

HI 96821

## Digital Refractometer for Sodium Chloride Measurement for the Food Industry

- **Ideal for the analysis of:**  
Salad Dressings, Cheeses, Condiments, Pickles, Canned Foods, Jarred Foods, Milk, Juices, Energy Drinks, Soups, Brines and Whey
- **Dual-level LCD**  
The dual-level LCD displays measurement and temperature readings simultaneously
- **Automatic Temperature Compensation**  
For accurate measurements
- **Easy measurement**  
Place a few drops of the sample in the well and press the READ key
- **BEPS**  
(Battery Error Prevention System) alerts the user in the event that low battery power could adversely affect readings.
- **IP65 water protection**  
Built to perform under harsh laboratory and field conditions.
- **Quick, accurate results**  
Readings are displayed in approximately 1.5 seconds.
- **Single point calibration**  
Calibrate with distilled or deionized water
- **Small sample size**  
Sample size can be as small as 2 metric drops.
- **Automatic shut-off**  
After three minutes of non-use
- **Stainless steel sample well**  
Easy to clean and corrosion resistant
- **ABS thermoplastic casing**



HANNA offers the HI 96821 digital sodium chloride refractometer to meet the requirements of the food industry. This optical instrument employs the measurement of the refractive index to determine sodium chloride concentration in aqueous solutions used in food preparation. It is not intended for sea water salinity measurements.

The measurement of refractive index is simple and quick and provides the user an accepted method for NaCl analysis. Samples are measured after a simple user calibration with deionized or distilled water. Within seconds the instrument measures the refractive index of the solution. The digital refractometer eliminates the uncertainty

associated with mechanical refractometers and is portable for measurements where you need them.

The instrument utilizes internationally recognized references for unit conversion and temperature compensation. It can display the measurement of NaCl concentration 4 different ways: g/100 g, g/100 mL, specific gravity, and °Baumé.

Temperature (in °C or °F) is displayed simultaneously with the measurement (on 3 of the ranges) on the large dual level display along with icons for Low Power and other helpful message codes.

## Easy Operation

### Start-up screens

When the HI 96821 is turned on, test screens then the percentage of battery life remaining is shown on the LCD followed by the ready status.

### Unit selection

Just press the RANGE key to cycle through the HI 96821's units of measurement. g/100 g, g/100 mL, Specific Gravity and °Baumé.

Temperature selection can also be easily changed.

### Calibration

Perform a quick and easy calibration after start-up:

1. Using a plastic pipette, completely cover the prism in the sample well with distilled or deionized water.
2. Press the ZERO key

### Measurement

Achieve fast, professional results:

1. Using a plastic pipette, drip sample onto the prism surface until the well is full.
2. Press the READ key and the results are display in the selected units.



SPECIFICATIONS		HI 96821
	g/100 g	0 to 28
	g/100 mL	0 to 34
Range	Specific Gravity	1.000 to 1.216
	°Baumé	0 to 26
	Temperature	0 to 80°C (32 to 176°F)
	g/100 g	0.1
	g/100 mL	0.1
Resolution	Specific Gravity	0.001
	°Baumé	0.1
	Temperature	0.1°C (0.1°F)
Accuracy (@20°C/68°F)	g/100 g	±0.2
	g/100 mL	±0.2
	Specific Gravity	±0.002
	°Baumé	±0.2
	Temperature	±0.3°C (0.5°F)
Temperature Compensation	automatic between 10 and 40°C (50 to 104°F)	
Measurement Time	approximately 1.5 seconds	
Minimum Sample Volume	100 µL (to cover prism totally)	
Light Source	yellow LED	
Sample Cell	stainless steel ring and flint glass prism	
Auto-off	after three minutes of non-use	
Enclosure Rating	IP65	
Battery Type / Battery Life	9V / approximately 5000 readings	
Dimensions / Weight	192 x 104 x 69 mm (7.6 x 4.1 x 2.7") / 420 g (14.8 oz.)	

## Making a standard sodium chloride solution

To make a Standard NaCl Solution (g/100g), follow the procedure below:

- Place a container (such as a glass vial or dropper bottle that has a cover) on an analytical balance.
- Tare the balance.
- To make an X NaCl solution weigh out X grams of high purity dried Sodium Chloride (CAS #: 7647-14-5; MW 58.44) directly into the container.
- Add distilled or deionized water to the container so the total weight of the solution is 100 g.

### Example with g/100 g NaCl:

g/100 g NaCl	10
g NaCl	10.000
g Water	90.000
g Total	100.000



### ORDERING INFORMATION

HI 96821 is supplied with battery and instruction manual.