

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 2.4: Growth of aquatic microorganisms test

ICS 07.100.20; 13.060.20

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by Technical Committee EH/3, *Water quality*, to Subcommittee EH/3/7, *Effects of materials on water quality*, upon which the following bodies were represented:

- Association of Manufacturers of Domestic Electrical Appliances
- Automatic Vending Association of Britain
- British Bathroom Council
- British Cement Association
- British Coatings Federation Ltd.
- British Malleable Tube Fittings Association
- British Non-Ferrous Metals Federation
- British Plastics Federation
- British Plumbing Fittings Manufacturers' Association
- British Precast Concrete Federation Ltd.
- British Rubber Manufacturers Association
- British Valve and Actuator Manufacturers' Association
- British Water
- Department of the Environment for Northern Ireland
- The Drinking Water Inspectorate
- Galvanizers Association
- Laboratory of the Government Chemist
- Lead Development Association
- Pipeline Industries Guild
- UK Steel Association
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- Water Research Centre
- Water UK
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Foreword

Publishing information

This subsection of BS 6920 is published by BSI Standards Limited, under licence from The British Standards Institution and came into effect on 15 May 2000. It was prepared by EH/3/7, *Effects of materials on water quality* Amendment No. 1 was prepared by Technical Committee EH/6, *Effects of materials on water quality*.

Supersession

BS 6920-2.4:2000+A1:2014 supersedes BS 6920-2.4:2000, which is withdrawn.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 flavour 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.

The start and finish of text introduced or altered by Amendment No. 1 is indicated in the text by tags **A1** **A1**. Minor editorial changes are not tagged.

Hazard warnings

WARNING. This British Standard calls for the use of live microorganisms, substances and/or procedures that can be injurious to health if adequate precautions are not taken. Tests should only be carried out in laboratories with suitable facilities and by suitably qualified persons with an appropriate level of chemical and microbiological expertise. Standard microbiological procedures and precautions should be followed throughout, taking into account that test extracts could contain potentially pathogenic microorganisms. This British Standard 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.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

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Introduction

Organic substances present in non-metallic materials (either as ingredients, contaminants or process by-products) which are capable of being utilized by microorganisms can give rise to a noticeable deterioration in the quality of the water with which they are in contact. This deterioration may manifest itself as a change in either the organoleptic, physical or microbiological characteristics of the water.

Microbial growth may occur in the water itself or at the material/water interface. The phenomenon is distinct from that of microbial attachment which can occur on the surface of any material type. If utilizable substances leach out of the material into the water, then the growth will be self-limiting and decline in proportion to the rate of leaching. In practical situations, growths on such materials have been found to persist for periods from 18 months to 3 years. Where the utilizable substance is bound within or to the material, then growths have been found to persist indefinitely.

Materials capable of supporting microbial growth are unlikely to give rise to an observable deterioration in water quality in every situation. This is due to the influence of various environmental factors, particularly temperature and the presence of residual chlorine. However, in plumbing systems the water temperature is rarely low enough to inhibit microbial growth and the low residual chlorine concentration present in public water supplies will not exert any appreciable bactericidal or bacteriostatic action once the water is within the customer's pipework.

Water intended for human consumption has been treated to ensure the absence of microbial pathogens but it is not sterile. The numbers and types of harmless microorganisms present in water intended for human consumption vary considerably and the natural flora comprises many strains that are adapted to living in a relatively hostile environment. Such organisms differ in their physiological capacity from strains of the same organisms found in other environments or grown in the laboratory. Tests using natural strains of aquatic organisms have given responses that correlate well with the occurrence of problems in practice, whereas the responses of laboratory cultures have not given reliable predictions of the performance of a material in practice.

