

IC Application Note No. O-17

Title: Glycolic acid, formic acid, acetic acid and carbonic acid in a scrubber solution

Summary: Determination of glycolic acid, formic acid, acetic acid and carbonic acid in a scrubber solution using ion exclusion chromatography with conductivity detection after chemical suppression.

Sample: Scrubber solution (containing di-isopropanolamine)

Sample Preparation: Dilution 1 : 10 with ultrapure water, injection through H⁺ cartridge

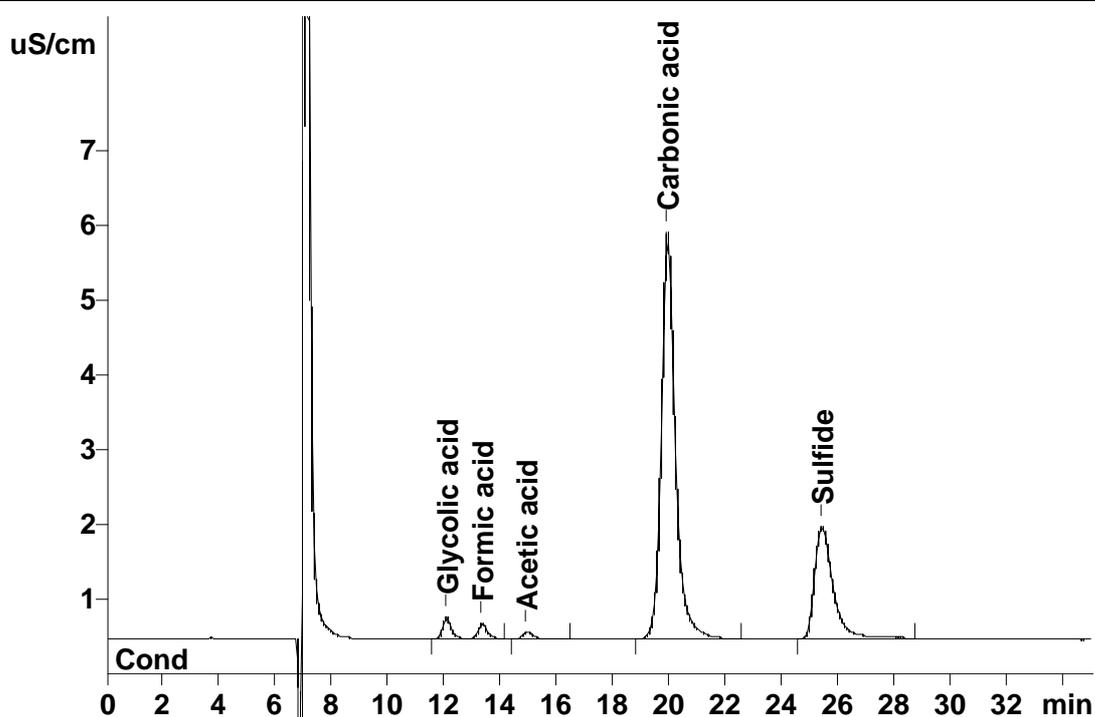
Column: 6.1005.200 Metrosep Organic Acids

Eluent: 0.5 mmol/L sulfuric acid, 5% acetone

Flow: 0.5 mL/min

Suppressor: MSM (10 mmol/L lithium chloride)

Injection Volume: 20 µL



Results:	Glycolic acid mg/L	Formic acid mg/L	Acetic acid mg/L	Carbonic acid g/L
	20.5	7.98	6.87	ca. 1.9

Sulfide (present as H₂S) is not quantified due to unpredictable changes in peak area. Carbonate (present as CO₂) is an estimation due to coelution of the system peak. Changing the acetone concentration to 15 % would separate these peaks.