

Chemical Test Kits

Detergents, Formaldehyde, Glycol

HI 3857 Detergents Test Kit

The aqueous solution containing the detergents is treated with the colored indicator. The reaction product can be extracted in the chloroform layer, while the original dyestuff is insoluble in the organic medium. The intensity of the color developed is proportional to the concentration of the detergents present.

HI 3838 Formaldehyde Test Kit

The HANNA formaldehyde portable test kit makes monitoring easy, quick and safe. The design of the kit makes it practically impossible to spill the reagents, thereby reducing the possibility of injury or damage to property.

Formaldehyde concentration is determined by a simple acid titration. The formaldehyde, in the aqueous sample, reacts with sodium sulfite to form an alkaline product. This product is then titrated to a yellow alizarin R yellow endpoint, using a prestandardized hydrochloric acid solution.

HI 3859 Glycol Yes/No Test Kit

Use the HI 3859 glycol standard 0.025% included in the kit to easily recognize a positive result in the form of an intense purple color. Ethylene glycol and other glycols are determined by a two step reaction:

Step 1: glycol is oxidized to two carbonyl groups under acidic conditions;

Step 2: the carbonyl groups react with the indicator to give a colored solution.

ORDERING INFORMATION

HI 3857 test kit comes with 15 mL detergents reagent A, 15 mL detergent reagent B, 180 mL chloroform, demineralizer bottle with filter cap for 12 L, checker disc, 30 mL long glass vials with caps (2), long plastic pipette, 3 mL plastic pipette and 1 mL plastic pipette.

HI 3838 test kit comes with 15 mL Alizarin Yellow R indicator, 30 g sodium sulfite, 120 mL titrant solution, plastic spoon, plastic bottle, 10 mL calibrated vessel, filter cartridge, calibrated titration syringe and plungers

HI 3859 test kit comes with 125 mL glycol reagent A, 25 packets glycol reagent B, 25 packets glycol reagent C, 25 mL glycol standard 0.025%, 3 mL plastic pipette, 1 mL plastic pipettes (25), 10 mL glass vials with caps (2) and brush.

ACCESSORIES

HI 3857

HI 3857-035 Spare reagent for 35 tests

HI 3838

HI 3838-100 Spare reagent for 100 tests

HI 3859

HI 3859-025 Spare reagent for 25 tests



HI 3859 Glycol Yes/No Test Kit

Detergents can enter water and wastewater by discharge of domestic and industrial cleansing waters. The most widely used detergents are linear alkyl sulfonates (LAS) and alkyl benzene sulfonates (ABS); LAS are preferable to ABS because they are biodegradable, thus readily decomposed by microorganisms. The presence of anionic LAS/ABS detergents in natural waters should be below 0.1 mg/L and in raw domestic wastewater in the range from 1 to 20 mg/L.

Formaldehyde is used widely in industry. Its duties vary from holding dyes onto fabrics, to assisting in the electroplating of metals. Each application uses different levels of formaldehyde and requires monitoring to optimize its given purpose.

Ethylene **glycol** is widely used as a coolant and antifreeze. Its presence in motor oils is an indication of a perforated engine block or of a leakage in the cooling systems. The HANNA glycol test kit can be used for water as well as oil samples to determine traces of ethylene glycol and other 1,2 glycols above 30 ppm. For better results test samples from used motor oil since samples from new oils can give erroneous positive results. Never test oils from hot engines.

| METHOD | RANGE | SMALLEST INCREMENT | CHEMICAL METHOD | # TESTS | WEIGHT |
|--|-------------------------|--------------------|--------------------------------------|----------|--------|
| HI 3857 Detergents | | | | | |
| checker disc | 0.00-1.30 mg/L (ppm) | 0.02 mg/L (ppm) | methylene blue | 35 | 1245 g |
| HI 3838 Formaldehyde (as CH₂O) | | | | | |
| titration | 0.00-1.00% 0.0-10.0% | 0.01% 0.1% | sodium sulfite/ hydrochloric acid | 110 avg. | 910 g |
| HI 3859 Glycol | | | | | |
| visual | Present/Absent | - | oxidation of glycolic group | 25 | 380 g |