

**Clinical
Refractometer
300069**

Serum Protein 0~12g/dl
Specific Gravity 1.000~1.050
Refractive Index 1.333~1.360

Instruction Manual

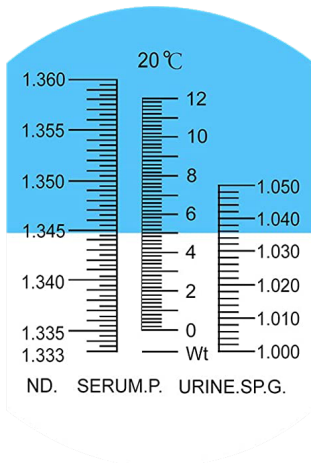
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Environmental Measurement Instruments

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DESCRIPTION



OPERATING PROCEDURE

1. With the **COVER PLATE** open, clean the **PRISM** with a soft cloth to avoid scratching the surface.
2. Aim the refractometer toward a light source and rotate the **EYEPIECE** to obtain the clearest focus.
3. Zero Point Calibration:
 - A. Open the **COVER PLATE**.
 - B. Apply a few drops of the included Distilled Water onto the **PRISM** platform.
 - C. Close the **COVER PLATE**.
 - D. Turn the **CALIBRATION SCREW** until the dark and light boundary line coincides with the bottom line of the scale.
4. Carefully dry the prism platform and **COVER PLATE**.
5. Place a few drops of the test solution on the prism and close the **COVER PLATE** so the solution spreads evenly on the prism.
6. Aim the front of the refractometer towards the light source and focus the eyepiece on the boundary line.
7. The boundary line indicates the v/v percentage of alcohol in the test sample at 20°C.
8. After use, clean the prism with distilled water and a cloth to remove any residue.
9. The temperature of the zero point calibration should be at the same temperature as the test solution. For variations in temperature the zero point should be adjusted once every 30 minutes.

PRECAUTIONS

Never submerge the unit, and do not let liquid seep into the unit's body. Clean the refractometer after each use with a soft cotton cloth. Do not scratch surface of the prism. Store in a dry, clean, and non-corrosive environment. Avoid strong impacts.

SPECIFICATIONS

Model	LH – Y12
Range	Serum Protein 0~12g/dl Specific Gravity 1.000~1.050 Refractive Index 1.333~1.360
Resolution	SP: 0.2 g/dl SG & RI: 0.005
Size	7 ¾" x 1 ½" (195mm x 40 mm)
Weight	8.3oz. (237 g.)
Accessories	Screwdriver, Carrying Case, Transfer Pipette, Manual.

WARRANTY

Sper Scientific warrants this product against defects in materials and workmanship for a period of **five (5) year** from the date of purchase, and agrees to repair or replace any defective unit without charge. If your model has since been discontinued, an equivalent Sper Scientific product will be substituted if available. This warranty does not cover probes, batteries, battery leakage, or damage resulting from accident, tampering, misuse, or abuse of the product. Opening the meter to expose its electronics will break the waterproof seal and void the warranty. To obtain warranty service, ship the unit postage prepaid to:

SPER SCIENTIFIC LTD.
8281 E. Evans Rd., Suite #103
Scottsdale, AZ 85260
(480) 948-4448

The defective unit must be accompanied by a description of the problem and your return address. Register your product online at www.sperwarranty.com within 10 days of purchase.