



The **WATER FILTRATION** Guys – Cartridge Selection (based on Water Testing)

This is a table mapping each **water testing criterion** to the **filtration cartridge types** (or treatment processes) that can *eliminate, reduce, or normalize* that parameter.

Water Quality Parameters vs. Filter Effectiveness

<u>Water Parameter</u>	<u>Targeted By</u>	<u>Notes</u>
pH (Acidity/Alkalinity)	Neutralizing Cartridge (Calcite, Corosex)– RO Membrane (indirectly)– Siliphos (slight)	RO tends to reduce pH slightly; calcite increases low pH. Siliphos stabilizes pH mildly.
Conductivity (Salts/Ions)	RO Membrane	Only RO or distillation effectively reduces TDS/conductivity.
Hardness (Ca²⁺, Mg²⁺)	Siliphos Cartridge / Balls– RO Membrane	Siliphos prevents scaling, but RO physically removes hardness ions.
Alkalinity	RO Membrane	RO reduces total alkalinity.
Dissolved Oxygen (DO)	Generally not removed by filtration– Aeration used to adjust DO levels	DO is beneficial in most cases; not filtered out, but affected by pressure & flow design.
BOD / COD (organic pollutants)	Activated Carbon (GAC / Block)– RO Membrane– Biofiltration (not cartridge-based)	Carbon removes organic chemicals (lowering BOD); RO reduces dissolved organics.
Nutrients (Nitrate, Phosphate)	RO Membrane– Specialty Ion Exchange/Nitrate Filters	RO removes nitrates, phosphates; standard filters generally do not.
Heavy Metals (Lead, Arsenic, etc.)	RO Membrane– Carbon Block (some, like lead)– KDF Media Filters (not listed)	RO is most effective; KDF (brass media) can remove iron, mercury, etc.
Coliform / E. coli	Ceramic Filter (not in your list)– UV Sterilizer– RO Membrane (partial)	Standard cartridges don't reliably remove bacteria. RO + UV or ceramic is needed.
Heterotrophic Plate Count	UV Sterilizer– Carbon Block (limited)– RO Membrane (partial)	Only UV or disinfectants reliably eliminate microbes. Carbon can reduce counts marginally.



Summary by Cartridge Type

<u>Cartridge Type</u>	<u>Effective Against</u>
Siliphos Balls / Cartridge	Prevents scale (hardness), mildly stabilizes pH
50G RO Membrane	Reduces: TDS, hardness, alkalinity, nitrates, phosphates, heavy metals, bacteria, some organics
Activated Coconut Carbon / GAC	Removes: chlorine, VOCs, organics (lowers BOD/COD), taste/odour compounds
Carbon Block Cartridge	More effective than GAC; reduces chlorine, lead (some), VOCs, taste/odour, organics
Granular Carbon Cartridge	Similar to GAC; high flow, less contact time
Half Spun Fibre / Half GAC Cartridge	Sediment + some organics/chlorine removal
Net Filter / Polyprop / Spun Fibre	Removes sediment only (sand, silt, rust)
Woven Cartridge	Coarse sediment pre-filtration

Missing or Specialised Technologies (not in cartridge form)

<u>Treatment Needed For</u>	<u>Recommended System / Cartridge</u>
Bacteria (Coliform, E. coli)	UV Steriliser or Ceramic Cartridge
High Nitrates	RO or Anion Exchange Cartridge
Arsenic, Fluoride, Lead (advanced)	RO, Activated Alumina, KDF Media
pH Correction (Acidic water)	Calcite Cartridge, Corosex, pH-neutralizer system



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