

# DETERGENT TEST KIT

## MODEL DS-1-DC • CODE 4507-01

QUANTITY	CONTENTS	CODE
2 x 30 mL	*DS Indicator Reagent	*4508-G
15 mL	DS Reference Solution	4513-E
50 g	pH Adjustment Powder	4509-H
1	Test Tube, Test Sample w/cap	0282
1	Test Tube, Reference Sample w/cap	0283
1	Test Tube, 1-8 mL, plastic, w/cap	0755
1	Pipet, glass	0347
1	Spoon, 0.25 g, plastic	0695

\*WARNING: Reagents marked with an \* are considered hazardous substances. To view or print a Material Safety Data Sheet (MSDS) for these reagents see MSDS CD or our web site. To obtain a printed copy, contact us by e-mail, phone or fax.

To order individual reagents or test kit components, use the specified code number.

### PROCEDURE

#### STEP I - Determine if Detergent is Present

- Use the calibrated test tube (0755) to measure 5 mL of the sample solution. Add to the screw cap tube marked Test Sample (0282).
- Use the 0.25 g spoon (0695) to add one measure of pH Adjustment Powder (4509). Shake until dissolved.
- Fill the pipet (0347) with \*DS Indicator Reagent (4508) by squeezing the rubber bulb, then inserting pipet into reagent. Add this amount of \*DS Indicator Reagent to the Test Sample tube. Cap and shake for one minute.
- Allow the tube to stand until the two layers of the solution separate. The water layer will settle to the bottom and the reagent layer will rise to the top. Use chart below to determine if detergent is present.

Bottom Layer	Top Layer	Quick Reading
Colorless	Colored	No Detergent in sample
Some Color	Some Color	Some Detergent in sample
Colored	Colorless	High Detergent in sample

**NOTE:** If the amount of detergent in the sample is to be determined, save this Test Sample and proceed to Step 2.

## **STEP 2 - Determine the Amount of Detergent Present**

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1. Use the calibrated test tube (0755) to measure 5 mL of detergent-free water. Add to the screw cap tube marked Reference Sample (0283). (On field trips it may be necessary to carry a small supply of detergent free water.)
2. Use the 0.25 g spoon (0698) to add one measure of pH Adjustment Powder (4509). Shake until dissolved.
3. Fill the pipet (0347) with \*DS Indicator Reagent (4508) by squeezing the rubber bulb, then inserting pipet into reagent. Add this amount of \*DS Indicator Reagent to the Reference Sample tube.
4. Add one drop of DS Reference Solution (4513). Cap and shake for one minute.
5. Allow the tube to stand until the two layers of solution separate. The color produced in the bottom (water) layer is equivalent to 1 ppm of detergent.
6. Compare the color in the bottom layer of the Test Sample Tube from Part I to the color of the bottom of the Reference Sample Tube.

### **If Test Sample Color Is:**

Lighter than Reference  
Same as Reference  
Darker than Reference

### **Test Sample Contains:**

Less than 1.0 ppm Detergent  
1.0 ppm Detergent  
More than 1.0 ppm Detergent

7. Add one drop of DS Reference Solution (4513) to the Reference Sample Tube. Shake to mix. Compare the color as before. The color in the Reference Sample is now equal to 2.0 ppm. Continue this procedure, counting the number of drops of DS Reference Solution (4513) added, until the color of the bottom layer in each tube is the same. Each drop of the DS Reference Solution (4513) added to the Reference Sample Tube is equal to 1 ppm detergent in the sample.

**NOTE:** If at any time the top layer of the Test Sample or Reference Sample becomes colorless, add more DS Indicator Reagent (4508). The amount of this reagent added is not important as long as there is some color in the top layer.