



State of Vermont
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Division of Health Surveillance
Public Health Laboratory

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Agency of Human Services

Gross Alpha Results Interpretation Sheet

Reported results for Gross Alpha are expressed as picoCuries per liter of water. A picoCurie is a standard unit for measuring radioactivity and is one trillionth of a Curie. Both Curies and picoCuries are measurements based on how much of the radioactive substance disintegrates or "decays". Due to the random nature of radioactive decay and the length of time between sampling and analysis, it is never possible to determine the exact level of radioactivity.

ALPHA RADIATION in water is due to dissolved, naturally occurring elements such as radium and uranium. Radon is also an alpha emitter but is not measured in this screening test. Because this is a screening test, an elevated gross alpha indicates the necessity for further testing to determine which elements are present and at what levels.

1. If the measured gross alpha result is less than 5 picoCuries per liter, no further action is necessary.

2. If the measured gross alpha result is greater than or equal to 5 picoCuries per liter but less than 15 picoCuries per liter, radium 226 and radium 228 testing is recommended. Public water systems are required to test for radium 226 at this concentration. The US EPA has set a drinking water limit for radium 226 and radium 228 at 5 picoCuries per liter.

3. If the measured gross alpha result is greater than or equal to 15 picoCuries per liter, a test for radium 226, radium 228 and uranium is recommended. Public water systems are required to retest for gross alpha and to test for radium 226, radium 228 and uranium.

If you have a private water supply and desire additional clarification of your report or further information concerning methods of corrective action, please contact the Health Protection Division at 1-800-439-8550 or 802-652-0358.

If you represent a public water supply and desire additional clarification of your report, please contact the Drinking Water & Groundwater Protection Division at 802-828-1535.