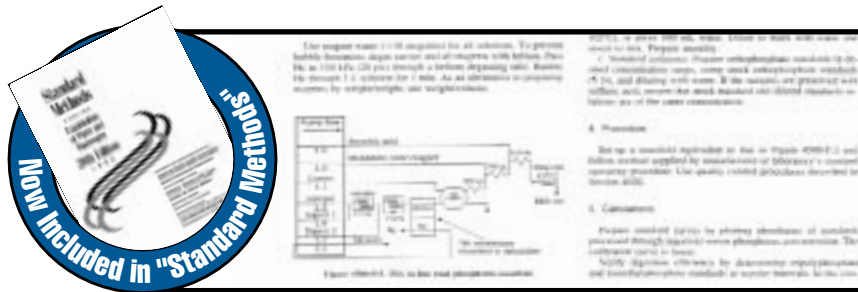


CGS 3000.02

Automated In-Line *Total Phosphorus* Sample Preparation

The method digests various phosphorus forms and converts them to orthophosphate using persulfate with heat and an in-line UV digestion. Organic phosphorus is converted to orthophosphate by UV-catalyzed persulfate digestion. Polyphosphates are converted to orthophosphate by sulfuric acid digestion. After digestion the orthophosphate ion (PO_4^{3-}) reacts with ammonium molybdate and antimony potassium tartrate to form a phosphomolybdate complex. This complex is reduced with ascorbic acid to form a blue complex which absorbs at 880 nm. This method now appears in Standard Methods (20th ed.) 4500-P I.



Specifications

Method	Range	Matrix	MDL (mg/L)	%RSD
10-115-01-3-A	0.1 to 10 mg P/L	Waters	0.007	0.8
10-115-01-3-B	0.025 to 4 mg P/L	Waters	0.01	0.54
10-115-01-3-C	0.01 to 1 mg P/L	Waters	0.001	0.49
10-115-01-3-D	0.005 to 1 mg P/L (AE)	Waters	0.003	0.64
31-115-01-3-D	0.05 to 1 mg P/L	Brackish Waters	0.002	0.56

Automated In-Line *Total Recoverable Phenolics in Water* Sample Preparation

Phenols in waters are extracted and preconcentrated in-line, using a small, low-pressure cartridge (4.6 x 10mm) packed with a non polar polymeric stationary phase. The retained phenol is then eluted off with 15% acetonitrile, injected onto an FIA manifold and determined using the standard 4- aminoantipyrene method.

Specifications

Method	Range	Matrix	MDL (mg/L)	%RSD
10-210-00-2-A	0.01 to 1 mg phenol/L	Waters	0.002	0.55