

HI3835

## Salinity Test Kit

## Silica Test Kit

HI38067

High Range

Determination of silica concentration is an adaptation of the ASTM D859 method of the heteropoly blue method. The reaction between silica and reagents causes a blue tint in the sample which is proportional to the silica concentration.

## Sulfate Test Kits

HI38000

The procedure for determining sulfate is a modification of the barium sulfate turbidimetric method.

Sulfate is precipitated as barium sulfate by reaction with barium chloride in acidic medium. The turbidity is proportional to the concentration of sulfate:  
 $(\text{SO}_4)^{2-} + \text{Ba}^{2+} \rightarrow \text{BaSO}_4$

HI38001

Low and High Range

The procedure for determining sulfate is a modification of the Determination of Sulfate by Sulfonazo III. Sulfate is determined via a titrimetric method. The reaction endpoint is indicated by the change in color of the solution from violet to blue.

HI3822

## Sulfite Test Kit

The method used is an iodometric method. Iodide ions react with iodate ions in the presence of sulfuric acid to form iodine.

The sulfite present in the water sample then reduces the iodine back to iodide.

An excess of iodate ions will generate additional iodine, which will form a blue complex with starch. This color change determines the endpoint of this titration.



HI3822 Sulfite

Method	Range	Smallest Increment	Chemical Method	# Tests
<b>HI3835</b>	<b>Salinity</b>			
titration	0.0-40.0 g/kg (ppt)		mercuric nitrate	110 avg.
<b>HI38067</b>	<b>Silica (as SiO<sub>2</sub>)</b>			
checker disc	0-40 mg/L (ppm) 0-800 mg/L (ppm)	1 mg/L (ppm) 40 mg/L (ppm)	colorimetric	100
<b>HI38000</b>	<b>Sulfate (as SO<sub>4</sub><sup>2-</sup>)</b>			
turbidimetric	20-30 mg/L (ppm) 30-100 mg/L (ppm)	5 mg/L (ppm) 10 mg/L (ppm)	barium chloride	100
<b>HI38001</b>	<b>Sulfate (as SO<sub>4</sub><sup>2-</sup>)</b>			
titration	100-1000 mg/L (ppm) 1000-10000 mg/L (ppm)	10 mg/L (ppm) 100 mg/L (ppm)	barium chloride	200
<b>HI3822</b>	<b>Sulfite (as Na<sub>2</sub>SO<sub>3</sub>)</b>			
titration	0.0-20.0 mg/L (ppm) 0-200 mg/L (ppm)	0.2 mg/L (ppm) 2 mg/L (ppm)	iodometric	110 avg.

## Ordering Information

**HI3835** test kit comes with 15 mL diphenylcarbazone indicator, 30 mL nitric acid solution, 120 mL titrant solution, plastic vial with cap and 1 mL calibrated syringe with tip.

**HI38067** test kit comes with 25 mL silica reagent A, 100 packets silica reagent B, 100 packets silica reagent C, demineralizer bottle with filter cap for 12 L, checker disc, glass vials with caps (2), 3 mL plastic pipette and 1 mL syringe with tip.

**HI38000** test kit comes with 100 packets sulfate reagent A, 53 g sulfate reagent B, 10 mL complexing agent, 50 mL glass test tube, 50 mL plastic vessel, 3 mL plastic pipette and spoon.

**HI38001** test kit comes with 100 packets sulfate reagent A (2 sets), 100 mL LR sulfate reagent B, 100 mL HR sulfate reagent B, 10 mL sulfate reagent C, 20 mL complexing agent, 30 mL sulfate solution, 50 mL plastic vessels (2) and 1 mL syringes (2).

**HI3822** test kit comes with 30 mL sulfamic acid solution, 30 mL EDTA reagent, 15 mL sulfuric acid solution, 10 mL starch indicator, 120 mL titrant solution, 20 mL calibrated vessel, 50 mL calibrated vessel and calibrated syringe with tip.

See a list of chemical test kit reagents beginning on page 1.52