

AUTOMATIC SINGLE-ION ANALYZER



AMIC7 SINGLE-ION AUTOMATIC PROFESIONAL ION CONTROL

INLINE MEASUREMENT
AUTO-CALIBRATION
SELF-CLEANING
REPRODUCIBILITY
REPEATABILITY
MONITORING
REAL-TIME DATA
PLUG & PLAY

AUTOMATIC ION CONTROL SERIES

NITRATE ISE SERIE

- Studies of water quality
- Analysis of soil nutrient extracts
- Soil and plant tissue analysis
- Food analysis
- Monitoring of discharged water from factories
- Wastewater monitoring
- Environmental monitoring
- Groundwater and surface water monitoring



ISE range

1 > 10.000 mg/L

pH range

2 > 11

Main interferences

$K(NO_3^-, Br^-) = 10^{-1.5}$, $K(NO_3^-, NO_2^-) = 10^{-1.7}$
 $K(NO_3^-, OH^-) = 10^{-1.8}$, $K(NO_3^-, CH_3COO^-) = 10^{-2.2}$

AMMONIUM ISE SERIE

- Environmental, agricultural and industrial monitoring
- Measurement in drinking water, tap and sewage
- Aeration tanks
- Ammonium decomposition
- Optimization of the treatment process
- Ammonium determination
- Direct measurement
- Compensation of cross sensitivities



ISE range

1 > 10.000 mg/L

pH range

4 > 8.5

Main interferences

$K(NH_4^+, K^+) = 10^{-1.0}$, $K(NH_4^+ + Ca^{2+}) = 10^{-4.0}$
 $K(NH_4^+ + Na^+) = 10^{-2.9}$, $K(NH_4^+, Mg^{2+}) = 10^{-3.2}$

SODIUM ISE SERIE

- Sewage
- Drinking water
- Water quality
- Environmental control
- Mining and processing of petroleum
- Inspection of incoming materials
- Quality control
- Effluent control



ISE range

1 > 10.000 mg/L

pH range

1 > 9

Main interferences

$K(Na^+, Li^+) = 10^{-3.2}$, $K(Na^+, K^+) = 10^{-2.5}$
 $K(Na^+, Ca^{2+}) = 10^{-4.0}$

AUTOMATIC ION CONTROL SERIES

CALCIUM ISE SERIE

- Systems of softening of water
- Drinking water and mineral waters
- Analysis of soils and nutrients
- Blood electrolytes/ clinical analysis
- Environmental control
- Inspection of incoming materials
- Quality control
- Effluent control



ISE range

1 > 10.000 mg/L

pH range

3,5 > 8

Main interferences

$KCa^{2+} H^+ = 10^{-2.9} / KCa^{2+} Na^+ = 10^{-3.7}$
 $KCa^{2+} K^+ = 10^{-3.6} / KCa^{2+} NH_4^+ = 10^{-3.0}$

POTASSIUM ISE SERIE

- Agriculture
- Analysis of soils and nutrients
- Environmental control
- Inspection of incoming materials
- Quality control
- Effluent control
- Ground detection
- Precision farming



ISE range

1 > 10.000 mg/L

pH range

1 > 9

Main interferences

$K (K^+, NH_4^+) = 10^{-2.1} ; K (K^+, Li^+) = 10^{-4.3}$
 $K (K^+, Na^+) = 10^{-4.6} K (K^+, Ca^{2+}) = 10^{-3.9}$

BROMIDE ISE SERIE

- Pharmaceutical industry
- Wastewater control
- Water quality control
- Analysis of food and beverages
- Environmental control
- Inspection of incoming materials
- Quality control
- Effluent control



ISE range

1 > 10.000 mg/L

pH range

1 > 12

Main interferences

Trace of Ag, S o Hg. To avoid I- and CN- At less degree OH- ($10^{-4.5}$) and Cl- ($10^{-2.7}$)

AUTOMATIC ION CONTROL SERIES

CHLORIDE ISE SERIE

- Determine salinity and concentration levels in ocean salt water
- Aquariums
- Salt in food samples
- Clinical analysis
- Plant tissue
- Analysis of food and beverages
- Agriculture
- Mining and processing of petroleum



ISE range

1 > 10.000 mg/L

pH range

2 > 12

Main interferences

Iodide ions irreversibly damage the membrane. Will not give reliable readings if more than a trace of Ag or S ions are present in the solution.

PERCHLORATE ISE SERIE

- Analysis of samples in the field
- Analysis of samples in laboratory
- Standard extraction of DNA
- Support for hybridization reactions in molecular biology
- Oxidation of metal alloys
- Herbicide production



ISE range

1 > 10.000 mg/L

pH range

1 > 11

Main interferences

K (ClO₄⁻, SCN⁻)= 10^{-1.7}, K (ClO₄⁻, I⁻)= 10^{-1.7}
K (ClO₄⁻, NO₃⁻)= 10^{-1.7}

MAGNESSIUM ISE SERIE

- Mining
- Drinking water
- Mineral water and seawater
- Nutrient meter in El Salvador
- Water hardness
- Mineral deposits
- Technical and medical applications
- drilling sludge



ISE range

1 > 10.000 mg/L

pH range

3 > 8,5

Main interferences

K (Mg²⁺, K⁺)=10^{-3.6} ; K (Mg²⁺, Ca²⁺)= 10^{-1.0}

AUTOMATIC ION CONTROL SERIES

I IODIDE ISE SERIE

- Plants
- Pharmaceutical uses
- Environmental control
- Analysis of food and beverages
- Agriculture
- Mining and processing of petroleum
- Clinical analysis
- Food emulsions such as salt or milk



ISE range

1 > 10.000 mg/L

pH range

2 > 12

Main interferences

Trace of Ag, S o Hg. To avoid CN-
In less significance Br 10^{-3,4} y Cl-10⁻⁶

Li LITHIUM ISE SERIE

- Batteries
- Ceramic glass



ISE range

1 > 10.000 mg/L

pH range

2 > 12

Main interferences

K (Li+, Na+)=10^{-2,3} / K(Li+, K+)=10^{-2,4} K
(Li+, H+)= 10^{-3,0}

NTsensors
PROFESSIONAL
ISE
SOLUTIONS

MEDICIÓN EN LÍNEA
AUTOCALIBRACIÓN
AUTOLIMPIEZA
REPRODUCIBILIDAD
REPETIBILIDAD
MONITOREO
DATOS EN TIEMPO REAL
PLUG & PLAY

NT Sensors

AUTOMATIC MULTI ION ANALYZER

MAIN FEATURES

AMIC7 Single Ion

Features	Unique parameter - 1 ION
Output signals	Digital: USB / UART Analog: 4-20mA
Automatic operations	Calibration, measurement and cleaning
Maximum pressure	1 bar
Connections tthe sample	¼ and ½ Inch
Sample temperature	10 - 35 °C
Sample points	1
Frequency of sampling (min)	1 sample/ 24h
Frequency of sampling (Max)	48 sample s/ 24h
Power supply	85V AC > 240V AC
Consumption	12V 2A DC
Type of measurement	Electrochemical measurement
Electrodes available	Ca2+ Cl- K+ Na+ NH4+ NO3- Mg pH
Volume min. of sample	~100mL
Output measures	mg/L - ppm
Measuring range	1 a 10.000 mg/L
Technique	Ion selective electrodes
Dimensions	300 x 400 x 180 mm
Degree of protection	IP66

AMIC7 AUTOMATIC PROFESIONAL ION CONTROL

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