

State Laboratory of Public Health – Environmental Sciences Unit

Well-water testing profiles

Full Well Panel – Microbiology and Inorganic Chemistry

Category	Description
Full Panel	Alkalinity, Arsenic, Barium, Cadmium, Calcium, Chromium, Nitrate/Nitrite, Chloride, Copper, Fluoride, Hardness (Total), Iron, Lead, Manganese, Magnesium, Mercury, pH, Selenium, Silver, Sodium, Sulfate, Zinc, Total Coliform/ <i>E. coli</i>

Microbiology

Category	Description
Total Coliform/ <i>E. coli</i> , P/A	Presence/Absence testing using an enzymatic procedure.
Total Coliform/ <i>E. coli</i> MPN	Enzymatic procedure using the Quantitray system to quantitate the number of organisms present in the 100-mL sample.
Fecal Coliform, MPN (Quantitray)	Enzymatic procedure using the Quantitray system. This method does not determine the number of Total Coliform present in the sample.
Enterococcus, MPN (Quantitray) – Enzymatic	Enzymatic procedure using the Quantitray system to quantitate the number of organisms present in the 100-mL sample.
Iron Bacteria	Centrifugation followed by a microscopic examination.
Sulfur/Sulfate – Reducing bacteria	Presence/Absence testing for sulfur bacteria and for sulfate-reducing bacteria. This method requires a 30-day incubation period.
Pseudomonas – MTF or MPN (Quantitray) Enzymatic	Quantitative determination of the number of Pseudomonas present in a sample using either the Quantitray MPN or cultural MTF.
Heterotrophic Plate Count	Direct plating of multiple sample dilutions.

Other testing: Contact Environmental Sciences laboratory management 919-733-7308

P/A = Presence/Absence

MPN and **MTF** = Most Probable Number and Multiple Tube Fermentation – quantitative techniques

Inorganic Chemistry

Category	Description
Full Inorganic Panel	Alkalinity, Arsenic, Barium, Cadmium, Calcium, Chloride, Chromium, Nitrate/Nitrite, Copper, Fluoride, Hardness (Total), Iron, Lead, Manganese, Magnesium, Mercury, pH, Selenium, Silver, Sodium, Sulfate, Zinc
Inorganic Panel without Nitrate/Nitrite	Alkalinity, Arsenic, Barium, Cadmium, Calcium, Chloride, Chromium, Copper, Fluoride, Hardness (Total), Iron, Lead, Manganese, Magnesium, Mercury, pH, Selenium, Silver, Sodium, Sulfate, Zinc
Coal Ash Inorganic Panel – a complete evaluation should include the Hexavalent Chromium test below	Alkalinity, Arsenic, Barium, Cadmium, Calcium, Chloride, Total Chromium, Copper, Iron, Lead, Manganese, Magnesium, Mercury, Selenium, Sodium, Sulfate, Zinc, Hardness (Total), Aluminum, Antimony, Beryllium, Boron, Cobalt, Molybdenum, Nickel, Potassium, Strontium, Thallium, Vanadium, Total Suspended Solids, Total Dissolved Solids
Hexavalent Chromium	Hexavalent Chromium
Metals panel	Arsenic, Barium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Manganese, Magnesium, Mercury, Selenium, Silver, Sodium, Zinc
Individual metals	1 – 3 maximum from above, with the addition of Uranium to the sample selection
Lead follow-up, single sample location	1 – 3 samples from same site collected at multiple time intervals
Anions	Fluoride, Chloride, and Sulfate
Disinfection By-Products	Bromide, Bromate, Chlorite, Chlorate
Fluoride only – Physician, Dentist	Fluoride
Nitrate/Nitrite only	Nitrate, Nitrite

Other testing: Contact Environmental Sciences laboratory management 919-733-7308

Organic Chemistry

Category	Description*
Chlorinated pesticides	Aldrin, Dieldrin, Endrin, Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Chlordane, Toxaphene Hexachlorocyclopentadiene, Methoxychlor, Lindane, Trifluralin, Propachlor plus a scan for DDT
Nitrogen-phosphorous pesticides	5 pesticides including Simazine/Prometon and Atrazine
Glyphosate	One of most commonly used pesticides sold under the trade name <i>Round-Up</i>
EDB, DBCP and TCP	Includes the agricultural fumigants 1,2-Dibromoethane (EDB) and 1,2-Dibromo-3-chloropropane (DBCP)
Carbamates	10 carbamate pesticides including Carbaryl (<i>Sevin dust</i>)
Chlorinated acid herbicides	16 herbicides including 2,4-D and Dicamba
Synthetic Organic Chemicals (SOC) scan	Scan for over 20 synthetic organic compounds with the ability to screen for more upon request
Petroleum Products	Petroleum Analysis for heavy weight products and VOC scan for lighter weight petroleum compounds
Volatile Organic Chemicals (VOC)	Scan for 47 volatile organic compounds

*Contact the laboratory for a full list of analytes included in each test category.

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