Detergents (anionic surfactants, MBAS)

Method

Detergents can be introduced into the water supply by industry, soap manufacturers, and private households. Environmental analysts often include a determination of anionic detergents when assessing surface water pollution.

The Methylene Blue Method

References: USEPA Methods for Chemical Analysis of Water and Wastes, Method 425.1 (1983). APHA Standard Methods, 23rd ed., Method 5540 C-2000. ASTM D 2330-02, Methylene Blue Active Substances.

The methylene blue active substances (MBAS) method is used in a 3-minute procedure to measure anionic detergents. The procedure features a superior extraction/sampling technique that eliminates several steps required in other test procedures and provides increased sensitivity.

Anionic detergents react with methylene blue to form a blue-colored complex that is extracted into an immiscible organic solvent. Results are expressed in ppm (mg/L) as linear alkylbenzene sulfonate (LAS), equivalent weight 325.

The shelf life of R-9400 is 5 months and R-9423 is 8 months. We recommend stocking quantities accordingly.

Visual Kits

Range: 0-3 ppm
MDL: 0.125 ppm / Method: Methylene Blue

	Cat#
CHEMets Kit	**K-9400**
CHEMets Refill, 20 ampoule sets, Shelf life 5 months	R-9400
Comparator 0, 0.25, 0.50, 0.75, 1.0, 1.5. 2.0, 3.0 ppm	C-9400

Kit comes in a cardboard box and contains everything needed to perform 20 tests: Refill, Comparator, reaction tube with lid, tip breaking tool and instructions.

MiniPet® is a registered trademark of Tricontinent Scientific, Inc.

Instrumental Kits

SAM Single Analyte Photometer

(See page 16 for instrumental features)

Range: 0-2.50 ppm
Method: Methylene Blue

	Cat#
Detergents SAM Kit	**I-2017**
Instrumental Refill, 20 double-tipped ampoules, 21 test tubes, dropper bottle with cap, tip-breaking tool and instructions. Shelf life 8 months.	**R-9423**

SAM Kit comes in a cardboard box and contains everything needed to perform 20 tests: Instrumental Refill, SAM Photometer, light shield, 4 AAA batteries, screwdriver, and instructions.

Components and Accessories

Description	Cat#
Tip Breaking Tool Pack (2 ea)	A-0197
Reaction Tube w/Lid, Detergents (5 ea)	A-0087

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.

⚠WARNING! These products can expose you to chemicals including chloroform, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Filming Amine (aliphatic amine)

Method

Filming amines are fed continuously into boiler feed-water to protect metal surfaces from corrosion caused by dissolved oxygen and carbon dioxide in condensate water. The amine forms a thin film on the surfaces that repels the potentially corrosive water.

The Methyl Orange Method

Reference: ASTM D 2327-80, Mono- and Dioctadecylamines in Water.

CHEMetrics' 3-minute procedure uses the standard methyl orange chemistry and features a unique extraction technique. The extraction eliminates several steps required in other procedures and provides increased sensitivity.

The filming amine compound reacts with methyl orange to form a yellow-colored complex that is extracted into an immiscible organic solvent. Results are expressed in ppm (mg/L) octadecylamine.

Visual Kit

Range: 0-1 ppm
MDL: 0.05 ppm / Method: Methyl Orange

	Cat#
CHEMets Kit	**K-1001**
CHEMets Refill, 20 ampoule sets	R-1000
Comparator 0, 0.05, 0.10, 0.15, 0.25, 0.50, 0.75, 1.0 ppm	C-1001

Kit comes in a cardboard box and contains everything needed to perform 20 tests: Refill, Comparator, reaction tube with lid, tip breaking tool and instructions.

Components and Accessories

Description	Cat#
Tip Breaking Tool Pack (2 ea)	A-0197
Reaction Tube w/Lid, Filming Amine (5 ea)	A-0087F

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.

Formaldehyde

Method

Formaldehyde, a toxic substance, is used in the following applications: metal plating baths, textile treatments, biological specimen preservatives, and disinfectants of medical equipment. Commercial formaldehyde gas is readily soluble in water.

The Purpald Method

Reference: Purpald® developed by Aldrich Chemical Co.

Purpald is subject to fewer interferences than Schiff's reagent or chromotropic acid procedures. A purple-colored complex is formed when Purpald in alkaline solution reacts with formaldehyde. Results are expressed as ppm (mg/L) CH_2O.

Shelf life of the Purpald Reagent: 5 months. We recommend stocking quantities that will be used within 4 months.

Visual Kits

Range: 0-1 & 1-10 ppm
MDL: 0.1 ppm / Method: Purpald

	Cat#
CHEMets Kit	**K-4605**
CHEMets Refill, 30 ampoules, Shelf life 5 months	R-4605
Activator Solution Pack, six 20 mL bottles	A-4201[1, 2]
Activator Solution Pack, six 10 mL bottles	A-4202[1]
Low Range Comparator 0, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, 1.0 ppm	C-4601
High Range Comparator 1, 2, 3, 4, 5, 6, 7, 8, 10 ppm	C-4610

Kit comes in a plastic case and contains everything needed to perform 30 tests (except distilled water): Refill, Low and High Range Comparators, Activator Solutions, 25 mL sample cup and instructions.

Components and Accessories

Description	Cat#
Sample Cup Pack, 25 mL (6 ea)	A-0013

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.

[1] The accessory pack supplies enough solution to perform at least 200 tests.
[2] The Activator Solution, A-4201, is supplied as a dry chemical with NO expiration date. Once reconstituted, it has a limited shelf life.

⚠WARNING! This product can expose you to chemicals including chloroform, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.