

## Method

References: USEPA Methods for Chemical Analysis of Water and Wastes, Method 376.2 (1983). APHA Standard Methods, 20<sup>th</sup> ed., pp. 4-165, Method 4500-S<sup>2</sup>-D (1998).

Sulfides are naturally present in ground waters as a result of leaching from sulfur-containing mineral deposits. Surface waters do not usually contain high sulfide concentrations. Sulfides result from the decomposition of organic matter, from bacterial sulfate reduction under anaerobic conditions and from various chemical processes.

CHEMetrics' test kits measure total acid soluble sulfides and employ the methylene blue methodology. Sulfides react with dimethyl-p-phenylenediamine in the presence of ferric chloride to produce methylene blue. Results are expressed as ppm (mg/L) S.

## Visual Kits

Range: 0-1 & 1-10 ppm MDL: 0.05 ppm / Method: Methylene Blue	
<b>CHEMetrics Kit</b>	<b>Cat# K-9510</b>
CHEMetrics Refill, 30 ampoules	R-9510
Activator Solution Pack, six 10 mL bottles, Shelf-life 2 years	A-9500 <sup>1</sup>
Low Range Comparator, Shelf-life 2 years: 0, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, 1.0 ppm	C-9501
High Range Comparator, Shelf-life 2 years: 1, 2, 3, 4, 5, 6, 7, 8, 10 ppm	C-9510
Kit comes in a plastic case and contains everything needed to perform 30 tests: Refill, Low and High Range Comparators, Activator Solution, 25 mL sample cup, instructions, and MSDS.	

Range: 0-25 & 25-250 ppm MDL: 2.5 ppm / Method: Methylene Blue	
<b>VACUettes Kit</b>	<b>Cat# K-9510D</b>
VACUettes Refill, 30 ampoules	R-9510D
Activator Solution Pack, six 10 mL bottles, Shelf-life 2 years	A-9500 <sup>1</sup>
Low Range Comparator, Shelf-life 2 years: 0, 2.5, 5, 7.5, 10, 15, 20, 25 ppm	C-9501D
High Range Comparator, Shelf-life 2 years: 25, 50, 75, 100, 125, 150, 175, 200, 250 ppm	C-9510D
Kit comes in a plastic case and contains everything needed to perform 30 tests (except distilled water): Refill, Low and High Range Comparators, Activator Solution, dilutor snapper cup, micro test tube, instructions, and MSDS.	

Range: 0-50 & 50-500 ppm MDL: 5 ppm / Method: Methylene Blue	
<b>VACUettes Kit</b>	<b>Cat# K-9510A</b>
VACUettes Refill, 30 ampoules	R-9510A
Activator Solution Pack, six 10 mL bottles, Shelf-life 2 years	A-9500 <sup>1</sup>
Low Range Comparator, Shelf-life 2 years: 0, 5, 10, 15, 20, 30, 40, 50 ppm	C-9501A
High Range Comparator, Shelf-life 2 years: 50, 100, 150, 200, 250, 300, 350, 400, 500 ppm	C-9510A
Kit comes in a plastic case and contains everything needed to perform 30 tests (except distilled water): Refill, Low and High Range Comparators, Activator Solution, dilutor snapper cup, micro test tube, instructions, and MSDS.	

Range: 0-100 & 100-1000 ppm MDL: 10 ppm / Method: Methylene Blue	
<b>VACUettes Kit</b>	<b>Cat# K-9510B</b>
VACUettes Refill, 30 ampoules	R-9510B
Activator Solution Pack, six 10 mL bottles, Shelf-life 2 years	A-9500 <sup>1</sup>
Low Range Comparator, Shelf-life 2 years: 0, 10, 20, 30, 40, 60, 80, 100 ppm	C-9501B
High Range Comparator, Shelf-life 2 years: 100, 200, 300, 400, 500, 600, 700, 800, 1000 ppm	C-9510B
Kit comes in a plastic case and contains everything needed to perform 30 tests (except distilled water): Refill, Low and High Range Comparators, Activator Solution, dilutor snapper cup, micro test tube, instructions, and MSDS.	



