



**Overview** The concentration of SD in aqueous solutions can be determined by titrating with Hyamine 1622 using the first derivative endpoint technique and a surfactant electrode. Hyamine 1622 is a large cationic surfactant that reacts with dodecylbenzenesulfonate and other anionic surfactants to form a fine precipitate. The surfactant electrode is ideally suited for this method because it is highly sensitive to anionic surfactants.

<b>Market</b>	Consumer Product	<b>Species Measured</b>	Anionic Surfactant
<b>Sample</b>	SD	<b>Sample Size</b>	75 mL
		<b>Typical Concentration</b>	105 ppm
<b>Technique #</b>	6 First derivative	<b>Electrode</b>	Surfactant electrode 9342BN, Double junction reference electrode 900200.

**Solutions** Thermo Orion 0.005 M Hyamine 1622 (cat# 654201), Reference electrode fill solutions (cat# 900002, 810007)

**Sample Prep** Pipet 75 mL of sample into a beaker and the sample is ready for titration. Use about 40 mL of sample if the titrant strength is 0.001M.

**Statistics**

**# of Trials** 5      **Mean** 105 ppm      **%CV** 0.53      **Analysis Time** 4.2 minute(s)

**Comments** Rinse the electrodes, stirrer, and dispenser probe thoroughly between measurements with deionized water.

**Method Parameters**

<b>Sample Volume/Weight</b>	50.00 mL	<b>Timed or Stability Readings</b>	8.0 second(s) timed
<b>Constant Increment</b>	0.102 mL	<b>Number of Endpoints</b>	1
<b>Max Titrant Volume</b>	10.00 mL	<b>Desired Units</b>	ppm - v
<b>Molecular weight</b>	288.38 g	<b>Predose</b>	3.521 mL
<b>Prestir</b>	10.0 second(s)	<b>Additional Parameters</b>	
<b>Reaction Ratio</b>	1.00		