

**QUANTITATIVE ANALYSIS OF SURFACTANTS AND
WETTING AGENTS IN CLEANERS****Application**

This test method is used to determine the percent surfactants and wetting agents in a cleaner.

The procedure is intended to be a simplified version of the applicable ASTM standard (e.g. D 501 or D 800) as well as being more appropriate for dealing with the many formulations of cleaners that are commonly encountered in plant operations.

Apparatus Required**Infrared Analyzer**

Suitable for use with cleaners.

Magnetic Stirrer**Hot Plate****Analytical Balance**

Precision +/- 0.1 mg

Oven

Mechanical convection; capable of maintaining 105 +/- 2 °C for 1 h

Steam Bath**Desiccator****Flask** (with reflux condenser)

250 mL

Beakers

250 mL

Funnel

Suitable for use with filter paper

Graduated Cylinder

100 mL

Date	Action	Revisions
2001 01 22	Revised	Editorial – no technical change A. Cockman
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Glass Rod

The above apparatus is available from any reputable laboratory equipment supply house.

Materials Required

Hydrochloric Acid

Concentrated, Reagent grade; CAUTION: Corrosive

Chloroform

Reagent grade; CAUTION: Good ventilation required

Methyl Alcohol

Reagent grade; CAUTION: Low flash point

Acetone

Reagent grade; CAUTION: Low flash point; good ventilation required

Distilled or Deionized Water

20 micromhos/cm at 25 °C maximum conductivity (ASTM D 1125)

Filter Paper

Whatman No. 541

Solutions Required

Hydrochloric Acid Solution

0.5 N

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.