

Technically valid results on or outside these limits must be notified to the clinical team* within 2 h unless the previous result (within the last 7 days FROM A LABORATORY ANALYSER NOT A WARD BLOOD GAS OR OTHER POCT RESULT) was worse or identical. These limits apply at any time of the day or night.

Notification may be direct or through Duty Biochemist's (DB) office (ext 30348) if 09:00-17:30 weekdays; On-call Clinical Biochem Specialist Registrar (SpR) (switchboard) if Out of hours (OOH). *If in doubt, call DB to discuss.*

	Lower limit (≤)	Higher Limit (≥)	Units	Notes
Sodium	125 (>16y) 130 (<16 y)	150	mmol/L	120 -155 if in-patient (IP)
Potassium	2.5	6.5	mmol/L	Not haemolysed <2.0 on known renal patients.
Urea	None	30 (adult) 10 (<16 y)	mmol/L	Only phone GP/OP & only if first time call out limit exceeded
Creatinine	None	354 adult 200 (<16 y)	µmol/L	
Bicarbonate	10	None	mmol/L	
Adj. Calcium	1.8	3.2	mmol/L	Adj only (consider Tot Ca if no Alb)
Magnesium	0.4	None	mmol/L	
Phosphate	0.3	None	mmol/L	
Glucose	2.5 (>28d) 1.9 (0-28d)	25.0 (adult) 15.0 (<18 y)	mmol/L	2.0 - 30.0 if known diabetic
Antenatal, GAN	as above	7.8	mmol/L	Refer to DB to email
Total bilirubin	None	300	µmol/L	Only if patient is under 1 year of age
Conj Bilirubin	None	25	µmol/L	< 6 weeks old only
Ammonia	None	100	µmol/L	Sample not haemolysed or >4h old
Triglycerides	None	20	mmol/L	Above 30 if IP/OP
ALT/AST	None	600 500 (<16 y)	IU/L	
CK	None	5000	IU/L	
Amylase	None	400	IU/L	
CRP	None	300	mg/L	Excluding hospital patients
Bile acids	None	100	µmol/L	Pregnant women only
TSH	None	50	mIU/L	
Free T4	5.4	40	pmol/L	(<5.4 Alinity, < 5.2 Architect)
Free T3		20	pmol/L	
Cortisol	100	None	nmol/L	< 50 phone (not if part of ONDST), 50–100 nmol/L refer to DB.
30 min cortisol	250			COR30 refer to DB
Oestradiol	None	15000	pmol/L	
Carbamazepine	None	25	mg/L	
Digoxin	None	2.0	µg/L	If taken 6h post dose. Upper limit 2.5 µg/L if K >3.0 mmol/L
Lithium	None	1.5	mmol/L	If 12h post dose. Check tube type.
Paracetamol	None	3	mg/L	Cut off will remain 100 mg/L for A&E
Phenobarbitone	None	70	mg/L	
Phenytoin	None	25	mg/L	
Salicylate	None	300	mg/L	
Theophylline	None	25	mg/L	
Urate		340		Antenatal indications only; not renal
Ethanol		4000	mg/L	
Troponin		>15F, >34M	ng/L	GP only
AKI		2,3		
		1		Call only if K > 6.0 mmol/L

***Refer to "Clinical Biochemistry Procedure for Providing & Receiving Pathology Results/Reports by Telephone, Fax and E-mail" CHEM-MP-002-NWL for the communication protocols that must be followed for each site.**

Details of all calls involving the transmission of results MUST be recorded in CallBack or a telephone log
Please state "this result is urgent" when telephoning results.

ACTION LIMITS (OOH) – CLINICAL BIOCHEMISTRY

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	Lower limit (≤)	Higher Limit (≥)	Units	Notes
Sodium	125 (>16y) 130 (<16y)	150	mmol/L	120 -155 if in-patient (IP)
Potassium	2.5	6.5	mmol/L	Not haemolysed <2.0 on known renal patients.
Urea	None	30 (adult) 10 (<16 y)	mmol/L	Only phone GP/OP & only if first time call out limit exceeded
Creatinine	None	354 adult 200 (<16 y)	µmol/L	
Bicarbonate	10	None	mmol/L	
Adj. Calcium	1.8	3.2	mmol/L	Adj only (consider Tot Ca if no Alb)
Magnesium	0.4	None	mmol/L	
Phosphate	0.3	None	mmol/L	
Glucose	2.5 (>28d) 1.9 (0-28d)	25.0 (adult) 15.0 (<18 y)	mmol/L	2.0 - 30.0 if known diabetic
Antenatal, GAN	as above	7.8	mmol/L	[†] Refer to DB to email
Total bilirubin	None	300	µmol/L	Only if patient is under 1 year of age
Conj Bilirubin	None	25	µmol/L	< 6 weeks old only
Ammonia	None	100	µmol/L	Sample not haemolysed or >4h old
Triglycerides	None	20	mmol/L	Call if IP > 30 mmol/L [†] GP/OP Refer to DB/call in morning
ALT/AST	None	600 500 (<16 y)	IU/L	[†] GP/OP Refer to DB/call in morning
CK	None	5000	IU/L	[†] GP/OP Refer to DB/call in morning
Amylase	None	400	IU/L	
CRP	None	300	mg/L	Excluding hospital patients
Bile acids	None	100	µmol/L	Refer pregnant only next working day
TSH	None	50	mIU/L	[†] GP/OP Refer to DB/call in morning
Free T4	5.4	40	pmol/L	[†] GP/OP Refer to DB/call in morning <5.4 Alinity, <5.2 Architect
Free T3		20	pmol/L	[†] GP/OP Refer to DB/call in morning
Cortisol	100	None	nmol/L	[†] GP/OP Refer to DB/call in morning
30 min cortisol	250			[†] GP/OP Refer to DB/call in morning
Oestradiol	None	15000	pmol/L	
Carbamazepine	None	25	mg/L	
Digoxin	None	2.0	µg/L	If taken 6h post dose. Upper limit 2.5 µg/L if K >3.0 mmol/L
Lithium	None	1.5	mmol/L	If 12h post dose. Check tube type.
Paracetamol	None	3	mg/L	Cut off will remain 100 mg/L for A&E
Phenobarbitone	None	70	mg/L	
Phenytoin	None	25	mg/L	
Salicylate	None	300	mg/L	
Theophylline	None	25	mg/L	
Urate		340		Antenatal indications only; not renal
Ethanol		4000	mg/L	
Troponin		>15F, >34M	ng/L	GP only
AKI		2,3		
		1		Call only if K >6.0mmol/L, [†] For GP call AKI1 next am

*Refer to “Clinical Biochemistry Procedure for Providing & Receiving Pathology Results/Reports by Telephone, Fax and E-mail” CHEM-MP-002-NWL for the communication protocols that must be followed for each site.

[†]OOH-refer next day: These results do not need to be telephoned OOH but must be actioned the next day. Notify the day shift BMS at handover for HH, SMH, CW, THH, C&W & WM results. Give ChX results and any others specified above to Duty Biochemist (x30348). **Weekend results call out on Saturday/Sunday morning.**

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