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DISTRIBUTION WATER MATERIALS AND TAP WATER QUALITY

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Abstract

In a study regarding metals concentrations in tap water, more than 250 samples were collected and analyzed using ICP-EOS techniques on a Perkin Elmer Optima 5300 DV spectrometer. Even if the quality of drinking waters provided by one important producer from Romania were situated in the limits imposed by the Romanian Legislation, the data reflected important influences of the material used in the internal distribution system within the customer buildings on the tap waters quality.
In 85% of the tap water collected from copper cold water pipes high concentrations of copper were recorded, much more than 100 µg/L, which is the maximum admissible value in the Drinking Water Romanian Law. Another problem observed was related to Fe content, possible leached by the cast iron or unprotected steel pipes. In addition, branch pipe or Pb old pipe included in the internal distribution system has a negative influence on the tap water quality.

Key words: domestic distribution system, leaching, metals, tap water

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