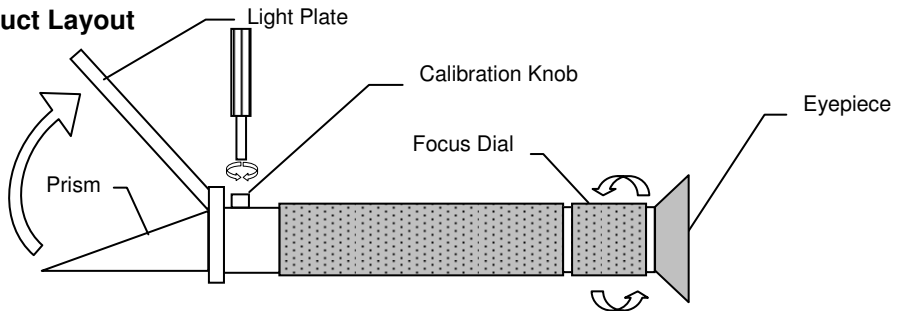


# Operation Manual for Hand-held Refractometer for Alcohol measurement

## Product Layout

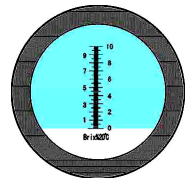


## Specification:

<b>Model:</b>	<b>RAL0080</b>
Measuring range:	0 ~ 80% Alcohol (v/v)
Display Resolution:	1% Alcohol

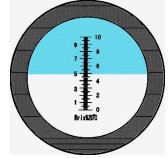
## Calibration:

1. Calibration should be made in an ambient environment of 20degree Celsius.
2. Open the Light Plate & place few drops of distilled water ½ fill the prism.
3. Close the Light Plate. Ensure the water is spread across the entire surface of the Prism. There must not be any bubbles or dry spots on the Prism, which is cause by too little liquid use.
4. Wait for about 30 seconds; this is to allow the temperature compensation to take place.
5. Hold the meter in the direction of light source and look into the Eyepiece.
6. Adjust the Focus Dial until image is clear and sharp. Each person has his own focusing adjustment.
7. Remove the rubber cap on the Calibration knob, with the use of the provided trimming tool and adjust it until the bottom line of the blue section is at 0%.
8. Calibration Completed.
9. Wipe dries the Light Plate and Prism with soft lint-free clothes before proceeding with measurement.



## Making Measurement:

1. Open the light plate & place 2 to 3 drops of the test liquid on the prism.
2. Close the Light Plate. Ensure the water is spread across the entire surface of the Prism. There must not be any bubbles or dry spots.
3. Wait for about 30 seconds; this is to allow the temperature compensation to take place. (ATC models only)
4. Hold the meter in the direction of light source and look into the Eyepiece.
5. Select the scale, which is the intended unit of measurement.
6. Take the reading from the scale on the line where the darkest blue and white area meets. Disregard faint or white lines
7. Wipe dry the Light Plate and Prism with a soft lint-free cloth after each and every test and before storing away.
8. It is important to maintain the Light Plate and Prism dust and stain free in order to have good repeatability measurement.



## Precautions in Usage:

1. Clean the instrument between each measurement and before storage with a soft cloth. Residue of samples stained on the prism could damage the coating on the prism.
2. Do not measure with abrasive or corrosive chemicals. This will damage the prism's coating.
3. Do not immerse the instrument in water. If the view inside the Eyepiece becomes foggy, water has entered into the body. Call a qualified service technician or contact your dealer.
4. Do not clean the prism with thinner as this will remove the special coating on the prism and damage the unit.
5. Do not store the instrument in a damp environment. Store only in a cool and dry environment.
6. This is an optical instrument and requires careful handling and storage. With care, this instrument will provide years of reliable service.

**TRANS INSTRUMENTS**  
for the professionals



A Product of Singapore

[www.transinstruments.com](http://www.transinstruments.com)