

SINGAPORE STANDARD

**Suitability of non-metallic products for
use in contact with water intended for
human consumption with regard to their
effect on the quality of the water**

– Part 2:6: Methods of test – The extraction of
metals

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– Part 2:6: Methods of test – The extraction of metals

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PUB, the National Water Agency

Setsco Services Pte Ltd

Singapore Sanitary Ware Importer and Exporter Association

Singapore Water Association

Standard Chemical Corporation Pte Ltd

TUV SUD PSB Pte Ltd

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National Foreword

This Singapore Standard was prepared by the Working Group on Drinking Water appointed by the Technical Committee on Water under the direction of the Chemical Standards Committee.

This is a revision of SS 375 : Part 2:6 : 2001. It is an identical adoption of BS 6920-2.6 : 2000 + A2: 2014 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water – Part 2: Methods of test – Section 2.6: The extraction of metals', and is implemented with the permission of BSI Standards Limited.

The following editorial changes were made:

<u>Clauses/Subclauses</u>	<u>Modification</u>
Clause 1 – NOTE 3; Bibliography – Other publication	<i>Deleted the reference to UK regulations [4] to [10] Explanation: These regulations are not applicable to Singapore.</i>

Where appropriate, the words 'British Standard' have been replaced by 'Singapore Standard'. The references to the BS 6920 series have been replaced by the following Singapore Standards:

BS 6920 Series	Corresponding Singapore Standard
BS 6920	SS 375
BS 6920-1: 2014	SS 375: Part 1: 2015
BS 6920-2	SS 375: Part 2
BS 6920-2.1: 2014	SS 375: Part 2:1: 2015
BS 6920-2.6	SS 375: Part 2:6
BS 6920-3	SS 375: Part 3

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

NOTE

1. *Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions.*
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Foreword

Publishing information

This subsection of BS 6920 is published by BSI Standards Limited, under license from The British Standards Institution and came into effect on 15 May 2000. It was prepared by Technical Committee EH/6, *Effects of materials on water quality*.

Supersession

BS 6920-2.6:2000 + A2:2014 supersedes BS 6920-2.6:2000, Incorporating Amendment No.1, which is withdrawn.

Relationship with other publications

BS 6920 is published in several parts, namely *Part 1: Specification, Part 2: Methods of test, Part 3: High temperature tests* and *Part 4: Method for the GCMS identification of water leachable organic substances*.

Part 2 is further subdivided into a number of sections and subsections as follows.

Section 2.1: Samples for testing;

Section 2.2: Odour and flavor of water;

Subsection 2.2.1: General method of test;

Subsection 2.2.2: Method of testing odours and flavours imparted to water by multi-layered hoses and pipes;

Subsection 2.2.3: Method of testing odours and flavours imparted to water by hoses for conveying water for food and drink preparation;

Section 2.3: Appearance of water;

Section 2.4: Growth of aquatic microorganisms test;

Section 2.5: The extraction of substances that may be of concern to public health;

Section 2.6: The extraction of metals.

Information about this document

This edition introduces technical changes but it does not reflect a full review or revision of the standard.

Hazard warnings

WARNING. This British Standard calls for the use of substances and/or procedures that might be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

Introduction

In the development of this test, much consideration was given to the composition of the water used to extract the metals. The composition and character of water intended for human consumption varies widely from region to region and there can be considerable changes according to season. No evidence was found to show that any particular water was more effective than distilled or deionized water in the leaching of metals from organic materials. It was therefore decided that distilled or deionized water was the most convenient for the wide range of products to be tested.

Subsequent experience has shown that the selected test water (4.1) was too aggressive to use with cementitious materials and a suitable test water, based upon the outcome of European research into leaching tests on cementitious materials, is included in this standard (4.4).

Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water – Part 2:6: Methods of test – The extraction of metals

1 Scope

This section of SS 375 specifies the test procedure for assessing the leachability of metals from non-metallic products when used in contact with water intended for human consumption.

NOTE 1 - In view of the type of product tested and the amounts of additives present, a limiting level of solubility in the extract water (saturation) is unlikely to be attained.

NOTE 2 - The limit of detection and sensitivity of the method vary according to the particular metal being analysed (see Clause 8).

NOTE 3 - The National Regulator may specify additional provisions in some cases and will assess the significance of the results obtained.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this section of SS 375. For dated references, subsequent amendments to or revisions of any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS 6068-2, *Water quality – Part 2 : Physical, chemical and biochemical methods.*

SS 375 : Part 1 : 2015, *Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of water – Part 1: Specification.*

SS 375 : Part 2:1 : 2015 *Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water – Part 2:1: Methods of test – Samples for testing.*

BS EN ISO 3696, *Water for analytical laboratory use – Specification and test methods.*

BS EN ISO 10523, *Water quality – Determination of pH.*