

**ANALYSIS UNIT model LP10 (MD01S + MD05 + MP05)**
**OPERATING SPECIFICATIONS**

<b>Application:</b>	Measurement of sugar-sweetened or diet carbonated soft drinks, alcoholic drinks, beer and mineral water in the laboratory
<b>Type of measurement:</b>	<p>Refractometric measurement of the Refractive Index and display in the selected "BRX REGULAR", "BRX DIET" or "% STANDARD" scale of the relative concentration with temperature compensation already applied.</p> <p>Calculation of the "% inverted sugar" in sugar-sweetened beverages.</p> <p>Prediction of the Brix value in beverages at total inversion (Brix with totally inverted sugar).</p> <p>Calculation of the alcohol content, expressed in ALC/V, for sugar-sweetened beverages containing alcohol.</p> <p>Measurement of the concentration of dissolved CO<sub>2</sub> based on the absorption of IR rays and transmission of the relative value. The technique used is known as "Attenuated Total Reflectance" (ATR): a collimated beam of infrared radiation passes through a prism in contact with the liquid, undergoes a number of internal reflections and is then collected by a suitably filtered detector as it exits the prism. The relationship between the exiting intensity and the entering intensity is proportional to the dissolved CO<sub>2</sub> concentration.</p> <p>Calculation of the Alcohol content expressed in w/w, the value of the Real Extracts and the Original Extracts.</p>
<b>Concentration measurement</b>	<p><b>Measurement limits:</b></p> <p>0...18.5 Brix for "REGULAR" scale.</p> <p>0...2000 mBrix for "DIET" scale.</p> <p>0...200% for "% STANDARD" display scale.</p> <p><b>Accuracy:</b></p> <p>0.1% of the range, maximum accuracy <math>\pm 0.01</math> Brix with <math>\pm 10</math> °C (<math>\pm 18</math> °F) variation for "REGULAR" scale</p> <p>0.15% of the range, maximum accuracy <math>\pm 0,003</math> Brix with <math>\pm 2.5</math> °C (<math>\pm 4.5</math> °F) variation for "DIET" scale.</p> <p><b>Measurement scale:</b></p> <p>"BRX", "DIET" or "% STANDARD"; the "BRX" scale is based on the nD/Bx ICUMSA conversion table (1974).</p> <p><b>Response time:</b></p> <p>&lt;1.0 seconds</p>
<b>Response time to temperature variations:</b>	2' / 10 °C (18 °F)
<b>CO<sub>2</sub> Measurement</b>	<p><b>Measurement limits:</b></p> <p>0...6 V/V (0...12 g/l)</p> <p><b>Accuracy:</b></p> <p><math>\pm 0.025</math> V/V (<math>\pm 0.05</math> g/l)</p> <p><b>Measurement scales:</b></p> <p>"V/V (Vol/Vol)" or "g/l"</p> <p><b>Measurement interval:</b></p> <p>3 seconds</p>
<b>Alcohol measurement</b>	<p><b>Measurement limits:</b></p> <p>0...13% w/w (0...16.5% V/V)</p> <p><b>Accuracy:</b></p> <p><math>\pm 0.02</math> w/w, with CO<sub>2</sub> compensation and specific product calibrations</p>
<b>Product temperature during measuring:</b>	+5...+40 °C (+41...+104 °F) with automatic sugar concentration compensation by means of AISI 316 stainless steel 3/8" Pt1000 Temperature Probe, Class "A" according to IEC751.

