Summary of Various Groundwater Sampling Equipment

Method	Parameters	Potential for Chemical Alternation	Comments
Bailer	organics and inorganics	slight to moderate	Samples may show statistically lower analytical results. Other techniques *may* be more appropriate when low levels of organics exist or when concentrations are close to action levels. Low flow sampling should be used for volatiles.
Bladder pump	organics and inorganics	minimum to slight	Provides efficient well purging and representative samples over a range of conditions.
Electric Submersible Pumps	organics and inorganics	slight to moderate	Good for purging and sampling deep, high yielding wells.
Syringe Sampler	inorganics and non-volatile organics	minimum to slight	Cannot be used for purging
Peristaltic pump	organics and inorganics	moderate to high	Can cause lower recoveries of purgeable organic compounds and gases. EPA and USGS recommends against the use of a peristaltic pump when sampling for volatiles. A bladder pump is recommended when sampling volatiles.
Passive Diffusion Bag Samplers (PDB samplers)	Certain volatile organics	slight to moderate	Requires for the sampler to be left in the well for an equilibration period which may differ for different chemicals. Sampler does not provide a discrete time interval sample, but instead an average concentration over the equilibration period. Not appropriate if chemicals of concern are transported on suspended particles. Data concerns exists for wells with low recharge and/or vertical flows.
Equilibrated Grab Samplers (Hydrosleeve®, Snap Sampler™, and Kennerer Sampler)	organics and inorganics	Slight to moderate	Requires for the sampler to be left in the well for an equilibration period which may differ for different chemicals. Must use different samplers for different parameters. Data concerns exists for wells with low recharge and/or vertical flows.