

Reichert AR200

Measuring Refractive Index

CAUTION: Do NOT use DMF, DMA, THF or acetone to clean prism.

Also, do NOT try to measure strong acids or strong bases.

Clean prism with methanol or isopropanol, followed by distilled water then blot dry with a soft tissue.

Calibration.

1. Turn on by pressing **CAL** button. Do not apply any sample yet. (Display will show *Apply sample and press READ*).
2. Press **CAL** button again (Display will show *Apply water*).
3. Apply ~3 drops of distilled water to completely cover prism and allow the temperature to equilibrate.
4. Press **CAL** button again and wait. (Display will show *Set point cal successful*) after a delay.

Sample Reading.

1. Clean and dry the prism.
2. Add enough sample to cover the prism surface and allow temperature to equilibrate.
3. Press the **READ** button and wait.
4. Display will show *nD* to four decimals and the temperature in °C to ±0.1 °C. Record both values.

Refractometer will shut down automatically after 30 seconds.

Correct the experimental reading for temperature using the following equation:

$$n_D^{20} = n_D^T + 0.00045(T - 20 \text{ } ^\circ\text{C})$$

where n_D^T is the experimental RI value measured at temperature, T.

