ALBERTA PRECISION LABORATORIES
Leaders in Laboratory Medicine

Laboratory Bulletin

DATE:	12 December 2025
TO:	Northern Lights Regional Hospital Healthcare Providers
FROM:	Clinical Biochemistry, Alberta Precision Laboratories
RE:	**Transition of Body Fluid, Cerebral Spinal Fluid, Urine and Additional Testing to Roche Cobas® Pure Chemistry Analyzers**

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Key Message

- Effective 16 December 2025, all chemistry testing will be performed on Roche Cobas® Pure chemistry analyzers. These instruments were initially implemented on 21 October 2025 for specified blood testing
- Tests transitioning on 16 December include body fluid, cerebral spinal fluid (CSF), urine, and specified analytes in blood (Appendix 1).
- Reference intervals, reporting limits and container types will change for select analytes (Appendix 2)
- Results for several tests will change significantly due to differences in methodology, and/or container types between current chemistry and new chemistry analyzers (Appendix 3).
- Phenytoin will be temporarily referred offsite to the University of Alberta Hospital, with turnaround time of up to 24 hours. Onsite testing is expected to be re-implemented in January 2026.

Background

- This change is part of a large-scale provincial standardization effort to implement Roche chemistry analyzers in urban and regional hospital laboratories across Alberta, which will benefit patients by standardizing laboratory practices and reporting components such as tests, reference intervals and reporting comments.

How this will impact you

- Reduced testing downtime as testing transitioned to new instruments.
- Temporary increase to turnaround time for Phenytoin, total.

Action Required

- Be aware of changes outlined in Appendix 1 and 2.
- There are no changes to ordering in EPIC.

Effective **16 December 2025**

Questions/Concerns

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Approved by

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- Dr. Michael Mengel, North Sector Medical Director, APL

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Appendix 1. Implementation of testing Roche Cobas® Pure chemistry analyzers

Table 1. Transition Dates for Chemistry Test Menu Components at NLRH

Transition Date	
21 October 2025	**16 December 2025**
Blood • Acetaminophen • Albumin • Alkaline phosphatase (ALP) • Alanine aminotransferase (ALT) • Aspartate aminotransferase (AST) • Beta hCG, Quantitative • Bilirubin, Conjugated • Bilirubin, Total • Calcium • Chloride • Creatine kinase (CK) • Carbon dioxide • Creatinine • CRP • Ethanol • Gamma glutamyl transferase (GGT) • Glucose • Lactate dehydrogenase (LD) • Lipase • Magnesium • NT-proBNP • Phosphate • Potassium • Salicylate • Sodium • Troponin T, High Sensitivity (hs-TnT) • Total protein • Urate • Urea • Vancomycin	**Blood** • Ammonia • Carbamazepine • Digoxin • Iron Overdose • Lithium • Phenytoin, Total* **Body Fluid** • Albumin, Body Fluid • Lactate dehydrogenase (LD), Body Fluid • Protein Total, Body Fluid • Urate, Body Fluid **CSF** • Protein Total, CSF • Glucose, CSF **Urine** • Creatinine, Urine • Potassium, Urine • Protein Total, Urine • Sodium, Urine

*Phenytoin, Total will temporarily be referred offsite to the University of Alberta Hospital (same methodology). Expected turnaround time will be up to 24 hours, with onsite testing to resume in January.

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Appendix 2. Reporting changes with Roche chemistry analyzers

Table 2. Summary of changes to reference intervals, reporting limits and container type

Test	Units	Reference interval (RI)		Reporting limits		Container	
		Current	New	Current	New	Current	New
Ammonia	µmol/L	No change		10-3000	10-2000	Mint LiHep PST	Lavendar EDTA
Carbamazepine	µmol/L	No change		4-1271	9-425	No change	
Digoxin	nmol/L	No change		0.3-32.1	0.6-64.0	No change	
Iron Overdose	µmol/L	No change		1-716	1-376	No change	
Lithium	mmol/L	No change		0.2-5.0	0.05-6.0	No change	
Phenytoin	µmol/L	No change		5-1584	4-316	No change	
Albumin, Body fluid	g/L	No RI		4-400	2-100	No change	
Lactate dehydrogenase, Body fluid	U/L	No RI		6-40000	10-2500	No change	
Protein Total, Body fluid	g/L	No RI		20-2280	2-300	No change	
Urate, Body fluid	µmol/L	No RI		30-40460	12-3700	No change	
Protein Total, CSF	g/L	0.15-0.45	**Age** <31 days: 0.14-1.12 ≥ 31 days: 0.15-0.45	0.1-25.0	0.04-6.00	No change	
Glucose, CSF	mmol/L	No change		0.5-417.0	0.5-83.2	No change	
Creatinine, Urine	mmol/L	No change (No RI for random samples)		1.1-35.3	0.1-135.0	No change	
Potassium, Urine	mmol/L	No change (No RI for random samples)		2.5-216.4	3-150	No change	
Protein Total, Urine	mmol/L	No change (No RI for random samples)		0.06-2.50	0.04-6.00	No change	
Sodium, Urine	mmol/L	No change (No RI for random samples)		5-300	20-375	No change	

Note: Urine tests include both random and 24 hr test orders

Appendix 3. Approximate expected changes to results with the new Roche Cobas® Pure analyzers compared to the current method

Table 3. Expected approximate range of result changes compared to current

Test	Approximate range of result changes	Notes
Carbamazepine	-25%	
Digoxin	+0.20 nmol/L	For results <1.25 nmol/L
Protein Total, Urine	-25%	
Protein Total, CSF	-0.06 g/L	

There are no changes to tests not listed above.