No single technique, based on growing microorganisms on or in culture media, exists to enumerate all the aquatic microorganisms present in a sample of water. Thus, overall numbers of microorganisms can only be assessed by an indirect measurement of their activity. The method of assessing microbial activity in the test system described in this section of BS 6920 is the

measurement of dissolved oxygen uptake. All the organisms which give rise to appreciable microbial growth respire aerobically and exert an influence on the concentration of oxygen dissolved in the water in the test systems. Other indirect measurement techniques are currently being developed.

A variety of factors may influence the capacity of living organisms to respond in a predictable manner and thus validation procedures are an essential part of any biological assay. A validation procedure fulfils a similar role to a calibration procedure in a physico-chemical test method. The validation procedure in this method is designed to identify the use of unsuitable test reagents or an error in the undertaking of the assay or "chance" occurrences. (These may occur at random when large numbers of assays using living organisms are performed over an extended time period.) Validation is achieved through the use of reference materials.

1 Scope

This section of BS 6920 specifies a method for assessing the ability of a product to promote the multiplication of aerobic aquatic microorganisms in water intended for human consumption. The method is applicable to all types of non-metallic product used in contact with water intended for human consumption.

NOTE  Under the relevant National Regulations [3] to [9], 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 part of BS 6920. 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 6920-1:2014, *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 1: Specification*.

BS 6920-2.2.1:2000+A3:2014, *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 2.2: Odour and flavour of water — Subsection 2.2.1: General method of test*.

BS EN 25814, *Method for determination of dissolved oxygen in water: electrochemical probe method*.

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

3 Terms and definitions

3.1

product

manufactured item, in its finished form, that comes into contact with water, including a component part of a manufactured item

3.2

composite product

product whose water-contact surface is made from a material that differs from those comprising the remainder of the product

3.3

sample

product, or a part of a product, submitted for testing for suitability for use in contact with water intended for human consumption

4 Principle

Tap water in contact with a sample of the product is inoculated with a mixture of naturally occurring aquatic microorganisms. The overall growth/activity of the microbial population is determined indirectly by the measurement of dissolved oxygen depletion in the test system and a control. Validation of the results is achieved by the assessment of reference materials tested in parallel with the sample.

NOTE A flow diagram showing the sequence of the test procedures is given in Annex A.

5 Test premises

Carry out the tests in premises as free as practicable from the presence of any volatile organic chemicals in the atmosphere, as such chemicals can dissolve in exposed water surfaces in sufficient quantities to produce abundant microbial slimes which will mask similar growths due to the test samples.

NOTE The volatile chemical most frequently responsible for such slimes is ethanol, but many other volatile chemicals used in or near the test premises can produce this effect. Even though the containers are sealed during incubation, their contents may become contaminated during water changes.

6 Safety

As well as statutory and general consideration of safety, particular care shall be taken in microbiological laboratories because the organisms present may be pathogenic. Media not being used specifically for tests for pathogens may enable pathogens to grow until present in large numbers, so care shall be exercised in the handling and disposal of all media after incubation. Any written safety guidance shall be supplemented by thorough training and supervision.

NOTE The tests presented in this section of BS 6920 fall within the scope of the report entitled "Categorization of pathogens according to hazard and categories of containment" published by the Health and Safety Executive (1990) [1]. Generally, Containment Level 2 facilities are required.

7 Reagents

7.1 General

Except where otherwise specified, only reagents of analytical grade shall be used.

7.2 Inoculum water, consisting of a fresh sample taken from a lowland surface water suitable for abstracting for water intended for human consumption preparation and that conforms to Table 1.

Conformity of the inoculum water with the criteria in Table 1 shall be determined on the basis of analysis of samples of the surface water. Analyses of the water shall be performed in accordance with the appropriate sections of BS 6068 or, if none exist, with "Methods for the Examination of Water and Associated Materials" [2].

The inoculum water shall be used within 6 h of collection. If suspended solids are present, the water shall be filtered (using filters of average pore size 10 µm) before use.

NOTE If necessary, the criteria in Table 1 may be met by dilution with test water (7.3).

