

## Method

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.

### The Methylene Blue Method

**References: USEPA Methods for Chemical Analysis of Water and Wastes, Method 376.2 (1983). APHA Standard Methods, 23<sup>rd</sup> ed., Method 4500-S<sup>2</sup>-D-2000.**

CHEMetrics' test kits measure total acid soluble sulfides (including hydrogen sulfide) 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	A-9500 <sup>1</sup>
Low Range Comparator 0, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, 1.0 ppm	C-9501
High Range Comparator 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 and instructions.	

Range: 0-30 & 30-300 ppm MDL: 2 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	A-9500 <sup>1</sup>
Low Range Comparator 0, 2, 4, 6, 10, 15, 20, 30 ppm	C-9501D
High Range Comparator 30, 60, 90, 120, 150, 175, 200, 250, 300 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, sample cup top, micro test tube and instructions.	

*Instructions and SDSs are posted on our website.  
If no shelf life is listed for a product, then the shelf life is at least 1 year.*

Range: 0-60 & 60-600 ppm MDL: 4 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	A-9500 <sup>1</sup>
Low Range Comparator 0, 4, 8, 12, 20, 30, 40, 60 ppm	C-9501A
High Range Comparator 60, 120, 180, 240, 300, 350, 400, 500, 600 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, sample cup top, micro test tube and instructions.	

Range: 0-120 & 120-1200 ppm MDL: 7.5 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	A-9500 <sup>1</sup>
Low Range Comparator 0, 7.5, 15, 25, 40, 60, 80, 120 ppm	C-9501B
High Range Comparator 120, 240, 360, 480, 600, 700, 800, 1000, 1200 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, sample cup top, micro test tube and instructions.	

Range: 0-1200 & 1200-12,000 ppm MDL: 75 ppm / Method: Methylene Blue	
<b>VACUettes Kit</b>	<b>Cat# K-9510C</b>
VACUettes Refill, 30 ampoules	R-9510C
Activator Solution Pack, six 10 mL bottles	A-9500 <sup>1</sup>
Low Range Comparator 0, 75, 150, 250, 400, 600, 800, 1200 ppm	C-9501C
High Range Comparator 1200, 2400, 3600, 4800, 6000, 7000, 8000, 10,000, 12,000 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, sample cup top, micro test tube and instructions.	

## Instrumental Kits

Multi-Analyte Photometers V-2000 / V-3000 (See page 14 for instrumental features)	
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Range: 0-3.00 ppm / Spec: 0-1.00 ppm Method: Methylene Blue	
<b>Vacu-vials Kit</b>	<b>Cat# 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 and instructions.	

Range: 0-6.00 ppm Method: Methylene Blue	
<b>Vacu-vials Kit</b>	<b>Cat# 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 and instructions.	

*Vacu-vials Kits require the use of a CHEMetrics Direct-Readout Photometer (photometers sold separately) or a spectrophotometer capable of accepting a 13 mm diameter round cell. See page 14 for details.*

Components and Accessories	
Description	Cat#
Sample Cup Pack, 25 mL (6 ea)	A-0013
Sample Cup Top Pack for 25 mL Cup (6 ea)	A-0014
Micro Test Tube Pack (10 ea)	A-0015
Dilutor Snapper Cup Pack (6 ea)	A-0018
Ampoule Blank Pack (5 ea)	A-0023
* Sample Zeroing Accessory Pack	A-0503
* Sample Zeroing Accessory Pack	A-0504

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

\*For use when testing colored or turbid samples. See page 13 for details.

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