



VWR handrefractometers

REFRACTOMETERHand refractometers are optical instruments for measuring refractive index and associated scales.

The units have ATC (automatic temperature compensation) from 10 to 30 $^{\circ}$ C to a reference temperature of 20 $^{\circ}$ C.

Technical specifications

Measuring range ATC (up to 20 °C) Resolution Accuracy Cat. No. 0 -18% Brix Yes 0.1% ±0.1% 635-0630

VWR Refractometers



Q8**@**Oils

Measuring a sampleStep

• <u>Step 1</u>

Open the daylight plate and place 2-3 drops of distilled water or standard solution on the prism. Close the daylight plate. The sample or standard should form a tight film between prism and daylight plate with no air bubbles or dry spots. Wait at least 30 seconds before going to step 2, so that the sample has the same temperature as the prism surface (for good temperature compensation and accurate results).

• <u>Step 2</u>

Hold the daylight plate towards a light source and look into the ocular. You will see a circular field with scale in the middle (you may have to focus the ocular to see the scale). The upper part of the field should be blue and the lower part white. You can read the value exactly at the boundary between the blue and white field. Determine the concentration by multiplying this value by the refractometer factor of your soluble metalworking fluid (this factor is on the pds).

Measuring a sampleStep

We recommend an adjustment before the first measurement with distilled water. Look into the eyepiece and turn the calibration screw until the boundary between the upper blue field and the lower white field is exactly on the zero scale. Adjustment completed. Note: The adjustment must be carried out at 20 °C room temperature. Once set, shifts in ambient temperature within the range 10 to 30 °C are compensated to 20 °C by the ATC function.

Instrument check

Perform step 1 and step 2 using a standard with known value. The instrument must display the value of the standard at 20 °C within the accuracy of the main unit and the standard. If the instrument does not display the correct value, repeat the setting step.function.



For all other installation advice, please consult us.

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For further details, please scan the QR code or visit https://www.q8oils.com/

Maintenance

Accurate measurement depends on careful adjustment. Follow the instructions above. Prism and sample should be at the same temperature for accurate results.

To optimise service life, we recommend the following:

- Do not expose the instrument to harsh environments.
- Do not immerse the instrument in water. If the instrument becomes foggy, water has entered the device. We recommend replacing the instrument.
- Do not measure abrasive or corrosive chemicals with this instrument. These may damage the coating of the prism.
- Between each measurement, clean the instrument carefully and thoroughly with water and asoft cloth, otherwise subsequent measurements may be incorrect or the prism may bebe damaged.
- This is an optical instrument. It requires careful handling andstorage. A harsh environment or improper handling may damagecause damage to the optical components.