7.3 Test water, obtained from a tap connected directly to a service pipe at mains pressure.

Before collection of the water, the tap shall be flushed until the temperature of the flowing water does not vary by more than 1 °C over a period of 1 min and does not exceed 25 °C.

NOTE For measurements of water temperature, an instrument should be used which shows values to the first decimal place.

The test water shall exhibit the characteristics specified in Table 2 so that it can be added directly to the test container.

Table 1 — Quality criteria for inoculum water

Parameter	Units	Minimum value	Maximum value
pH	—	5.5	9.0
Copper	mg/l	—	0.05
Total presumptive coliforms	per 100 ml	10	—
Presumptive pseudomonads	per 100 ml	1	maximum value deleted

Table 2 — Quality criteria for test water

Parameter	Units	Minimum value	Maximum value
[A1] Duplicate text deleted [A1]			
Total presumptive coliforms	per 100 ml	—	< 1
Bacterial colony count after incubation at: 37 °C for 48 h	per ml	—	50
22 °C for 72 h	per ml	—	500
Phosphate	mg/l (as phosphate ion)	2.0	6.7
Total oxidized nitrogen	mg/l (as N)	5.0	11.3
Free residual chlorine	mg/l (as Cl ₂)	—	0.05
Total residual chlorine	mg/l (as Cl ₂)	—	0.2
pH	—	6.5	9.5
Copper	mg/l	—	0.05
Silver	mg/l	—	0.01
Dissolved oxygen	mg/l	6.5	—

The conformity of the test water with the specified criteria shall be determined on the basis of analysis of samples of water drawn from a tap in the test premises after flushing. Analyses of the water shall be performed in accordance with the appropriate sections of BS 6068 or, if none exists, with “Methods for the Examination of Water and Associated Materials” [2].

The water shall be used directly from the tap or may be stored for up to 1 h prior to use. If storage is necessary, the storage vessel shall be made from a suitable inert material such as borosilicate glass or polyethylene, cleaned using the procedure described in 8.1, except that the final rinse water shall be at a temperature greater than 70 °C and be in contact with the inner surface of the storage vessel for a minimum of 10 min.

If the water is deficient in total oxidized nitrogen and/or phosphate, a sufficient quantity of a 10 g/l solution of potassium nitrate and/or a 2 g/l solution of potassium dihydrogen orthophosphate shall be added from a graduated pipette to achieve the minimum concentrations in the test water specified in Table 2.

If the water has an excess of residual chlorine, a sufficient quantity of a fresh solution of sodium thiosulfate shall be added to neutralize the measured free residual chlorine level to less than 0.05 mg/l as free chlorine in the test water (BS 6920-2.2.1:2000+A3:2014, 6.1). Sodium thiosulfate shall not be added in excess of the required amount to the test water.

7.4 Laboratory water, conforming to grade 3 of BS EN ISO 3696.

8 Apparatus

8.1 Test containers, airtight glass preserving jars of nominal capacity 1 000 ml, fitted with glass lids and seals manufactured from a medical grade of silicone rubber.

Each container shall bear a permanent calibration mark for a capacity of 1 000 ml at $(23 \pm 3) ^\circ\text{C}$.

If the surface area of a sample is not in the range 13 000 mm² to 19 000 mm², a suitably sized test container calibrated in accordance with Table 3 shall be used.

The ullage (headspace) of any container shall not exceed 15 % of its total capacity.

Table 3 — Test container calibration mark

Sample surface area (mm ²)	Volume indicated by calibration mark (ml)
5 500 ≤ to < 9 500	500
9 500 ≤ to < 13 000	750
13 000 ≤ to < 19 000	1 000
19 000 ≤ to ≤ 26 000	1 500

The containers, lids and seals shall be cleaned with an aqueous solution of a biodegradable laboratory detergent, rinsed in tap water and then rinsed once in laboratory water (7.4). Following this, the containers, lids and seals shall be drained and air dried. The lids and seals shall be attached to the containers and stored until required for use.

