

### Clinical Chemistry Tests Available on the AU680 Analyser

Version 7, January 2020

Assay	Method used	Plasma / Serum			Urine		
		Preferred sample type	Required Volume (µl)	Detectable Range	Preferred sample type	Required Volume (µl)	Detectable Range
Sodium <sup>1</sup>	Indirect ISE	Serum or LitHep Plasma only	20	50 - 200 mmol/l	24 hr/No preservative	20	10 - 400 mmol/l
Potassium <sup>1</sup>	Indirect ISE	Serum or LitHep Plasma only		1.0 - 10.0 mmol/l	24 hr/No preservative		2 - 200 mmol/l
Chloride <sup>1</sup>	Indirect ISE	Serum or LitHep Plasma only		50 - 200 mmol/l	24 hr/No preservative		15 - 400 mmol/l
Total Calcium	Arsenazo III	Serum or Heparinised plasma (Avoid complex anticoagulants, no EDTA)	3	1 - 5 mmol/l	24 hr/ Acidify with 6M HCL <sup>4,5</sup>	7	0 - 10 mmol/l
Inorganic Phosphorus	Molybdate, UV	Serum or Heparinised plasma	8	0.32 - 6.4 mmol/l	24 hr/ Acidify with 6M HCL <sup>4,5</sup>	25	0 - 113 mmol/l
Iron	TPTZ	Serum or Heparinised plasma (Avoid complex anticoagulants)	12	2 - 179 µmol/l	/	/	/
Magnesium	Direct Colorimetric	Serum/Heparinised plasma	7	0.2 - 3.3 mmol/L	24 hr/ Acidify with 6M HCL <sup>4,5</sup>	6	0.2 - 9.25 mmol/L
Creatinine	Enzymatic mtd	Serum or Heparinised plasma	11	4.4 - 4420 µmol/l	24 hr/No preservative	6	88 - 44200 mmol/l
Urea	Urease/GLDH	Serum/EDTA or LitHep plasma (No ammonium hep plasma)	2	0.8 - 50 mmol/l	24 hr/No preservative	25	10 - 750 mmol/l
Uric Acid	Uricase/POD	Serum/EDTA or Heparinised plasma	11	89 - 1785 µmol/l	24 hr/ add NaOH to pH 8 or 9 <sup>4,5</sup>	7	119 - 23800 µmol/l
Total Protein	Biuret mtd	Serum/EDTA or Heparinised plasma	10	30 - 120 g/l	/	/	/
Urinary Protein	Photometric	/	/	/	12-24 hr/No preservative	7	10-2000 mg/dl
Albumin	Bromocresol green	Serum/EDTA or Heparinised plasma	2	15 - 60 g/l	/	/	/
Total Bilirubin	DPD	Serum/EDTA or Heparinised plasma	10	0 - 513 µmol/l	/	/	/
Alkaline Phosphatase (ALP)	IFCC	Serum or Heparinised plasma (Avoid complex anticoagulants)	2	5 - 1500 U/l	/	/	/
Alanine aminotransferase (ALT)	Modified without Pyridoxal phosphate	Serum/EDTA or Heparinised plasma	5	3 - 500 U/l	/	/	/
Aspartate aminotransferase (AST)	Modified without Pyridoxal phosphate	Serum or Heparinised plasma	5	3 - 1000 U/l	/	/	/
Lactate Dehydrogenase (LDH)	SCE 1974	Serum or Heparinised plasma	2	50 - 3000 U/l	/	/	/
Creatine Kinase (CK)	IFCC	Serum or Heparinised plasma (Avoid complex anticoagulants)	8	10 - 2000 U/l	/	/	/
α-Amylase	CNPG III	Serum or Heparinised plasma (Avoid complex anticoagulants)	7	10 - 2000 U/l	/	/	/
Total Cholesterol	Enzymatic CHO-POD	Serum/EDTA or Heparinised plasma	7	0.5 - 18.0 mmol/l	/	/	/
HDL Cholesterol	Enzymatic	Serum or Heparinised plasma	7	0.05 - 4.65 mmol/l	/	/	/
LDL cholesterol	CHO/PAP	Serum or Heparinised plasma	7	0.26 - 10.3 mmol/l	/	/	/
Triglycerides	GPO-POD	Serum/EDTA or Heparinised plasma	2	0.1 - 11.3 mmol/l	/	/	/
Glycerol	Direct Colorimetric	Serum/EDTA or Heparinised plasma	6	0 - 2500 µmol/l	/	/	/
Free Fatty Acids	ACS-ACOD Enzymatic	Serum/EDTA or Heparinised plasma (Fasted)	9	0.01-4.00mmol/l	/	/	/
Glucose	HK G6P-DH	Serum/EDTA or Heparinised plasma	2	0.6 - 45.0 mmol/l	Random & fresh / No preservative	7	0.05 - 45.0 mmol/l
Ketone bodies (Beta-Hydroxybutyrate) <sup>2</sup>	Kinetic enzymatic	Serum/EDTA or Heparinised plasma	4	0.1 - 3.2 mmol/l	/	/	/
Ammonia <sup>2</sup>	Direct Enzymatic	EDTA/LitHep plasma (Never ammonium based anticoagulants)	20	0 - 1000 µmol/l	/	/	/
LIH (lipaemia, haemolysis icterus) <sup>3</sup>	Direct Colorimetric	Serum or Heparinised plasma	7	/	/	/	/

Dead Volume = 40µl in each sample tube<sup>6</sup>

<sup>1</sup> Electrolytes are measured simultaneously / from a single aliquot

<sup>2</sup> Requests for these assays require advance notice as reagents are not routinely stocked

<sup>3</sup> The LIH test scores the severity of haemolysis, lipaemia and icterus of plasma / serum samples - results are not quantitative

<sup>4</sup> The manufacturer of our reagent recommends the adjustment of urine sample pH for this assay, although we appreciate that it may not always be practical due to the low sample volumes obtained from mice

<sup>5</sup> Please add sufficient amounts of the recommended preservative at the point of collection to prevent precipitation or adsorption of analytes and remove any suspended matter by centrifugation before freezing