

Private Well Disinfection Comparison Worksheet

Use this worksheet to organize recurring bacteria results before accepting a UV or continuous-chlorination proposal. It is a homeowner planning aid, not an official laboratory report, well inspection, health-department form, code document, or treatment design. Follow your certified laboratory, health department, and qualified professional's instructions.

Result and source record

Field	Record
Property and state/county	
Laboratory and certification	
Report date and sample date/time	
Sample point and before/after treatment	
Total coliform result	
E. coli or fecal-indicator result	
Turbidity, pH, iron, manganese, hardness, and other relevant chemistry	
Weather, flooding, runoff, well work, or plumbing work near sample date	
Safe-water instruction while result is unresolved	

Keep the laboratory report attached. The [CDC home-treatment guidance](<https://www.cdc.gov/drinking-water/about/about-home-water-treatment-systems.html>) says to test water and match treatment to the specific germs or chemicals of concern; one treated-tap result does not describe every source or plumbing condition.

Source-correction gate

- ☐ Wellhead and cap observed from a safe, dry position; record access limits.
- ☐ Casing, seal, drainage, flood exposure, and nearby surface-water pathway assigned for qualified evaluation.
- ☐ Septic location, condition, and possible influence assigned to the appropriate professional or authority.
- ☐ Well construction, repair, pump, and treatment records collected when available.
- ☐ Repeat or confirmation samples requested from the laboratory or health authority.
- ☐ Any need for a new source, new well, or larger corrective action has been left open rather than assumed away.

Recurring contamination can have many causes. The [University of Florida guidance](<https://ask.ifas.ufl.edu/publication/SS700>) lists septic influence, improper well location, missing or loose caps, inadequate grouting, and cracked casing as examples. These examples do not diagnose this property.

Shock-chlorination record

Field	Record
Reason for shock and professional/person responsible	
Date, product, concentration, and label instructions	
Well, pressure system, plumbing, heater, and treatment equipment included or bypassed	
Filters, membranes, cartridges removed or replaced as directed	
Flush completion date and chlorine-free observation	
Follow-up sample date, location, and laboratory	
Follow-up result and next instruction	

Shock chlorination is a temporary disinfection response, not continuous disinfection. The [University of Florida procedure](<https://ask.ifas.ufl.edu/publication/SS700>) describes retesting 5 to 10 days afterward; local instructions may differ.

r. Do not mix chlorine with ammonia, acids, or other cleaners. Do not open a well, handle concentrated chemical, or work on electrical or pressurized equipment unless assigned to a qualified professional.

Compare the two treatment concepts

Gate	UV	Continuous chlorination
Water quality	Document turbidity, sediment, iron, manganese, hardness, and model limits; pretreatment may be required	Document chlorine demand, pH, temperature, turbidity, metals, and any post-filtration need
Disinfection path	Lamp and validated flow; no chemical added by the UV step	Metered chemical feed, contact volume/time, measured residual, and downstream filtration as designed
Residual protection	None after the UV chamber	May protect downstream plumbing when correctly designed and maintained
Power	Lamp, controller, alarm, and outage response	Feed pump, controller, alarm, and outage or empty-chemical response
Maintenance	Pretreatment, sleeve cleaning, lamp replacement, alarm response	Chemical replenishment, feed checks, residual checks, contact system, filters, and alarms
Household fit	Can maintain an electrical barrier and respond to alarms; accepts no residual	Can safely store and handle chemical and accepts a more involved operating record

For UV, ask for the exact water-quality limits, validated flow, pretreatment, lamp and sleeve schedule, alarm or shutoff, and power-failure response. The [CDC](<https://www.cdc.gov/drinking-water/about/about-home-water-treatment-systems.html>) says pre-filtered UV works better than UV without pre-filtration; UConn notes that pretreatment may be required above 1 NTU, but the selected unit's validated limits control.

For continuous chlorination, ask for the chemical, dose basis, injection point, chlorine-demand test, contact tank or other validated contact arrangement, residual sample point, post-filter, taste or odor plan, and fail-safe response. Penn State describes approximately 0.3 to 0.5 mg/L residual and roughly 30 minutes of contact as general design guidance, not homeowner settings to copy.

Quote comparison record

Question	UV proposal	Chlorination proposal
Source condition and unresolved risks		
Raw-water results used		
Treated-water target and retest plan		
Design flow and peak-demand assumption		
Pretreatment and post-filtration		
Alarm, bypass, shutoff, and outage response		
Maintenance tasks and intervals		
Parts, chemical, filters, lamp, and service assumptions		
Installation, commissioning, training, and retest included		
Warranty and exclusions in writing		
Total initial and routine-maintenance cost		

UConn recommends asking about maintenance, operating principle, malfunction alerts, life expectancy, waste products, and unit, installation, and routine-maintenance cost. [Penn State's buying guidance](<https://extension.psu.edu/tips-for-buying-water-treatment-equipment>) recommends certified-laboratory testing, multiple estimates, and written warranty and maintenance terms.

Decision record and safe handoff

Choose the statement that matches the evidence, then attach the reports and quote:

- ☐ One-time event suspected; source correction assigned, shock record complete, follow-up sample due: -----
- ☐ Recurring raw-water positives; qualified well/source evaluation required before treatment selection.
- ☐ Treatment may be reducing bacteria at its outlet; verify sample locations, maintenance, alarms, flow, power, and bypass status.
- ☐ Continuous-disinfection proposals are comparable on the same source results, flow, treatment train, failure response, maintenance, and retest plan.
- ☐ Result remains unsafe or unresolved; alternate safe water continues and laboratory/health authority guidance is followed.

Never open energized controls, test live wiring, enter a well pit or confined space, pull a pump, or manipulate a pressurized tank, switch, relief device, or contact vessel as a homeowner experiment. Assign those tasks, source correction, chemical-system work, and any inaccessible inspection to qualified professionals.