8.2 Dissolved oxygen meter, for use with an electrochemical probe for the determination of dissolved oxygen.

The electrochemical probe shall be automatically temperature compensated for the solubility of oxygen in the water. The meter and probe shall be maintained in accordance with the manufacturer's instructions. Dissolved oxygen shall be measured in accordance with BS EN 25814.

8.3 Incubator/chamber, consisting of a conventional microbiological incubator or chamber calibrated to maintain $(30 \pm 1)^\circ\text{C}$ with fan-assisted circulation of the internal air.

9 Samples

9.1 General

Test samples shall conform to all the relevant requirements given in BS 6920-2.1.

9.2 Reference materials

Two reference materials shall be prepared for use with each batch of samples. These shall be a positive reference of paraffin wax (microscopy grade) containing between 20 and 25 carbon atoms per molecule (melting point 50°C to 55°C), and a negative reference of borosilicate glass. The surface area and dimensions of each reference material shall conform to BS 6920-2.1:2000+A3:2014, 5.1.2.

NOTE The positive and negative references are used in the validation of the results for this test.

9.3 Test water control

Use a cleaned test container (8.1); after the addition of the inoculum (7.2) and test water (7.3), this constitutes the test water control.

10 Test procedures

10.1 Preparation of the test system

10.1.1 General

On the same working day as testing is to start, soak the samples in test water (7.3) for a minimum of 10 min and then rinse the samples in flowing test water for a further 2 min to 3 min.

NOTE 1 To help ensure that optimum precision and accuracy of results are obtained in any biological test, the test should be in regular use within the test laboratory.

NOTE 2 It is recommended that whenever possible, more than two test products are tested in any one test batch.

Place each sample and reference material (9.2) in separate test containers (8.1). In addition, include with each batch of samples one empty container which constitutes the test water control (9.3). Add inoculum water (7.2) to each container, and fill with test water (7.3) to the calibration mark appropriate to the sample surface area (see Table 3). Use a volume of inoculum in accordance with Table 4.

Table 4 — Volume of inoculum

Sample surface area (mm ²)	Volume of inoculum (ml)
5 500 ≤ to < 9 500	50
9 500 ≤ to < 13 000	75
13 000 ≤ to < 19 000	100
19 000 ≤ to ≤ 26 000	150

If the density of the sample is less than that of water, ensure the sample is kept totally submerged in the test water for the duration of the test by using glass-encapsulated weights cleaned in accordance with 8.1. Seal each container with the lid.

10.1.2 Cementitious samples and samples containing bacteriostatic or bactericidal compounds

If a cementitious sample is included in the batch, include an additional container for a cementitious reference test. Into this container place a paraffin wax reference material (see 9.2) and the second cementitious sample, followed by the inoculum water and test water as in 10.1.1.

If there is reason to believe that a product contains a water-soluble bactericidal or bacteriostatic compound, set up an additional reference container for a bactericidal/bacteriostatic reference test using the sample plus the paraffin wax reference material, as in paragraph one.

NOTE These reference tests are used in the validation of the results from the MDOD test.

10.1.3 Samples applied to metal fittings: jointing compounds, solder fluxes and anaerobic adhesives

If a sample applied to a metal fitting is included in the batch, then include in the test an additional container for a metal fitting reference test. Into this container place an identical metal fitting but without the test sample. Add the inoculum water and test water as in 10.1.1.

NOTE This reference test is used in the validation of the results from the mean dissolved oxygen difference (MDOD) test.

10.2 Incubation

Place each sealed container in an incubator (8.3) in the absence of light at $(30 \pm 1)^\circ\text{C}$ for the periods of time given in 10.3.

10.3 Assessment of microbial growth

Twice a week, decant the water from each container and then refill to the mark with fresh test water (7.3), reseal and continue the incubation. The interval between each water change shall be either 3 days or 4 days.

Measure the dissolved oxygen concentration in the water in accordance with BS EN 25814 at the following times:

- a) at the time of the 4-day water change;
- b) during the fifth, sixth and seventh weeks of the test;
- c) immediately before the water is changed.

