

Operation Manual

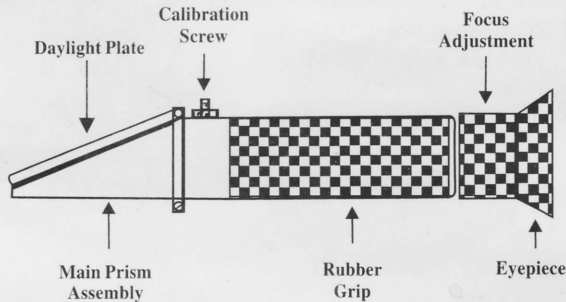
For Hand Held Salinity (Salt) Refractometer

The **RHS** series are designed for testing the concentration of salt water and brine. Provides a direct reading of the specific gravity and concentration (Parts Per Thousand) of salt in water. It provides reliable refractive index and salinity readings of total dissolved solids of aqueous solutions. It is used for quality control in research and clinical laboratories. It can be used to check and maintain stock solutions and dilutions. In the food industry, it is especially effective in the preparation of frozen vegetable, fruits, seafood and ocean byproducts. The Salinity Refractometer is also used in oceanography and seawater studies for determining soil quality. The model having ATC (Automatic Temperature Compensation) is ideal for field use.

SERIES:

Series:	Model	Range	Min. Div	Accuracy	Remarks
Style Salinity	RHS-10	0-100 PPT	1.0 PPT	± 1.0 PPT	Without ATC
		1.000-1.070 SG	0.001 SG	± 0.001 SG	
	RHS-10ATC	0-100 PPT	1.0 PPT	± 1.0 PPT	ATC
		1.000-1.070 SG	0.001 SG	± 0.001 SG	
RHS-28	0-28%	0.20%	$\pm 0.2\%$	Without ATC	
RHS-28ATC	0-28%	0.20%	$\pm 20\%$	ATC	

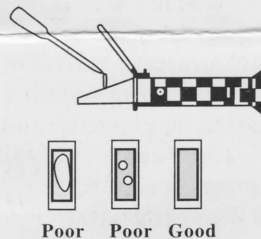
Parts Diagram:



Operation Steps:

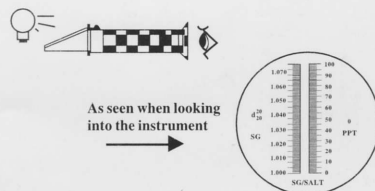
Step 1.

Open daylight plate, and place 2-3 drops of distilled water on the main prism. Close the daylight plate so the water spreads across the entire surface of the prism without air bubbles or dry spots. Allow the sample to temperature adjust on the prism for approximately 30 seconds before going to step #2. (This allows the sample to adjust to the ambient temperature of the refractometer)



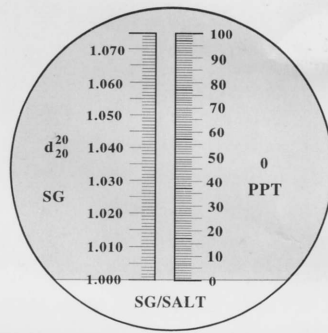
Step 2.

Hold daylight plate in the direction of a light source and look into the eyepiece. You will see a circular field with graduations down the center (you may have to focus the eyepiece to clearly see the graduations). The upper portion of the field should be blue, while the lower portion should be white. (The pictures shown here and shown in step 3. & step 4. are only as reference, the right specific scale is listed the product.)



Step 3.

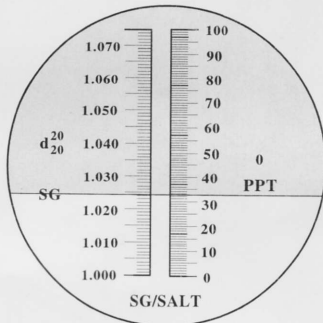
Look into the eyepiece and turn the Calibration Screw until the boundary between the upper blue field and the lower white field meet exactly on the zero scale, such as shown in the image. That is the end of calibration process. Make sure the ambient room temperature is correct for the solution you are using (20°C /68°F). When working temperature of the room or environment (not the sample) changes by more than 5°F , we recommend recalibrating to maintain accuracy. If the instrument is equipped with Automatic Temperature Compensation system, the ambient working temperature of the room must be 20°C (68°F) whenever the instrument is recalibrated. Once calibrated, shifts in ambient temperature within the acceptable range(10°C-30°C), should not effect accuracy .



Calibrate to "0"

Step 4.

Now place a few drops of the sample to be tested onto the main prism, close the daylight plate and check reading. Take the reading where the boundary line of blue and white cross the graduated scale. The scale will provide a direct reading of the concentration.



Reading of sample

Warning - Maintenance

1. Accurate measurement depends on careful calibration. The prism and sample must be at the same temperature for accurate results.
2. Do not expose the instrument to damp working conditions, and do not immerse the instrument in water. If the instrument becomes foggy, water has entered the body. Call a qualified service technician or contact your dealer.
3. Do not measure abrasive or corrosive chemicals with this instrument. They can damage the prism's coating.
4. Clean the instrument between each measurement using a soft, damp cloth. Failure to clean the prism on a regular basis will lead to inaccurate results and damage to the prism's coating.
5. This is an optical instrument. It requires careful handling and storage. Failure to do so can result in damage to the optical components and its basic structure. With care, this instrument will provide years of reliable service.