

MICROMAC NICKEL

ON LINE ANALYZER FOR
NICKEL MONITORING IN WATER

MICROMAC NICKEL is a microprocessor controlled On Line analyzer specifically designed for automatic Nickel monitoring on several types of water matrices.

✓ **ROBUST AND RELIABLE**

Designed for industrial and Environmental On Line applications ensures the highest level of robustness in the electronics, mechanics and hydraulics components. Complete separation between electronics and hydraulics plus a simple and robust LFA* hydraulics allows easy maintenance and long terms reliable operations.

**LFA: Loop Flow Analysis patent pending*

✓ **EASY TO INSTALL**

The analyzer is delivered after a long and successful series of factory tests ready for installation and setup; it is provided with complete set of spares for start up. To start monitoring is enough to connect reagents, sample line, waste line and power supply.

✓ **AUTOMATIC CALIBRATION**

When the Calibration Time interval expires the analyzer performs a Calibration Cycle, storing and checking the new calibrant O. D. If new O.D. exceeds selected limits, an alarm contacts is closed.

✓ **SAMPLE DILUTION**

Sample can be analyzed as it is or after automatic dilution. Automatic dilution is factory adjusted for high range applications.

✓ **MEASURING INTERVAL**

User selectable; between two measurements the analyzer remains in stand by mode, without reagents consumption.

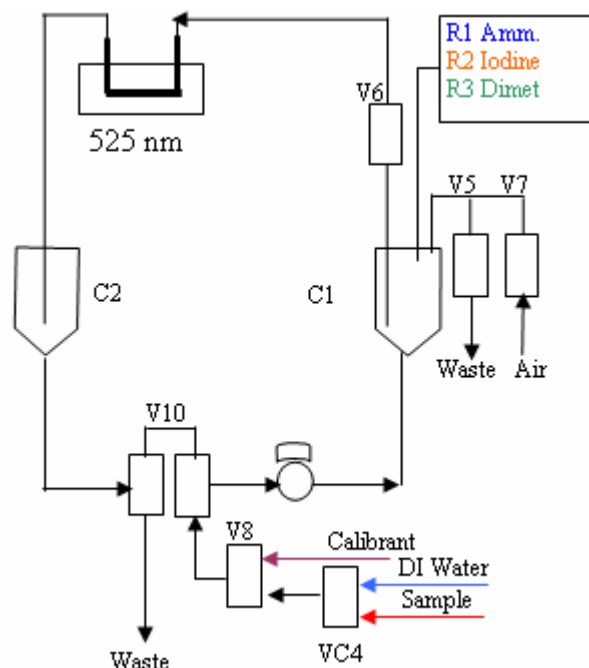
✓ **FEATURES AND BENEFITS**

- Fully automatic operation
- Long autonomy; low maintenance, low operating cost
- Low reagents consumption; short preparation time; low disposable costs
- Easy operation; plug in analyzer, no special training is required
- Electronics and hydraulics completely separated
- Serial interface for local o remote PC connection (option)

Nickel measuring principle and hydraulic diagram

In this automated method the sample, after proper filtration, is mixed with ammonium citrate to eliminate iron interference and then reacts with iodine in order to convert any nickel present to the nickelic state. To complete the oxidation, both excess iodine and alkaline medium are required. These conditions also tend to increase the stability of the color formed, when dimethylglyoxime is added to the oxidized sample.

The developed reddish color is measured at 525 nm. The sample concentration is calculated against the calibration factor stored in the analyzer.



Technical Specifications

MEASURING PRINCIPLE: Colorimetric, dimethylglyoxime

COLORIMETER: dual beam, silicon detector

MEASUREMENT TYPE: cyclic

MEASURING INTERVAL: programmable

MEASURING TIME: About 8-10 minutes, depending on the range

MEASURING RANGE: 0 – 0.5 up to 10 ppm Ni; other ranges available on request

DETECTION LIMIT: typically better 2% of the full scale, calculated as for EPA p. 136 appendix B

REPEATABILITY: better than 2%

OUTPUT SIGNAL: 4-20 mA

INPUT SIGNALS: n. 1 Analysis, n. 1 calibration; digital contacts

ALARMS: n. 1 High Limit, n. 1 General, n. 1 Calibration; potential free contacts

SAMPLE AND WASTE DELIVERY: pressure free;

SAMPLE TEMPERATURE: 10 °C - 30 °C

REAGENTS REPLACEMENT: 3/4 weeks depending on the operating temperature

PROTECTION: IP55

HARDWARE: PC104 industrial standard, Integrated keyboard and graphics display, RS232 option

POWER SUPPLY: 12 V DC external power supply included; 4W Standby; 10 W (mean) analysis

WEIGHT: 33 Kg without reagents;

DIMENSION: 800x450x300 mm (hwxwd)

Subject to change without notice



SYSTEA S.p.A.

HEADQUARTER AND MANUFACTURING FACILITY:

VIA PADUNI, 2A - 03012 ANAGNI (FR) ITALY

TEL: +39 0775-776058 FAX +39 0775-772204

A member of Consorzio NDI

Web Site: <http://www.systea.it> Email: info@systea.it

Document ID: MicC_Nickel-02-E