First determine the dissolved oxygen concentration of the water for both the container with no sample, i.e. the control, and the container with borosilicate glass, i.e. the negative reference (9.2). Then determine the dissolved oxygen concentration of the water for each test container showing no visible turbidity. Last, measure the dissolved oxygen concentration of the water in the containers showing visible turbidity. Between each reading, rinse the probe thoroughly in water conforming to grade 3 of BS EN ISO 3696. Record the values obtained in accordance with BS EN 25814 (in mg/l) to one decimal place. Calculate the MDOD (see 11.1) for each test product sample.

If the test procedures give individual values outside the expected range, i.e. if the MDOD value is >1.69 but <2.0 mg/l, continue the test for a further two weeks and then calculate the final MDOD using all 5 sets of results.

Record any changes in the visual appearance of the test sample(s).

NOTE At the end of this test, useful information can be obtained about the compatibility of the test material with water intended for human consumption. A visual examination of the test piece, comparing it with an untested example, can indicate potential problem areas such as discolouration, surface blemishes, including osmotic blistering, and changes in the surface texture.

10.4 Measurement of dissolved oxygen for lubricants and lubricated materials

10.4.1 Introduction

Measure the dissolved oxygen concentration of test waters having an oily film on their surface by the method described in 10.4.2.

NOTE Some products give rise to an oily film on the surface of the test water. If the electrochemical dissolved oxygen probe is introduced into the water through an oily film, the characteristics of its membrane are sometimes irreversibly altered.

10.4.2 Measurement

Decant, with minimal disturbance, 300 ml of the water from the control, the reference materials and test water control test containers (see 9.2 and 9.3) into separate, clean 500 ml beakers. Measure the dissolved oxygen concentrations of these waters. Carefully remove 300 ml of the water from beneath the oily film of the test sample container. In order to separate the test water from the oily film, use a clean 400 ml beaker modified to allow the soak water to be drained out of the beaker from below the surface by a bottom exit tube. Transfer this to a clean 500 ml beaker and by visual inspection, ensure that there is no oily film present on the surface of this water. Measure the dissolved oxygen concentration in this water as before.

NOTE Commercially available fat-separating gravy jugs have been found to fulfil these requirements. The soak water (with oil film) should be carefully transferred into the jug with minimal disturbance of the water surface. The oil-free water should be carefully drained into a clean 500 ml beaker.

11 Expression of results

11.1 Calculation of the mean dissolved oxygen difference (MDOD)

Calculate the arithmetic mean of the three dissolved oxygen values obtained from each test sample container, each of the reference tests and the test water control. Subtract the mean of each test container from the mean of the test water control. For a sample applied to a metal fitting, subtract the mean from the mean of the metal fitting reference test (10.1.3).

Express the resultant value for each test or reference test as the MDOD (in mg/l) to one decimal place.

If the MDOD from the test samples container lies within the range >1.69 mg/l to 2.9 mg/l, then test two further samples for a period of seven weeks only. Do not extend this test to 9 weeks (10.3).

Calculate the mean of the three MDOD values $\overline{A_1}$ obtained for the three test pieces during the 5th to 7th weeks of test $\overline{A_1}$. If the value is greater than 2.3 mg/l but less than 2.4 mg/l, express the result to 2 decimal places.

11.2 Validation of results

Glass reference materials shall have an MDOD value of (0.0 ± 0.6) mg/l. Paraffin wax reference materials shall have an MDOD value of (7.5 ± 2.5) mg/l.

The control shall have a dissolved oxygen value (mean value) of (8.5 ± 2.5) mg/l.

If any reference material or the control gives results that do not conform to these values, repeat the tests using fresh reagents and samples.

NOTE The quality characteristics of the test and inoculum waters should be carefully assessed when an "out-of-range" result occurs.

