Applications

Emergency
Monitoring electrolytes in critically ill patients due to poisoning, coma and convulsions

ICU
Monitoring electrolytes in critically ill patients

Surgery
Monitoring electrolytes during operation

Anesthesiology
Monitoring electrolytes during surgical anesthesia (preoperative, intraoperative and postoperative)

Dermatology
Monitoring electrolytes in patients with severe trauma, burn and scald

Gastroenterology
Monitoring electrolytes in patients with diarrhea and vomiting accompanied by coma

Nephrology
Monitoring electrolytes for patients in dialysis ward

General Physicians' office
Primary Medical
Electrolytes test

How to use



1. Scan the barcode on the cartridge pouch and take out the cartridge.



2. Fill the inlet with sample to the fill mark and slide the cap to seal the inlet.



3. Insert the cartridge into the analyzer until it clicks. Wait for the results.

For in vitro diagnosis only.
For the intended use of the product, precautions and contraindications, please refer to the instructions.
This material is intended for academic exchange and training of professionals only.

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Eaglenos Sciences Inc.

Eaglenos

Smart Healthcare Technologies

Electrolyte Analyzer



K^+ iMg^{2+} Na^+ Cl^- iCa^{2+}

- **"5-in-1" cartridge**
- **Including iMg^{2+}**
- **Maintenance free**

Electrolyte Analyzer

Advanced Features

- Concurrent testing K^+, Na^+, Cl^-, iCa^{2+}, and iMg^{2+}.
- Ionized Magnesium (iMg^{2+}) testing.
- Dry electrochemical technology with a patented pellet structure design.
- Exclusive molecular probes and algorithms.

Efficiency and Accuracy

- Swift calibration and testing in under 5 minutes.
- Built-in calibration solution.

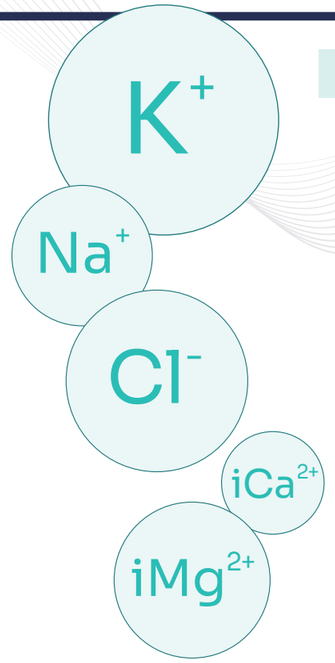
User-friendly Experience

- Whole blood testing for instant results.
- Minimum sample volume requirement (100 µL).
- No fluidic pathways for hassle-free operation and minimal maintenance.
- Room temperature stored test cartridges (up to 8 months).

Portability and Data Storage

- Compact and portable design for on-the-go use.
- Over 50 consecutive tests on a single charge with the built-in lithium battery.
- Built-in barcode scanner and thermal printer.
- Stores over 99,999 records.
- Connection to LIS/HIS.





Test Parameters and Clinical Significance

Potassium (K^+): Minor fluctuations in extracellular K^+ concentration can lead to significant alterations in the transmembrane potential gradient, consequently impacting the function of neuromuscular and cardiac tissues.

Sodium (Na^+): Na^+ is the principal determinant of water distribution between the intracellular and extracellular compartments, hence Na^+ is essential for the maintenance of blood volume and thereby blood pressure.

Chloride (Cl^-): Cl^- is essential for the maintenance of normal plasma osmolarity.

Ionized Calcium (iCa^{2+}): The maintenance of iCa^{2+} is critical for the structural integrity of bones as well as hemostasis, cardiac and skeletal muscle cell contraction, neuromuscular transmission and the proper function of many hormones.

Ionized magnesium (iMg^{2+}): iMg^{2+} is associated with the stabilization of intracellular potassium, which ensures normal functionality of the myocardium, nerves and muscles.

Performance

Parameter	Accuracy	Precision	Stability	Test Range (mmol/L)
K^+	±3.0%	≤1.5%	≤2.0%	1.0-15.0
Na^+	±3.0%	≤1.5%	≤2.0%	100-200
Cl^-	±3.0%	≤1.5%	≤2.0%	65-160
iCa^{2+}	±5.0% ±0.05% mmol/L	≤1.5%	≤3.0%	0.25-4.00
iMg^{2+}	±5.0% ±0.05% mmol/L	≤3.0%	≤3.0%	0.2-1.5

*Benchmarking its performance against a gold standard wet bench analyzer



Accuracy Validation

The accuracy of Eaglenos Electrolyte Analyzer has been validated by linear regression analysis showing a strong positive, linear relationship between two analyzers ($R^2 > 0.94$ for all parameters), demonstrating the accuracy of our analyzer for K^+, Na^+, Cl^-, iCa^{2+} and iMg^{2+} measurements.

Correlation with Benchtop Analyzer

