



# 3

**SECTION 3**

**BLOOD GAS  
& ELECTROLYTES**

## Blood Gas & Electrolyte Controls

Blood gas and electrolyte controls in diagnostics are essential for ensuring the accuracy and reliability of tests that measure critical parameters like pH, oxygen (PaO<sub>2</sub>), carbon dioxide (PaCO<sub>2</sub>), and key electrolytes such as sodium, potassium, chloride, and bicarbonate. These controls, typically pre-prepared solutions with known concentrations, are used to calibrate and validate diagnostic equipment, such as blood gas analyzers.

By regularly running these controls, laboratories can detect any inaccuracies in the testing process, ensuring that instruments and reagents are functioning correctly and that test results are precise. In clinical settings, the proper use of blood gas and electrolyte controls helps prevent diagnostic errors, which are crucial in high-stakes situations such as critical care and emergency medicine. Any variation in these tests can significantly impact patient management, from adjusting ventilation settings to correcting electrolyte imbalances.

The Fortress Blood Gas & Electrolytes Quality Controls contain values for ten parameters, with values assigned by European Reference Laboratories, covering pH, pCO<sub>2</sub>, pO<sub>2</sub> and electrolytes. Available in a liquid stable format for convenience and ease-of-use. The controls are supplied with instrument and method specific assigned values.



Lyophilised



Liquid Frozen



Liquid Stable



100% Human Serum



Assayed Target Values Provided

### Blood Gas & Electrolyte Controls



- Liquid stable controls with a shelf life of 1 year when stored, unopened at 2-8 °C.
- Values are assigned by European reference laboratories.
- Store at 2-8 °C. Do not freeze or expose to temperatures greater than 30 °C.
- When opened, analyse immediately for Blood Gas parameters and use within 1 hour for electrolytes.

#### Analytes

Calcium Chloride Glucose	Lactate Potassium Sodium	pCO <sub>2</sub> pH pO <sub>2</sub>	Total CO <sub>2</sub>
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Description	Size	Cat No.	Type
Blood Gas & Electrolyte Control (Level 1)	1 x 2 ml	BXC0108A	LS
Blood Gas & Electrolyte Control (Level 1)	10 x 2 ml	BXC0108D	LS
Blood Gas & Electrolyte Control (Level 2)	1 x 2 ml	BXC0108B	LS
Blood Gas & Electrolyte Control (Level 2)	10 x 2 ml	BXC0108E	LS
Blood Gas & Electrolyte Control (Level 3)	1 x 2 ml	BXC0108C	LS
Blood Gas & Electrolyte Control (Level 3)	10 x 2 ml	BXC0108F	LS
Blood Gas & Electrolyte Control (Tri-Level)	30 x 2 ml	BXC0108G	LS

### Electrolyte Controls



- Liquid stable format with a shelf life of 2 years when stored at 2-8 °C.
- Values are assigned by European reference Laboratories.
- Store at 2-8 °C. Do not freeze or expose to temperatures greater than 30 °C.
- When opened the analytes are stable for a period of 15 days when stored at 2-8 °C.

#### Analytes

Chloride (ISE & Colorimetry)	Potassium (ISE & Colorimetry)	pH	Sodium (ISE & Colorimetry)
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Description	Details	Size	Cat No.	Type
Electrolytes Calibrator		5 x 5 ml	BXC0140A	LS
Electrolytes Control (Level 1)	Low (Na, K, Cl)	5 x 5 ml	BXC0143A	LS
Electrolytes Control (Level 2)	Normal (Na, K, Cl)	5 x 5 ml	BXC0144A	LS
Electrolytes Control (Level 3)	High (Na, K, Cl)	5 x 5 ml	BXC0145A	LS