



## REF-113ATC, Hand Refractometer, 0-32% Brix/ATC

Designed to measure sugar content. Just a few sample drops are enough to determine the percentage of dissolved solid, according to the principle for which the refraction index of a solid dissolved is proportionate to its concentration. This is a simple and accurate method, extremely useful for controlling the quality of fruit, jam, vegetables, tomatoes, beet sugar, canned foods, etc., in the field or in the factory. This new revolutionary instrument allows to measure without problems due to temp. changes, eliminating the inconvenient of temperature compensation. until now indispensable for refractometric measuring operations.

Model	Range	Precision
REF-113ATC	0-32% Brix/ATC (10°C-30°C)	0.2%



## REF-104, Hand Refractometer, 28-62% Brix

Ideal for concentrated fruit juices and canned foods that use sugar infusion, and half-scale concentration samples. In the bright/blue field, the boundary line is clearly visible with good contrast.

Model	Range	Precision
REF-104	28-62% Brix/ATC	0.2%



## REF-105, Hand Refractometer, 45-82% Brix

Standard refractometer used to measure the sugar content of concentrated fruit juices, condensed milk, liquid sugar and marmalade, and for very dense products, jams, syrups, concentrated substances, glucose, treacle.

Model	Range	Precision
REF-105	45-82% Brix	0.5%



## REF-116, Hand Refractometer, 58-90% Brix

Designed to measure the common indexes of HONEY: high sugar content, Baume and water. It determines the percentage of water in the honey by measuring the refraction index. It permits the determination of the collecting period, conservation and commercial value. Useful for preparing the spring mixtures of the bees.

Model	Range	Precision
REF-116	58-90% Brix	1% Brix
	38°Bé-43°Bé	0.5°Bé
	12-27% water	1% water



## REF-107, Hand Refractometer, 0-90% Brix

It precisely determines the sugar content of each solution; suitable for all products, both diluted & concentrated. It adopts a light transmission system to increase the contrast of the boundary line in the field of vision.

The Amici prism, inside situated, has been made to eliminate color, so as to obtain a clear boundary line in the field of vision. Thanks to the special thermometer with which it is equipped, the measurements can be easily corrected by the relative tables.

Model	Water percentage	Precision
REF-107	0-90% Brix	0.2%
	3 Ranges: 0-42%; 42-71%; 71-90%	



## REF-117, Hand Refractometer, 12-27% Brix

Refractometer for honey, for quickly determination of the percentage of water in the honey and relevant Baume degree. Manual temperature compensation between 20°C and 40°C.

Model	Water percentage	Precision
REF-117	12-27%	0.2%
	Baumé range	
	38°Bé-43°Bé	1°

# REFRACTOMETERS Hand



## REF-108, Hand Refractometer, 0-80% Brix

Universal broad-scale refractometer, able to precisely determine the sugar content of all kinds of products. Selnable scales between 0 and 80° Brix.

Model	Range	Precision
REF-108	0-80% Brix	1%



## REF-111, Hand Refractometer, 0-10% Brix

The REF-111 model features an enlarged Brix scale making possible high-precision measurements. It can be used to measure the Brix degree in fruit juices, emulsion oils, lubricating oils and all low-concentration substances, with Brix degree of 10% or lower.

Model	Range	Precision
REF-111	0-10% Brix	0.1%



## REF-112, Hand Refractometer, 0-18% Brix

The model with high-resolution Brix scale has been developed for low concentrations. The scale can measure the Brix degree in fruit juices, soft drinks, must wine and various types of drinks, lubricating oils, emulsion oils, tomato, etc.

Model	Range	Precision
REF-112	0-18% Brix	0.1%



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Model	Range	Precision
REF-113	0-32% Brix	0.2%



## REF-212, Hand Refractometer, 0-28% Brix Salinity

Refractometer able to determine the percentage of sodium chloride in sea water and in prepared-food solutions. with salt concentration up to 28%. meaning 28g of salt in 100g of solution. Suitable for controlling refrigerating brines. for food treatment liquids used in the processing industry. for brackish and sea water. Instrument calibrated to the refraction index of sodium chloride.

Model	Range	Precision
REF-212	0-28% Brix salinity	0.2%



## REF-211, Hand Refractometer, 0-100‰ Brix Salinity

It measures low-concentration salt content. It adopts scale with unit of salinity per thousand (‰). The refractometer is easy to use and quickly provides the direct measurement of saline density and the specific weight of sea water.

Model	Range	Precision
REF-211	0-100‰	1‰
	1000-1070 sg	0.001 sg



### REF-311, Hand Refractometer, 0-12g/dl Proteins & Urine

This high-precision and widely-used model has been designed to quickly determine the proteins in blood serum & the specific weight of urine; indispensable for all chemical-clinical test laboratories.

Model	Range	Precision
REF-311	0-12g/dl	0.2g/dl
	1000-1040 sg	0.002 sg



### REF-312, Hand Refractometer, 0-12g/dl Proteins & Urine

Widely used in chemical-clinical test laboratories to determine the proteins in blood serum and the specific weight of urine.

The instrument also features refraction index scale (Nd), to determine the concentration of test reagent solutions, and calibration line (Wt) for instrument control.

Model	Range	Precision
REF-312	0-12g/dl	0.2g/dl
	1000-1050 sg	0.002 sg
	1.3330-13600 RI	0.0005 RI



### REF-414, Hand Refractometer, Measuring The Freezing Point

It permits measuring the freezing point of glycol ethylene and propylene solutions. Especially suitable for controlling lead battery charges & concentration of heat exchange liquid in cooling systems.

Model	Range	Precision
REF-414	0°C/-50°C	5°C
	1.15-1.30 sg	0.01 sg



### REF-513, Hand Refractometer, Alcohol

It permits measuring the approximate value of the amount of alcohol in aqueous solutions and the sugar content of grape juice.

The scale directly shows measurement results.

Model	Range	Precision
REF-513	0-25%	0.2%



### REF-711, Hand Refractometer, 0-26% Babo

Manual instrument indispensable for all grape growers and wine-making industries. It features 3 measurement scales (Brix, Babo, Oechsle), for the quick sight determination of the sugar content of grapes & musts.

Model	Range	Precision
REF-711	0-26% Babo	0.2%
	0-140 °Oechsle	1°
	0-32% Brix/ATC	0.2%



### REF-601A, Hand Refractometer, Gemology

Used to measure the refraction index in gemology. It features inner protection for the light, to obtain enough lighting for measuring, and polarizer filter.

Model	Range	Precision
REF-601A	1.30-1.81	0.01