TECHNICAL CHARACTERISTISCS

- Response time: < 120 s
- Working Temperature: 5-50ºC
- Minimum required volume : 0.5 mL
- ISAB: No needed*
- Specifications:

	Mg^{2+}
Slope (mV/dec)	24 ± 5
Linear range (mg/L)	2.4 to 2400
Linear range (mol/L)	$1x10^{-4}$ to 0,1
pH range	3 to 8.5
Main interfereces (log Kij)	K^{+}(-3.6)
	Ca^{2+} (-1.0)

ADDITIONAL EQUIPMENT

- NT ION METER or an equivalent meter: pH/mV-meter with resolution of 0.1mV.
- Reference electrode (Code: M*RX11*) or an equivalent.
- Flasks and pipettes.

REAGENTS

- Deionized water, to prepare solutions and rinse the probe.
- Standard and conditioning solutions of the primary ion to be determined.

*For highly accurate measurements, when the uncertainty required must be very low, we recommended the use of ISAB.

PREPARATION AND USE OF CNT ISE SINGLE

Before using the CNT ISE SINGLE, it is recommended to read the instructions of your meter.

Condition the CNT ISE in a solution of the target ion of 1000ppm at least for 30 minutes[1] and then 10 minutes at 100ppm. For measurements at low concentrations (<100ppm), condition the CNT ISE in a solution of 100ppm at least for 30 minutes.

(1) If the electrode is new or has been a week without use, conditioning time is recommended to be 2 hours in a 1000ppm solution. If the electrode has been prolonged time without use or has been in contact with interference containing samples, is recommended an overnight conditioning process in 2400ppm solution or until stable potential reading.

1. Plug the BNC terminal of the CNT ISE to the meter.
2. Remove the protection cap from the sensing area.
3. Calibrate the electrode.[2,3]

(2)Regarding the complexity of the sample matrix and some different factors, the analytical procedure could be direct calibration or different analytical techniques, such as the standard addition, etc.

3) To calibrate the electrode must have a reference electrode connected to the meter.

4. Rinse with DI water and dry the outer body with a clean tissue.
5. Measure the sample.
6. Rinse with DI water and dry the outer body of the probe between each sample measure.
7. Keep dry and clean with the protective cap.

✓ *Presence of solid particles in suspension and turbid solutions do not affect to the overall performance of the electrode.*

RECOMENDATIONS

✓ Keep constant the same conditions of temperature, stirring, both in samples and standards.

✓ Follow the instructions for better conservation of the electrode.

✓ Great care has to be taken to do not damage the tip. The electrode can be irreversibly damaged if this part is hit or grated.

GUARANTY

Electrodes are guaranteed of any manufacturing defect.

NT Sensors will replace without additional cost the Electrodes which, after being revised by its technical post-service have been considered as “defect from origin”.

The Guaranty of the electrodes does not cover the defects caused by:

-inadequate use,
-the usual aging of the electrode,
-the logic premature aging caused by certain samples,
-the damaged caused by accident.

The guaranty is valid through a period of 6 months.

For more information visit NT Sensors user guide on –line.

CNT_ISE SINGLE:
ION SELECTIVE ELECTRODE

CNT_ISE S024

Electrode to determine ions (Mg^{2+}) in aqueous solutions

Simply and fast

Minimum volume consumption of reagents and samples

Does not require any special maintenance

Nsensors
Nanotechnology Sensors

Magnesium Ions Electrode (Mg^{2+})

CNT_ISE S024

MAINTENANCE AND STORAGE

- ✓ The CNT ISE SINGLE does not require maintenance due to not contain internal liquid solutions.
- ✓ Place the protective cap when not use the electrode. Do not leave the sensing area in contact with air/atmosphere for longer time than necessary.
- ✓ Storage at temperatures below 50ºC.
- ✓ Storage in a dry, cool place avoiding the direct contact with the sunlight.

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