

DR10 EASY DIET™

THE AUTOMATIC LABORATORY ANALYZER THAT MEASURES ALL TYPES OF DIET BEVERAGES
IN THE SOFT DRINKS INDUSTRY.

Accurate and simple quality control for sugar-free drinks

The DR10 **Easy-Diet™** laboratory analyzer is an innovative automatic system specifically created by Maselli for measuring the concentration of diet or sugar-free carbonated soft drinks, flavored water and energy drinks. A single analyzer which for these measurements simultaneously replaces: HPLC units, spectrophotometers, titrators and other manual systems and methods. The DR10 indicates the concentration in %STANDARD, in equivalent Total Acidity, Brix and RD (refractometric degree).

Maselli's **Easy-Diet™** has brought about a revolution in the measurement of diet drinks in the laboratory, bringing all of the following characteristics together for the very first time: **speed, simplicity, safety and accuracy.**

Measurement is usually carried out on the sampled product in less than **5 minutes; 3 times faster** than any traditional system currently being used in the laboratory.

The fact that the system is completely automated means it is extremely simple and easy to use; to analyze a sample simply pour it into the beaker and press the start button. No expert operators are required as no specific analysis methods or sample preparation (conditioning) procedures need to be followed; this also means a total reduction in chemical hazards which may be associated with the use of special reagents.

The presence of a touch-screen display helps the operator to select the analysis procedure.

The analyzer is supplied as an integrated unit, with a sleek, practical and sturdy design. Inside the unit a PC embedded with a Microsoft® Windows® Operating System manages the user interface and allows the unit to be connected to the company's Ethernet network for exporting analysis data.

This project was developed by combining the most up-to-date technology with the tried and tested experience gained by Maselli over the years. It aims to revolutionize the philosophy of diet drink measurements in the laboratory.



- **Fast:** only 5 minutes to get a measurement.
- **Easy-to-use:** no need of skilled operators. Push a button and go.
- **Automatic:** no need of sample preparation avoiding any risk of human error.
- **Safe:** no need of chemical reagents.
- **Accurate:** $\pm 0.5\%$ of the target.

TECHNICAL CHARACTERISTICS

Measurement limits:

0...20 RD

Accuracy:

0.5% of the measurement,
max. accuracy 0.00125 RD

Measurement scales displayed:

- %STANDARD
- Equivalent "Total Acidity"
- Brix
- RD (Refractometric Degree).

Product temperature:

5... 25 °C (41...77 °F)

Analysis time:

5 minutes for a complete cycle.

Quantity of analyzed sample:

Product: ~100 cc for each test.

Water: ~50 cc for each test.

Power supply

Electrical:

AC 100... 240V $\pm 10\%$ - 47... 63Hz 150VA.

Connection by means of cable with SP7748

(EEC-7) 10A/250V plug for EC or P620

15A/125V plug for USA versions.

Interfaces

USB:

Type A for external connection.

Ethernet:

RJ-45 for external connection.

PS/2:

N°1 Mini-DIN 6 P.F. for external keyboard and mouse connection.

CONSTRUCTION CHARACTERISTICS

Execution:

AISI 304 STAINLESS STEEL monobloc enclosure.

Measurement section:

- Differential measurement prism in "N-BK10"
- Electronically compensated "LED" light sources.
- "CCD" sensitive element.
- Transfer of the process water and product from beakers to the collection container by means of peristaltic pumps.
- Automatic product heating and degassing.
- Automatic calibration of zero setting.
- Temperature expressed in °C or °F.

Electronic section:

- Microprocessor controlled industrial "CPU" Monoboard.
- Graphic display of the measurement, software menus and error messages by means of 800 x 600 10.4" colour "LCD" touch screen and touch pen.
- 2 GB Flash Memory.

Electrical section:

- Switching power supply unit.
- 8 relay assembled board for actuators control.

Dimensions:

365 (w) x 506 (h) x 419 (d)

Weight:

~ 26kg without supplied accessories.

~ 27kg including the supplied accessories.

Accessories:

- N°1 600 ml Plexiglass Beaker for process water
- N°1 600 ml Plexiglass Beaker for product (approx. 100 ml for the measurement).
- N°1 Plastic container for collection of discharged fluids.



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