes	X 10 ⁹ /L	50–100	

THERAPEUTIC INR RANGE FOR PATIENTS ON WARFARIN

INR	Condition/Indication
2 - 3	AF, VTE
2.5 - 3.5	MRV, AVR, Recurrent thromboembolism

ERYTHROCYTE SEDIMENTATION RATE (ESR)

Age	Male Range	Female Range - ESR (mm/hr)
1–16 Years	0 - 20	
17 - 50 years	0 - 10	0 - 12
51 - 60 years	0 - 12	0 - 19
61 - 70 years	0 - 14	0 - 20
> 70 years	0 - 30	0 - 35

