

Analog refractometer

RF.6612 - RF.6614



Introduction

With your purchase of a Euromex hand refractometer you have chosen for a quality product. The Euromex hand refractometers are developed for use in laboratories and in the food industry. The maintenance requirement is limited when using the refractometer in a decent manner. This manual describes the construction of the refractometer, how to use the refractometer and maintenance of the refractometer

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General safety instructions

- This product is a high quality optical instrument. Delicate handling is required
- Impacts, even small ones, can affect the precision of the device
- Keep the device and its optics clean for maximum performance
- Precautions should be taken with the samples; substances under observation may be a risk to the health of humans and other living organisms or the environment



Construction of the refractometer

The names of the parts are listed below and are indicated in the picture on page 2:

A	Prism	C	Adjustment screw (underneath protective cap)
B	Cover	D	Adjustable eyepiece

Functions of the refractometer

The Euromex hand refractometers are widely used for measuring sugar concentrations. In the table below the different models are shown with their specific way of calibrating them

Model	Type	Range	Accuracy	Calibration
RF.6612	High contrast	0–12g/dl 1.000–1.050sg 1.3330–1.3600RI	0.2 0.002 0.0003	distilled water
RF.6614	High contrast	2–14g/dl 1.000–1.06sg (dog) 1.000–1.06sg (cat)	0.1 0.001 0.001	distilled water

Standard accessories

For all types: carrying case, screwdriver or allen key for scale adjustment, plastic pipette

Working with the refractometer

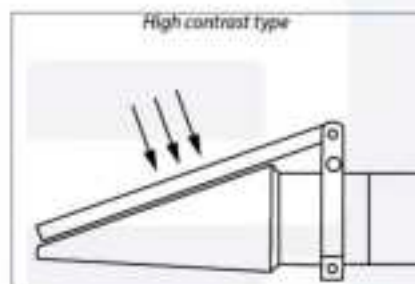
Prior to the actual measurement, the scale should be checked if it is correctly calibrated. If not, the scale should be adjusted by using the supplied tool to turn the scale adjustment screw (C). For this check distilled water is used

Calibrating using distilled water

Open the prism cover (B) and put a drop of distilled water on the surface of prism (A). Close the prism cover and look through the eyepiece (D). You will see the horizontal demarcation line as well as the scale in the field of view. If the scale is correctly calibrated the horizontal demarcation line should be exactly on the "W" line for RF.6612 and for RF.6614 the line should be at the 1.00 position of the scale. If not, one can adjust the scale with the screwdriver until the demarcation line is at the scale's correct position

Light entrance

Usually, daylight is good enough for all types of hand refractometers but, depending of the kind of sample, one can also direct the refractometer to a bright light source

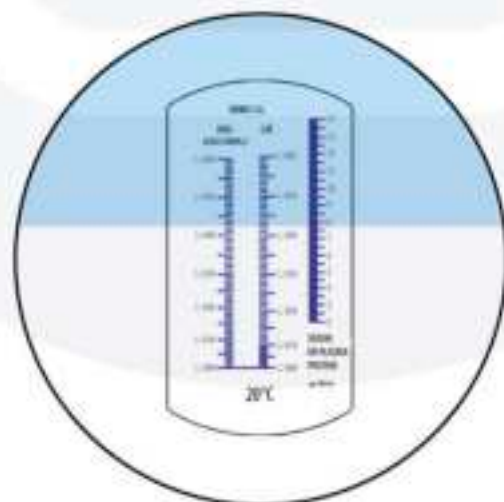


Actual measurement

After calibration wipe off the distilled water, or dispersion fluid so you will have a clean surface to start with. Put a few drops of the specimen on the prism. Close the prism cover and the percentage of the measurement can be read at the position of the demarcation line



RF.6612



RF.6614

Maintenance and cleaning

Always clean the prism of the refractometer after use with a soft tissue

Warning:

Cleaning cloths containing plastic fibres can damage the coating of the prism!