

## Alamance County Health Department Guide to Understanding Your Water Test Results

Contact ACHD at (336) 570-6367

Well owners should be diligent in finding the best treatment for water problems. Start with a complete water quality analysis from a certified drinking water laboratory. Talk to multiple treatment installers and share your test results with them to help them design a system that will be successful in fixing your problems. Have your water re-tested after installation and at regular intervals after that to ensure the system is working correctly.

Parameter	MCLs (EPA Primary Drinking Water Standards) (milligrams per liter (mg/L))	Aesthetic Limits (EPA Secondary Standards) (milligrams per liter (mg/L))	Potential Health Effects from Ingestion of Water containing substance in levels above MCL's	Potential Aesthetic Effects from Water Use	TREATMENT
<b>pH</b>		6.5-8.5	Low pH or acidic water does not present a health risk, but creates an increased risk of lead and copper leaching from copper pipes and brass plumbing fixtures.	Bitter metallic taste, corrosion of pipes	Acid Neutralizer
<b>Alkalinity</b>	No MCL				Weak acid solution with feed pump and flow meter
<b>Arsenic</b>	0.010		Skin damage or problems with circulatory systems, and may have increased risk of getting cancer		Reverse Osmosis system
<b>Barium</b>	2.0		Increase in blood pressure		Reverse Osmosis system
<b>Calcium</b>	No MCL				Water softener
<b>Cadmium</b>	0.005		Kidney damage		Reverse Osmosis system
<b>Chloride</b>		250		Salty taste	Reverse Osmosis system
<b>Chromium</b>	0.100		Allergic dermatitis		Reverse Osmosis system
<b>Fluoride</b>	4.0	2.0	Bone disease (pain and tenderness of the bones); Children may get mottled teeth.	Tooth discoloration	Reverse Osmosis system
<b>Copper</b>	1.3	1.0	Short term exposure: Gastrointestinal distress Long term exposure: Liver or kidney damage	Metallic taste, blue green staining of plumbing fixtures	Reverse Osmosis
<b>Hardness</b>	No MCL		Generally does not present a health risk	Scale buildup in plumbing fixtures, poor lathering/suds from soap	Water Softener
<b>Iron</b>		0.3		Orange staining, metallic taste	Softener/iron precipitation and then filtration.
<b>Lead</b>	0.015		Infants and children: Delays in physical or mental development; Adults: Kidney problems; high blood pressure		Reverse Osmosis system

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Magnesium	No MCL				Reverse Osmosis system
Manganese		0.05		Black staining, metallic taste	Softener / manganese precipitation and then filtration.
Mercury	0.002		Kidney damage		Reverse Osmosis system
Nitrate & Nitrite	10 (nitrate) 1 (nitrite)		Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome		Reverse Osmosis system
Selenium	0.05		Hair or fingernail loss; numbness in fingers or toes; circulatory problems		Reverse Osmosis system
Sodium	No MCL		A concern for individuals who are following a reduced sodium diet for health reasons.		Reverse Osmosis system or limit sodium from other dietary sources.
Gross Alpha Activity	15 picocuries per liter		An indicator of the presence of radionuclides, primarily Uranium and Radium 226. See health effects for Uranium and Radium, below.		Ion exchange (whole house) or Reverse Osmosis system (point of use). Choice will depend on the levels of other radionuclides (especially radon) as well as levels of iron, manganese, and hardness.  If ion exchange is used, two different ion exchange components may be required. Uranium is removed by <u>anion</u> exchange, while Radium is removed by <u>cation</u> exchange.
Gross Beta Activity			An indicator of the presence of radionuclides, including Radium 228 and many others. See health effects for Uranium and Radium, below.		
Uranium	0.030		Kidney toxicity can result from consuming water above the MCL for weeks or months. Decades of exposure at higher levels creates an increased risk of cancer.		
Radium	5 picocuries per liter		Increased risk of certain types of cancer		
Radon	No MCL				
VOCs			Increased risk of certain types of cancer		
Pesticides			Increased risk of certain types of cancer or liver damage for certain pesticides		
Zinc		5.0		Metallic taste	Flushing of pipes or Reverse Osmosis System