

# Product Testing to AS/NZS 4020



Australian  
Water  
Quality  
Centre

## Products tested to AS/NZS 4020 include:

Elastomers  
Hot Water Systems  
Greases  
Epoxy Coatings  
Tap Components  
Hoses  
Tank Linings  
Pipes  
Sealants  
Valves  
Pumps  
Paints



## AS/NZS 4020.

Testing of products for use in contact  
with drinking water.

This Standard is designed to test any product that comes in contact with drinking water. The Australian Water Quality Centre was the first laboratory in Australia to offer testing to AS/NZS 4020. The first products were submitted in 1992 and since that time, the laboratory has tested thousands of products. Enquiries and products have been received from all areas of Australia. Test reports issued by the laboratory are recognised by Standards Australia and the major Water Authorities. NATA accreditation has been obtained for all the tests described in the Standard.

## The Standard

The Standard requires that products do not affect the taste or appearance of water; do not support the growth of microorganisms; and do not release cytotoxic or mutagenic compounds or metals. The tests required are specific to the type of product submitted.



**Taste Of Water Extract:** A trained panel tastes water extracts to determine whether products release any compounds that impart discernable taste.

**Appearance Of Water Extract:** Water that has been in contact with a product is examined for any increase in colour or turbidity.

**Growth Of Aquatic Micro-organisms:** In a test that takes 8 weeks, products are examined for the ability to support bacterial growth by monitoring dissolved oxygen levels.

**Mutagenic Activity Of Water Extract:** An AMES test is used to determine whether products release mutagenic compounds. Water extracts are mixed with specific bacteria. Any measured change in genetic nature of the bacteria is regarded as evidence of mutagenic activity.



**Cytotoxic Activity Of Water Extract:** Water extracts are tested for cytotoxicity using mammalian cell lines maintained in laboratory culture. Any adverse effect on the health of the cells is recorded as a cytotoxic effect.

**Extraction Of Metals:** Water extracts are examined for the release of Arsenic, Antimony, Barium, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium and Silver. The limits are in line with NHMRC guidelines. The extraction procedure is either by end-of-line test or in-line test.

**High Temperature Tests:** Products in contact with hot water are tested at higher temperatures. This applies to hot water systems, boiling water dispensers (including their outlet taps, fittings and tubes).



## AS/NZS 4020 AWQC Approved Products Directory

To extend our services, AWQC lists approved products or materials in a directory to companies that express an interest at the following web address [www.awqc.com.au/AWQC/AS4020/Approved\\_Products](http://www.awqc.com.au/AWQC/AS4020/Approved_Products). The directory provides an avenue for interested parties to seek information from listed companies, regarding products that have been tested by AWQC and have met the requirements of AS/NZS 4020.

**Water Quality Solutions**  
[www.awqc.com.au](http://www.awqc.com.au)

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The AWQC is a business unit of SA Water, a South Australian Government Enterprise