



System Application Guide

Water Analysis Ultimately Determines Equipment Options

In this applications section, it is our intent to present you with a basic overview of the types of Barnstead systems that have been successfully used in laboratories over the years. It is intended only as a guideline, however, in that we often find drastic tap water fluctuations not only throughout a country but sometimes within a small community. As a result, the system that is individually suited for your needs can best be determined by our W.A.T.E.R.™ program.

Applications themselves vary; for example, to pick tissue culture as an application encompasses an endless number of variations. Cell lines are different and may be sensitive to different types of water. We have found that researchers working with the same cell line have used different types of high purity water systems and have achieved favorable results. *Please note: Systems capable of producing Type I water are also suitable for less demanding Type II or Type III applications such as washing glassware.*

Application	Biologically Pure water for	Organically Pure water for applications such as:	Ionically Pure Reagent Grade Water		
	- Tissue Culture - Life Sciences - Microbiology	- HPLC - ICP/MS - GCMS - TOC	Type I	Type II	Type III
FEED WATER: Average Raw Water (10 grains per gal. or greater)	Still Pretreatment (Deionization and absorption) followed by: Glass Distillation or Reverse Osmosis followed by Deionization and Ultrafiltration or Deionization with UV/UF	Reverse Osmosis followed by: Deionization w/UV Oxidation or For BOD, COD only Glass Distillation	Reverse Osmosis followed by: Deionization or Still Pretreatment and Distillation followed by Deionization or Deionization with UV/UF	Still pretreatment followed by: Distillation	Still pretreatment followed by: Distillation
High Quality Raw Water	Glass Distillation (3-10 grains per gal.) or Deionization and or Deionization with UV/UF	Reverse Osmosis followed by: Deionization w/UV oxidation or Ultrafiltration For BOD, COD only Glass Distillation	Deionization Distillation/ Deionization or Deionization with UV/UF	Distillation	Distillation or Single Cartridge Deionization
Central Deionization, Central Distillation, or Central Reverse Osmosis	Glass Distillation or Deionization and or Deionization with UV/UF	Deionization w/UV oxidation or For BOD, Ultrafiltration	Deionization Still Pretreatment / Distillation / Deionization COD only, Glass Distillation or Deionization with UV/UF	Distillation	Distillation or Deionization