

PRODUCT TESTING TO AS/NZS 4020



Ensuring quality and compliance to the Standard AS/NZS 4020, the Australian Water Quality Centre (AWQC) is Australia's leading product testing laboratory, with more than 25 years experience providing professional advice to the water industry.

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. We have tested thousands of products since 1992, building a strong understanding of what the industry needs. We provide services for a wide variety of products submitted from across Australia and the world. Our reports are recognised by Standards Australia and the major water authorities. NATA accreditation has been obtained for all tests prescribed 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 hazardous compounds or metals. The tests we provide are specific to the type of product you submit.

— Specialist water services

Ensuring public health

Components of the Standard

Taste: A trained panel tastes water extracts to determine if the product releases compounds that have a detectable taste.

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

Growth of aquatic micro-organisms: Products are examined for the ability to support bacterial growth by monitoring dissolved oxygen levels. This test requires eight weeks.

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

Cytotoxic activity: 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.

Metals: Water extracts are examined for the release of aluminium, arsenic, antimony, barium, boron, cadmium, chromium, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium and silver. The limits are in line with Australian Drinking Water Guidelines (ADWG). 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 and boiling water dispensers (including outlet taps, fittings and tubes).

Organic compounds: Water extracts are analysed for organic compounds using USEPA methods. The limits are in line with ADWG.

Consultancy service

We also provide expert advice and evaluation on product selection to help you meet AS/NZS 4020 requirements.

AS/NZS 4020 AWQC Approved products directory

We have a directory of manufacturers that supply products with AS/NZS 4020 approval.

Visit awqc.com.au/our-services/product-testing.



Examples of products tested to AS/NZS 4020 include:

- Elastomers
- Greases
- Hot water systems
- Epoxy coatings
- Tap components
- Hoses
- Tank linings
- Pipes
- Sealants
- Valves
- Pumps
- Paints

Call us on 1300 653 366
awqc.com.au

