



Detergents Test Kit

DE-2 (143203)

DOC326.97.00058

Test preparation

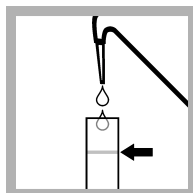
CAUTION: Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.

- Put the color disc on the center pin in the color comparator box (numbers to the front).
- Use sunlight or a lamp as a light source to find the color match with the color comparator box.
- Rinse the tubes with sample before the test. Rinse the tubes with deionized water after the test.
- If the color match is between two segments, use the value that is in the middle of the two segments.
- If the color disc becomes wet internally, pull apart the flat plastic sides to open the color disc. Remove the thin inner disc. Dry all parts with a soft cloth. Assemble when fully dry.
- Use the filtration procedure for samples that contain turbidity.
- If the test result is more than the maximum limit, dilute the sample as follows. Use the dropper to add 1 mL of sample to a tube. Dilute the sample to the 20-mL line with deionized water. Use the diluted sample in the test procedure. Multiply the value in the scale window by 20 to get the test result in mg/L.
- To use the included demineralizer bottle, fill the bottle with tap water and shake to mix. Use this water as deionized water in the test procedure. Fill the bottle again when empty. Replace the resin after the bottle is filled approximately 100 times.
- Dispose of reacted solutions according to local, state and federal regulations. Refer to the Safety Data Sheets for disposal information for unused reagents. Refer to the environmental, health and safety staff for your facility and/or local regulatory agencies for further disposal information.

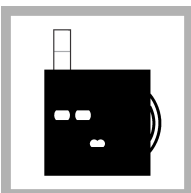
Replacement items

Description	Quantity	Item no.
Chloroform, ACS grade	500 mL	1445849
Detergents Reagent	100 mL MDB	105932
Wash Water Buffer Solution	500 mL	99949
Color comparator box	each	173200
Color disc, detergents, 0–1.2 mg/L	each	9265700
Demineralizer bottle, 177-mL capacity	each	1429900
Dropper, glass, 0.5- and 1.0-mL marks	5/pkg	1419705
Filter thimble	1	51200
Glass viewing tubes, 5-mL and 20-mL marks	6/pkg	173606
Glass wool	5 g	252074
Pipet bulb	1	178600
Stoppers for viewing tubes, No. 2 plastic	6/pkg	1448001
Test tube, 13 x 100 mm	10/pkg	56510
Transfer pipet	1	221800

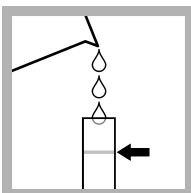
Test procedure—Detergents (0–1.2 mg/L as LAS (linear alkylate sulfonate) and/or ABS (alkyl benzene sulfonate))



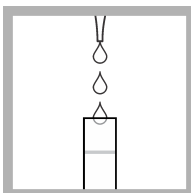
1. Fill a tube to the top line (20 mL) with deionized water.



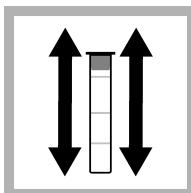
2. Put the tube into the left opening of the color comparator box.



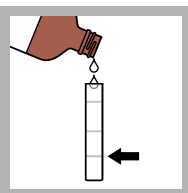
3. Fill a second tube to the top line (20 mL) with sample.



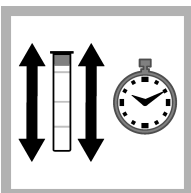
4. Add 12 drops of Detergents Reagent.



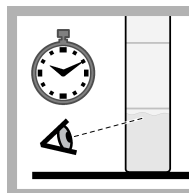
5. Put the stopper on the second tube. Shake to mix.



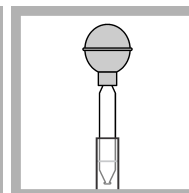
6. Add chloroform to the first line (5 mL). Chloroform is heavier than water and goes to the bottom of the tube.



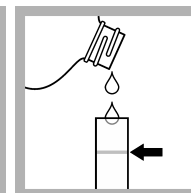
7. Put the stopper on the tube. Shake vigorously for 30 seconds.



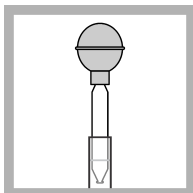
8. Do not touch the tube for 1 minute to let the chloroform separate from the sample.



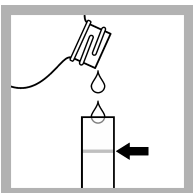
9. Use the transfer pipet to remove the top water layer from the tube. Discard the water.



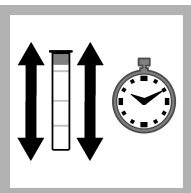
10. Add Wash Water Buffer Solution to the top mark (20 mL).



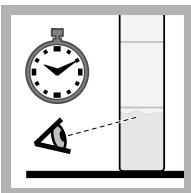
11. Use the transfer pipet to remove the Wash Water Buffer. Discard the buffer. This step removes the remaining water sample.



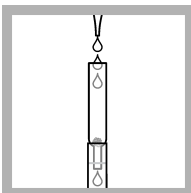
12. Add Wash Water Buffer to the top mark (20 mL).



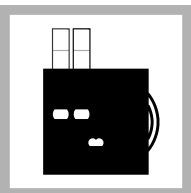
13. Put the stopper on the tube. Shake vigorously for 30 seconds.



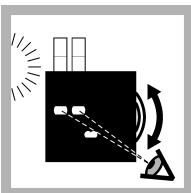
14. Do not touch the tube for 1 minute to let the chloroform separate.



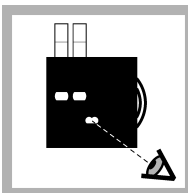
15. If the sample contains turbidity, complete the [Filtration procedure for turbid samples](#) on page 2.



16. Put the second tube into the color comparator box.



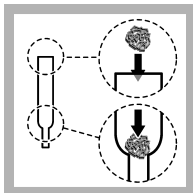
17. Hold the color comparator box in front of a light source. Turn the color disc to find the color match.



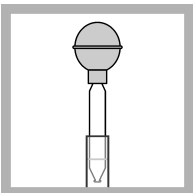
18. Read the result in mg/L in the scale window.

Filtration procedure for turbid samples

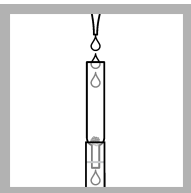
If the sample contains turbidity, pour the chloroform layer through a filter during the test procedure after step 15.



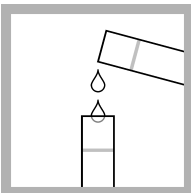
1. Put a small ball (the size of a large pea) of glass wool in the filter thimble.



2. Use the transfer pipet to remove the chloroform layer from the viewing tube.



3. Put the filter thimble on a clean test tube. Add the chloroform to the filter thimble.



4. Use the filtered chloroform to continue the test procedure after step 15.

