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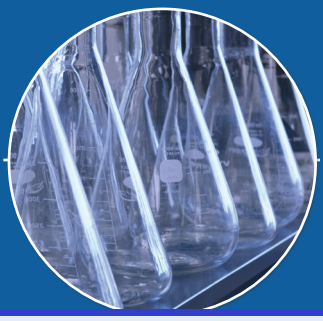
NSF/ANSI/CAN 61 - 2020

Drinking Water System Components - Health Effects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NSF International Standard /
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National Standard of Canada
for Drinking Water Additives –

Drinking Water System Components – Health Effects

Standard Developer
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Foreword[2]

In response to a competitive request for proposals from the US Environmental Protection Agency (US EPA), a Consortium led by NSF International (NSF) agreed to develop voluntary third-party consensus standards and a certification program for all direct and indirect drinking water additives. Other members of the Consortium include the American Water Works Association Research Foundation (WRF), the Association of State Drinking Water Administrators (ASDWA), the Conference of State Health and Environmental Managers (COSHEM), and the American Water Works Association (AWWA). (COSHEM has since become inactive as an organization.) Each organization was represented on a steering committee with oversight responsibility for the administration of the cooperative agreement. The Steering Committee provides guidance on overall administration and management of the cooperative agreement. Currently, the member organizations remain active in an oversight role.

Two Standards for additives products have been adopted. NSF/ANSI/CAN 60: *Drinking Water Treatment Chemicals — Health Effects* covers many of the water treatment chemicals, also known as direct additives. This Standard, NSF/ANSI/CAN 61, covers all indirect additives products and materials. Testing to determine the potential of a product to impart taste and/or odor to drinking water is not included in this Standard.

NSF/ANSI/CAN 61, and subsequent product certification against it, has replaced the US EPA Additives Advisory Program for drinking water system components. US EPA terminated its advisory role in April 1990. For more information with regard to US EPA's actions, refer to the July 7, 1988 *Federal Register* (53FR25586).

NSF/ANSI/CAN 61 was developed to establish minimum requirements for the control of potential adverse human health effects from products that contact drinking water. It does not attempt to include product performance requirements that are currently addressed in other voluntary consensus standards established by such organizations as the AWWA, ASTM International, and the American National Standards Institute (ANSI). Because this Standard complements the performance standards of these organizations, it is recommended that products also meet the appropriate performance requirements specified in the standards of such organizations.

Water age can be a major factor in the deterioration of water quality within plumbing systems affecting issues of both public health and aesthetic concerns. With increased water age is an increased potential for the formation of disinfection by-products, increased corrosion, and an increased potential for microbial regrowth. It can also lead to a loss in the effectiveness of corrosion control measures and an increased potential for nitrification of the water.

Within NSF/ANSI/CAN 61, most extraction protocols result in exposure periods between 12 to 24 hours. While these are appropriate for typical drinking water system use, they can be significantly less than in others. Examples of where high water age can occur include:

— water storage tanks in rain water catchment systems where the duration may be weeks or months;

— plumbing system designs in green buildings which result of overall reduction in water usage without a change in piping design to minimize stagnation;

— buildings where stagnant periods occur due to nonuse such as schools between semesters, vacation homes, or seasonal buildings; and

— products on isolated lines with either long or oversized piping resulting low water turnover.

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