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ChemScan[®] Method Summary #161 Tannic Matter in Water

Tannin is found in natural waters as a result of the decay from vegetative matter. Some types of tea, for example, have substantial concentrations of tannin. Tannin may also be a result of tanning industry wastes. Historically, tannin has been used as a sludge dispersant for boiler water treatment, but most current boiler water treatment programs now use synthetic organic polymers. When dissolved in water, tannin will form tannic acid, although an insoluble fraction of tannin may also persist.

Standard laboratory analysis may be unreliable, as the principal reagent used for colorimetric analysis (Folin phenol) reacts not only with tannic materials but also with the hydroxyl groups and reducing materials found in several organic and inorganic substances typical in water including humic materials, amines, proteins, iron, manganese, nitrite and sulfite.

ChemScan Analysis Method

Tannic acid has a very strong and unique absorbance signature in water, which can be detected and separated from absorbance contributions by other materials using information from a full spectrum analyzer such as ChemScan. Or, tannic acid can be analyzed as one of several components of Natural Organic Matter (See ChemScan Method #68) or Dissolved Organic Carbon (See ChemScan Method #159).