

ChemScan[®]

PROCESS ANALYZERS

©2002, Applied Spectrometry Associates, Inc.

www.chemscan.com

Rev. 9/02

ChemScan[®] Method Summary #159 Dissolved Organic Carbon (DOC)

Dissolved Organic Carbon is that fraction of TOC that passes through a filter, typically 0.45 micron pore size. Because particulates have been removed, this fraction tends to correlate with soluble organics in the sample. Methods of laboratory analysis are the same as for TOC (See ChemScan Application Summary #126, TOC Estimation) in the laboratory and for on-line estimation.

ChemScan Analytical Method

Analysis of DOC in filtered or settled potable water can be performed using ultraviolet light absorbance correlation similar to the ChemScan method for TOC estimation. The ChemScan UV-0254 provides measurement of certain dissolved organics at 254 nm and a subtraction of turbidity at a second wavelength. This is an effective and economical method of analysis at locations where dissolved organics are the dominant constituent. Other ChemScan analyzers provide a full spectrum measurement of light intensity at 256 increments across the 200 nm to 450 nm wavelength range (including the 254 nm wavelength). These full spectrum analyzers are capable of compensating for the presence of inorganic chemicals that might otherwise interfere with organics analysis. On-line direct analysis of dissolved organics can be used to estimate DOC in waters where the dissolved organic fraction is the predominant TOC component or where the dissolved organic fraction is a constant percentage of TOC. This generally includes filtered wastewater samples and wastewater effluent.