



Origination 10/29/2024  
 Last Approved 10/29/2024  
 Effective 10/29/2024  
 Last Revised 10/29/2024  
 Next Review 10/29/2026

Document Contact Shani Kastl: Medical Technologist Lead  
 Area Laboratory-Chemistry  
 Applicability Trenton

## Chemistry Quality Control Schedule - Trenton

Document Type: Guideline

### I. PURPOSE AND OBJECTIVE:

To provide the laboratory technical staff with a schedule of instrumentation and frequency of Quality Control material within the Chemistry department.

### II. PROCEDURE:

Analyzer	Control	
ci4100	Bio-Rad	Frequency
	Unassayed Chemistry	
Albumin	Level 1, Level 2	1x Daily
Alkaline Phosphatase	Level 1, Level 2	1x Daily
Alanine Aminotransferase	Level 1, Level 2	1x Daily
Amylase	Level 1, Level 2	1x Daily
Aspartate Aminotransferase	Level 1, Level 2	1x Daily
Calcium	Level 1, Level 2	1x Daily
Creatine Kinase	Level 1, Level 2	1x Daily
Chloride	Level 1, Level 2	3x Daily
Carbon Dioxide	Level 1, Level 2	1x Daily
Creatinine	Level 1, Level 2	1x Daily
Creatinine, Enzymatic	Level 1, Level 2	1x Daily

Direct Bilirubin	Level 1, Level 2	1x Daily
Glucose	Level 1, Level 2	1x Daily
Lactate Dehydrogenase	Level 1, Level 2	1x Daily
Lactic Acid	Level 1, Level 2	1x Daily
Lipase	Level 1, Level 2	1x Daily
Magnesium	Level 1, Level 2	1x Daily
Phosphorous	Level 1, Level 2	1x Daily
Potassium	Level 1, Level 2	3x Daily
Sodium	Level 1, Level 2	3x Daily
Total Bilirubin	Level 1, Level 2	1x Daily
Total Protein	Level 1, Level 2	1x Daily
Urea	Level 1, Level 2	1x Daily
Uric Acid	Level 1, Level 2	1x Daily
<b>Analyzer</b>	<b>Control</b>	
<b>ci4100</b>	<b>Bio-Rad</b>	<b>Frequency</b>
	<b>Immunoassay Plus</b>	
Acetaminophen	Level 1, Level 2, Level 3	1x Daily
Beta-Human Chorionic Gonadotropin	Level 1, Level 2, Level 3	1x Daily
Digoxin	Level 1, Level 2, Level 3	1x Daily
Free Thyroxine	Level 1, Level 2, Level 3	1x Daily
Salicylate	Level 1, Level 2, Level 3	1x Daily
Thyroid Stimulating Hormone	Level 1, Level 2, Level 3	1x Daily
Valproic Acid	Level 1, Level 2, Level 3	1x Daily
Vancomycin	Level 1, Level 2, Level 3	1x Daily
<b>Analyzer</b>	<b>Control</b>	
<b>ci4100</b>	<b>Bio-Rad Liquichek</b>	<b>Frequency</b>
	<b>Ethanol/Ammonia</b>	
Ethanol	Level 1, Level 3	1x Daily
Ammonia	Level 1, Level 3	1x Daily
<b>Analyzer</b>	<b>Control</b>	
<b>ci4100</b>	<b>Bio-Rad</b>	<b>Frequency</b>
	<b>Cardiac Markers Plus</b>	

Brain Natriuretic Peptide	Level 1, Level 2, Level 3	1x Daily
Troponin	Level 1, Level 2, Level 3	1x Daily
<b>Analyzer</b>	<b>Control</b>	
<b>ci4100</b>	<b>UTAK</b>	<b>Frequency</b>
	<b>Amphetamine Plus</b>	
Amphetamine	Level 1, Level 2	1x Daily
Barbiturate	Level 1, Level 2	1x Daily
Benzodiazepine	Level 1, Level 2	1x Daily
Cannabinoid	Level 1, Level 2	1x Daily
Cocaine	Level 1, Level 2	1x Daily
Fentanyl	Level 1, Level 2	1x Daily
Methadone	Level 1, Level 2	1x Daily
Opiate	Level 1, Level 2	1x Daily
Oxycodone	Level 1, Level 2	1x Daily
Phencyclidine	Level 1, Level 2	1x Daily
<b>Analyzer</b>	<b>Control</b>	
<b>ci4100</b>	<b>Bio-Rad</b>	<b>Frequency</b>
	<b>Liquichek Spinal Fluid</b>	
Cerebral Spinal Fluid Glucose	Level 1, Level 2	As Needed
Cerebral Spinal Fluid Protein	Level 1, Level 2	As Needed
<b>Analyzer</b>	<b>Control</b>	
<b>ci4100</b>	<b>Bio-Rad</b>	<b>Frequency</b>
	<b>Specialty Immunoassay</b>	
Procalcitonin	Level 1, Level 2, Level 3	1x Daily
<b>Analyzer</b>	<b>Control</b>	
<b>ci4100</b>	<b>Stanbio</b>	<b>Frequency</b>
	<b>Beta-hydroxybutyrate</b>	
Beta-hydroxybutyrate	Level 1, Level 2	As Needed
<b>Analyzer</b>	<b>Control</b>	
<b>ABL 825 Flex</b>	<b>Radiometer America</b>	<b>Frequency</b>

	<b>Autocheck 5+</b>	<b>Auto Programmed</b>
pH	Level 1, Level 2, Level 3	1 level every 8 hours
pCO <sub>2</sub>	Level 1, Level 2, Level 3	1 level every 8 hours
Na <sup>+</sup>	Level 1, Level 2, Level 3	1 level every 8 hours
K <sup>+</sup>	Level 1, Level 2, Level 3	1 level every 8 hours
Ca <sup>++</sup>	Level 1, Level 2, Level 3	1 level every 8 hours
Cl <sup>-</sup>	Level 1, Level 2, Level 3	1 level every 8 hours
Lactate	Level 1, Level 2, Level 3	1 level every 8 hours
Carboxyhemoglobin	Level 1, Level 2, Level 3	1 level every 8 hours
Methemoglobin	Level 1, Level 2, Level 3	1 level every 8 hours
tHb	Level 1, Level 2, Level 3	1 level every 8 hours
O <sub>2</sub> Hb	Level 1, Level 2, Level 3	1 level every 8 hours
Glucose	Level 1, Level 2, Level 3	1 level every 8 hours

- A. All applicable control levels must be run after calibration of any method or parameter, after any maintenance, repair, reagent change or extended power failure.
- B. Corewell Health East Trenton Laboratory is enrolled in Bio-Rad Unity Real Time program, Radiometer Aqure and Stanbio Peer Group Monitor. These programs provide a calculation for mean, standard deviation and coefficient of variation.
- C. Quality control is reviewed by a Lead Medical Technologist at least monthly.

## Approval Signatures

<b>Step Description</b>	<b>Approver</b>	<b>Date</b>
Medical Director	Muhammad Arshad: Chief, Pathology	10/29/2024
Policy and Forms Steering Committee Approval (if needed)	Shani Kastl: Medical Technologist Lead	10/23/2024
	Christopher Ferguson: Dir, Lab Services	10/17/2024
	Ashley Beesley: Mgr, Laboratory	10/17/2024
	Shani Kastl: Medical Technologist Lead	10/17/2024

---

## Applicability

Trenton

COPY