**Range: 0-1000 & 1000-10,000 ppm**  
**MDL: 100 ppm / Method: Methylene Blue**

	Cat#
<b>VACUettes Kit</b>	<b>K-9510C</b>
VACUettes Refill, 30 ampoules	R-9510C
Activator Solution Pack, six 10 mL bottles, Shelf-life 2 years	A-9500 <sup>1</sup>
Low Range Comparator, Shelf-life 2 years: 0, 100, 200, 300, 400, 600, 800, 1000 ppm	C-9501C
High Range Comparator, Shelf-life 2 years: 1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 10,000 ppm	C-9510C

Kit comes in a plastic case and contains everything needed to perform 30 tests (except distilled water): Refill, Low and High Range Comparators, Activator Solution, dilutor snapper cup, micro test tube, instructions, and MSDS.



## Instrumental Kits

### V-2000 Multi-Analyte Photometer (See page 8 for instrumental features)

**Range: V-2000: 0.20-3.00 ppm / Spec: 0.10-1.00 ppm**  
**Method: Methylene Blue**

	Cat#
<b>Vacu-vials Kit</b>	<b>K-9503</b>

Kit comes in a cardboard box and contains everything needed to perform 30 tests: thirty ampoules, Activator Solution, 25 mL sample cup, ampoule blank, instructions, calibration table, and MSDS.

**Range: 0.60-6.00 ppm**  
**Method: Methylene Blue**

	Cat#
<b>Vacu-vials Kit</b>	<b>K-9523</b>

Kit comes in a cardboard box and contains everything needed to perform 30 tests: thirty ampoules, Activator Solution, 25 mL sample cup, ampoule blank, instructions, calibration table, and MSDS.

**Vacu-vials Kits require the use of the V-2000 Photometer or a spectrophotometer capable of accepting a 13 mm diameter round cell. Instrument sold separately.**

### V-1000 Multi-Analyte Photometer (See page 10 for instrumental features)

**Range: 0.10-1.50 ppm**  
**Method: Methylene Blue**

	Cat#
<b>VVR Module</b>	<b>V-9503</b>
Vacu-vials Refill, 30 ampoules	R-9503
Activator Solution Pack, six 10 mL bottles, Shelf-life 2 years	A-9500 <sup>1</sup>
VVR Filter, Shelf-life 2 years	F-9503

Module comes in a cardboard box and contains everything needed to perform 30 tests: Refill, VVR Filter, Activator Solution, 25 mL sample cup, instructions, and MSDS.

**Range: 0.30-3.00 ppm**  
**Method: Methylene Blue**

	Cat#
<b>VVR Module</b>	<b>V-9523</b>
Vacu-vials Refill, 30 ampoules	R-9523
Activator Solution Pack, six 10 mL bottles, Shelf-life 2 years	A-9500 <sup>1</sup>
VVR Filter, Shelf-life 2 years	F-9523

Module comes in a cardboard box and contains everything needed to perform 30 tests: Refill, VVR Filter, Activator Solution, 25 mL sample cup, instructions, and MSDS.

**VVR Modules require the use of the V-1000 Photometer. Instrument sold separately.**

#### Kit Components common to Sulfide

Description	Cat#
Sample Cup Pack, 25 mL (6 ea)	A-0013
Micro Test Tube Pack (10 ea)	A-0015
Dilutor Snapper Cup Pack (6 ea)	A-0018
Ampoule Blank Pack (5 ea)	A-0023
VVR Zero Ampoule Pack (5 ea)	A-0128
VVR Zero Test Tube Pack (5 ea)	A-0129

<sup>1</sup>The accessory pack supplies enough solution to perform at least 200 tests.

*If no shelf-life is listed for a product, then the shelf-life is at least 2 years.*