**WATER QUALITY ANALYSIS**

**Abstract**:

• Water quality analysis is a critical component of environmental monitoring and management. This abstract provides an overview of the key aspects of water quality analysis, including its significance, methodologies, parameters, and applications.

• It highlights the importance of monitoring water quality to safeguard human health, protect aquatic ecosystems, and support sustainable water resource management.

• The abstract also discusses common water quality parameters such as pH, turbidity, dissolved oxygen, and pollutant concentrations, detailing their role in assessing water quality.

• Additionally, it touches upon the diverse applications of water quality analysis, encompassing drinking water safety, wastewater treatment, industrial processes, and ecological studies.

• The abstract underscores the need for ongoing research and advancements in water quality analysis to address emerging challenges and ensure the availability of clean and safe water resources for future generation

**CLARIFICATION AND PRE-FILTRATION**:

• When handling and processing wastewater and sewage, pre-filtration is very often a necessary stage in sample preparation to reduce fowling and improve the efficacy of downstream microfiltration.

• To designate pre-filtration, methods will sometimes call for “filter paper”, “coarse filter paper”, or simply indicate “filtration” in an early clarifying or particle-removing step.

• Pre-filtration requires an open mesh or net filter and can best be accomplished using options such glass fiber filters or quartz fiber filters for aqueous samples, or polypropylene filters for solvent filtration.

**GENERAL FILTRATION OF WASTEWATER SAMPLES:**

• Many EPA and EPA-recommended methods do not specify filter type. They may designate parameters or specifications such as a pore size or format (disc or syringe filter) without detailing the filter material.

• Hydrophilic polyvinylidene fluoride (PVDF), polytetrafluoroethylene (PTFE), mixed cellulose esters (MCE), and cellulose acetate filters are all valid options for general filtration. Millipore® Durapore® PVDF and Omnipore™ PTFE filters are ideal for low-protein binding applications. Millex®-HA MCE syringe filters and MF-Millipore® MCE disc membranes are biologically inert, low binding, and thermally stable with a high loading capacity.

• All three membrane filters provide low extractable filtration for minimal contamination. LCR PTFE filters are specially treated to prevent the introduction of additional extractable to your sample prior to HPLC analysis or similar instrumentation

**TESTING:**

• ASTM D2972- ARSENIC in water

• CTD (Conductivity temperature dept)

• 5510 AQUATIC human substances