



HOUGHTON™

## CONCENTRATION DETERMINATION FOR IN-USE CLEANERS

### Reagents:

0.04% Bromophenol Blue indicator  
0.1N HCL titrating solution

### Equipment:

Graduate cylinder (capable of measuring 25 mls.)  
Beaker or flask  
Burette  
pH meter (optional)

### Procedure:

1. Measure out 25 mls of the test solution, and place the sample into the beaker or flask.
2. Fill the burette with 0.1 N HCL.
3. Add 4 to 6 drops of Bromophenol Blue indicator to the sample and swirl the beaker or flask.
4. Titrate the sample to a yellow endpoint. Swirl the beaker or flask when adding titrating solution. As an option a pH meter may be used instead of the indicator solution. When using a pH meter, the solution should be titrated to a pH of 3.2.
5. Record the amount of titrating solution used.
6. Calculate the concentration as follows:

$$\% \text{ Concentration} = (\text{mls of 0.1 N HCL}) / \text{Product factor}$$

Fluid Partnerships Making a World of Difference

Houghton International Inc.  
Madison & Van Buren Aves., P. O. Box 930, Valley Forge, PA 19482-0930  
Phone: (610) 666-4000 / Fax (610) 666-1376