



Comparison of Aquagenx GEL EC CFU Kit to Membrane Filtration Tests

	Aquagenx® GEL EC CFU Kit	Membrane Filtration
Testing method	Colony Forming Units (CFU)	Colony Forming Units (CFU)
Microbial indicator	<i>E. coli</i>	Depends on product/system: Thermotolerant (fecal) Coliforms; <i>E. coli</i>
Usability	Easy for anyone to use, designed for field testing	Requires intensive training, challenging to use for field testing
Portability	Lightweight, easy to carry and transport	Can be heavy and/or cumbersome, multiple components
Incubation	Ambient temperature incubation ≥25° Celsius	Requires incubator and temperature control
Components	Thio-Bag, GEL Bag, <i>E. coli</i> medium, GEL powder	Filter and funnel apparatus, vacuum system (vacuum flask and vacuum source, typically an electrical pump or a vacuum line in a lab) or large syringe, culture plates, petri dishes, gridded membrane filters, multiple measuring devices, absorbent pads, volume dispensers (e.g., sterile pipettes and/or graduated cylinders or centrifuge tubes with volume marks), tweezers, heat source to flame tweezers
Procedures	Eight easy steps	Time consuming with multiple steps: equipment set-up and preparation, culture media preparation (or costly sterile media in ampoules), sterilization of multiple pieces of equipment
Growth medium storage	Store at 10-25° Celsius in a dry environment, refrigeration is optional	Requires refrigeration and cold chain
Post-test disposables and reusables	No reusables to clean or sterilize. To decontaminate sample, add liquid bleach or chlorine tablets to GEL bag. Or, treat with heat >60°C. After 30 minutes, pour contents into a sink, toilet or hole in ground and safely dispose the GEL Bag with solid waste.	Disposables: Petri dishes (and possibly sample collection bag, large syringe for pulling a vacuum, disposable pipettes and disposable graduated centrifuge tubes) that must be decontaminated prior to disposal (e.g., with heat >60 degrees C or free chlorine). Reusables: Multiple materials and equipment that require decontamination, cleaning and sterilization (e.g., filter apparatus, pipettes and/or graduated cylinders, vacuum flask, sample collection bottles, etc.)