

Murray Kennedy

From: awwa-compliance-list@listserv.awwa.org
Sent: Friday, 24 March 2000 03:17
To: awwa-compliance-list@listserv.awwa.org
Subject: Compliance Forum: Bottled Water

A message from an American Water Works Association (AWWA) discussion forum. AWWA is Dedicated to Safe Drinking Water.

Forum: Compliance Forum
Thread: Bottled Water
Posted Date: 23-Mar-00 at 07:57 AM
Posted By: Fred Pontius (fredp@pontiuswater.com)

***** Message *****

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Fluoride and bacterial content of bottled water vs tap water.

Lalumandier JA, Ayers LW

Department of Community Dentistry, Case Western Reserve University, School of Dentistry, Cleveland, Ohio, USA.
jal10@po.cwru.edu

CONTEXT: Bottled water has become a status symbol and is frequently used in place of tap water. While both waters are considered safe to drink, is either more beneficial in preventing tooth decay and is there a difference in purity?

OBJECTIVE: To determine the fluoride level and bacterial content of commercially bottled waters municipal tap water and to compare the results.

DESIGN: Comparative study

SETTING: Cleveland, Ohio.

SAMPLE: Fifty-seven samples of 5 categories of bottled waters were purchased from local stores. Samples of tap water were collected in sterile containers from the 4 local water processing plants. Fluoride levels were determined by an ion-selective electrode method. Water was cultured quantitatively and levels of bacteria were calculated as colony-forming units (CFUs) per milliliter.

MAIN OUTCOME MEASURE: Fluoride levels and bacterial counts.

RESULTS: Fluoride levels within the range recommended for drinking water by the Ohio Environmental Protection Agency, Cincinnati, 0.80 to 1.30 mg/L, were found in only 3 samples of bottled water tested. The fluoride levels of tap water samples were within 0.04 mg/L of the optimal fluoride level of 1.00 mg/L. The bacterial counts in the bottled water samples ranged from less than 0.01 CFU/mL to 4900 CFUs/mL, including 6 samples with levels substantially above 1000 CFUs/mL. In contrast, bacterial counts in samples of tap water ranged from 0.2 to 2.7 CFUs/mL.

CONCLUSIONS: Five percent of the bottled water purchased in Cleveland fell within the required fluoride range recommended by the state, compared with 100% of the tap water samples, all of which were also within 0.04 mg/L of the optimal fluoride level of 1.00 mg/L. Use of bottled water based on the assumption of purity can be misguided. Recently, the Environmental Protection Agency, Washington, DC, published a final ruling that requires community water systems to regularly report to the public on the quality of local tap water; there are no similar proposals to determine the quality of bottled water through labeling.
End of Message