**GENERAL SPECIFICATIONS**

<b>Power supplies</b>	<p>AC 100...240V, 1.5A, 50/60Hz</p> <p>DC24V 50W - Optional transformer, Connection via cable with EU (Schuko) plug and specific universal adapter</p>
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<b>Interfaces</b>	<p><b>Ethernet:</b> For connection to Personal Computer or Printer; connection by means of RJ45 GbE connector</p> <p><b>USB#1:</b> For connection with mouse, keypad or USB port, connection by means of USB Type-A 2.0 female connector</p> <p><b>USB#2:</b> For connection with mouse, keypad or USB port, connection by means of USB Type-A 2.0 female connector</p> <p><b>USB#3 e 4:</b> For connection with SL01 and/or SL02 sampler</p>
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### CONSTRUCTION FEATURES

<b>Execution:</b>	The system is made up of: MP05 Multiparametric Receiver. Digital Refractometer, MD01S model. Digital Carbometric Unit, model: MD05.
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<b>Overall dimensions and weight:</b>	345 (b) x 250 (h) 520 (p) 20 kg
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#### MP05 MULTIPARAMETRICE RECEIVER

<b>Execution</b>	AISI 304 stainless steel casing
<b>Function:</b>	System management, data processing, operator interface, interfacing with additional elements outside the equipment
<b>Electronic section:</b>	PC Panel module. Indication of measurement and software menu by means of TFT LCD 6.5" 640x480 with "LCD Saving" function, resolution 640x480. 5-w Resistive type touchscreen, resolution 4096 x 4096. CPU Intel Celeron® N2807 1.58GHz 4.5W Dual Core onboard.

#### REFRACTOMETRIC UNIT MD01S

<b>Measurement section:</b>	Synthetic sapphire measurement prism. Electronically compensated LED light source. CCD sensitive element. "Pt1000" temperature sensor inside the appliance. INOX AISI 316 stainless steel analysis basin, with plastic cover. Ultrasound sensor for time of flight measurement required to calculate the speed of sound.
<b>Electronic section:</b>	Central "CPU" unit with microprocessor
<b>Materials in contact with the product:</b>	Pt1000 in AISI 316 stainless steel. Prism holder in AISI 316L stainless steel. O-rings and gaskets in VITON+KALREZ 6230 or EPDM. Synthetic sapphire measurement prism.
<b>Notes:</b>	The optical section of the equipment is dehumidified by means of a desiccant molecular sieve cartridge

#### MD05 CARBOMETRIC UNIT

<b>Measurement section:</b>	Synthetic sapphire measurement prism. "Pt1000" temperature sensor inside the appliance.
<b>Electronic section:</b>	Central "CPU" unit with microprocessor
<b>Materials in contact with the product:</b>	Prism holder in AISI 316L stainless steel. O-rings and gaskets in VITON+KALREZ 6230 or EPDM. Synthetic sapphire measurement prism.
<b>Notes:</b>	The optical section of the equipment is dehumidified by magnesium sulfate which has the sole function of absorbing humidity.

#### SCANNER

<b>Function:</b>	The wireless 2.4 GHz wireless barcode reader, with a fully-charged battery, can scan over 8000 barcodes
<b>Features</b>	<p><b>Battery capacity</b> 2600mAh</p> <p><b>Compatible barcodes:</b> Codabar, Code 11, Code 128, Code 39, Code 93, EAN-8, EAN-13, ISBN, ISSN, MSI, UPC-A, UPC-E, IATA 25, Industrial 25, Standard 25, Interleaved 25, Matrix 25, FedEx, USPS, VIN Chinese postal code</p>

**TECHNICAL-NORMATIVE SPECIFICATIONS**

<b>Environmental features</b>	<b>Temperature limits:</b> Environment: +10...+45 °C (50...113 °F) Storage: -20...+70 °C (-4...+158 °F) <b>Humidity limits:</b> Environment: 5%...95% (R.H. without condensate) storage: 5%...95% (R.H without condensate) <b>Altitude limits:</b> <2000 m a.s.l. <b>Degree of Protection:</b> Receiver: IP65 in accordance with EN60529 Analyzers with connectors or protections fitted: IP67 in accordance with EN60529
<b>Conformity to Directives:</b>	EMC: 2014/30/EU WEEE: 2012/19/EU CE marking of conformity to EU Directives