If the results for the cementitious or bactericidal/bacteriostatic reference test (10.1.2) $\overline{A_1}$ shows a reduction in MDOD of greater than 0.6 mg/l $\overline{A_1}$ of the MDOD obtained for the positive reference test (with paraffin wax) when tests have been done in the same batch, then report the material as having a bacteriostatic or bactericidal effect.

11.3 Repeatability and reproducibility of results

When two or more identical samples of a product are examined by one analyst using the same apparatus within a short time interval, it has been found that the repeatability, r , of the arithmetic mean is 15 %. On this basis the repeatability will be exceeded on average not more than once in 20 cases in the normal and correct operation of this method.

When two or more identical samples of a product are examined by two operators working in different laboratories, the reproducibility, R , of the arithmetic mean is 28 %. The reproducibility will be exceeded on average not more than one in 20 cases in the normal and correct operation of this method.

A1 NOTE “R” and “r” have been calculated using 90 test results obtained from the testing of one homogenous reference material in three laboratories during 1985. This analysis has been done on the basis that:

- a) Repeatability “r” is the value below which the absolute difference between two single test results obtained with the same method on identical test material under the same conditions (same operator, same apparatus, same laboratory and a short interval of time) might be expected to lie with a specified probability; in the absence of other indications the probability is 95% and;
- b) Reproducibility “R” is the value below which the absolute difference between two single test results obtained with the same method on identical test material under different conditions (different operators, different apparatus, different laboratories and/or different time) might be expected to lie with a specified probability; in the absence of other indications, the probability is 95%. **A1**

12 Test report

The test report shall include the following particulars:

- a title (e.g. “Test Report”) and the date of issue of the report;
- a reference to this British Standard, i.e. BS 6920-2.4;
- name and address of laboratory, and location where the tests were carried out if different from the address of the laboratory;
- unique identification of the test report (such as serial number), and on each page an identification in order to ensure that the page is recognized as a part of the test report, and a clear identification of the end of the test report;
- name and address of the client placing the order;
- description and unambiguous identification of the item(s) tested; this shall meet the minimum requirements set out in BS 6920-2.1:2014, Clause 9;
- reference to any sampling or sample preparation procedures used by the laboratory, or other bodies and where appropriate, chain of custody details where these are relevant ± in the case of site applied products include all the requirements in accordance with BS 6920-2.1:2014, 9.5;
- date of receipt of test item(s) and date(s) of performance of the tests undertaken;
- deviations from, additions to or exclusions from the test method;
- the MDOD of the test and reference materials (in mg/l); if the test was extended for an additional two weeks (10.3) report both sets of MDOD values;

A1 — if two additional test pieces have been tested in accordance with BS 6920-1:2014, Clause 6, the mean of the three MDOD values obtained for the three test pieces during the 5th to 7th weeks of test; **A1**

— whether any bacteriocidal/bacteriostatic effect was seen (11.2) together with the MDOD values obtained for special reference systems (10.1.2 and 10.1.3);

— if the test was extended by an extra two weeks to nine weeks give both sets of MDOD values;

— the mean dissolved oxygen concentration of the control (in mg/l);

— a description of any changes in the appearance of the test sample after the completion of the test;

— a statement of conformity/non conformity with the test requirements of BS 6920-1:2014, Clause 6;

— the name(s), function(s) and signature(s) or equivalent identification of person(s) authorizing the test report;

— a statement to the effect that the results relate only to the items tested, and that the test report shall not be reproduced except in full, without written approval of the laboratory.

When the test report contains results of tests performed by subcontractors, these results shall be clearly identified.

When reports are reissued to take into account errors/omissions, results of additional tests or for other reasons shall adopt one of two approaches:

- a) issue an additional test report containing the additional information or corrections only and clearly marked “Supplement to Test Report, Reference.....”.
- b) issue a complete amended report (usually the preferred option) with a statement added below the original date of issue of the report stating — “Reissued with correction/additional data/etc (as appropriate):(date).”

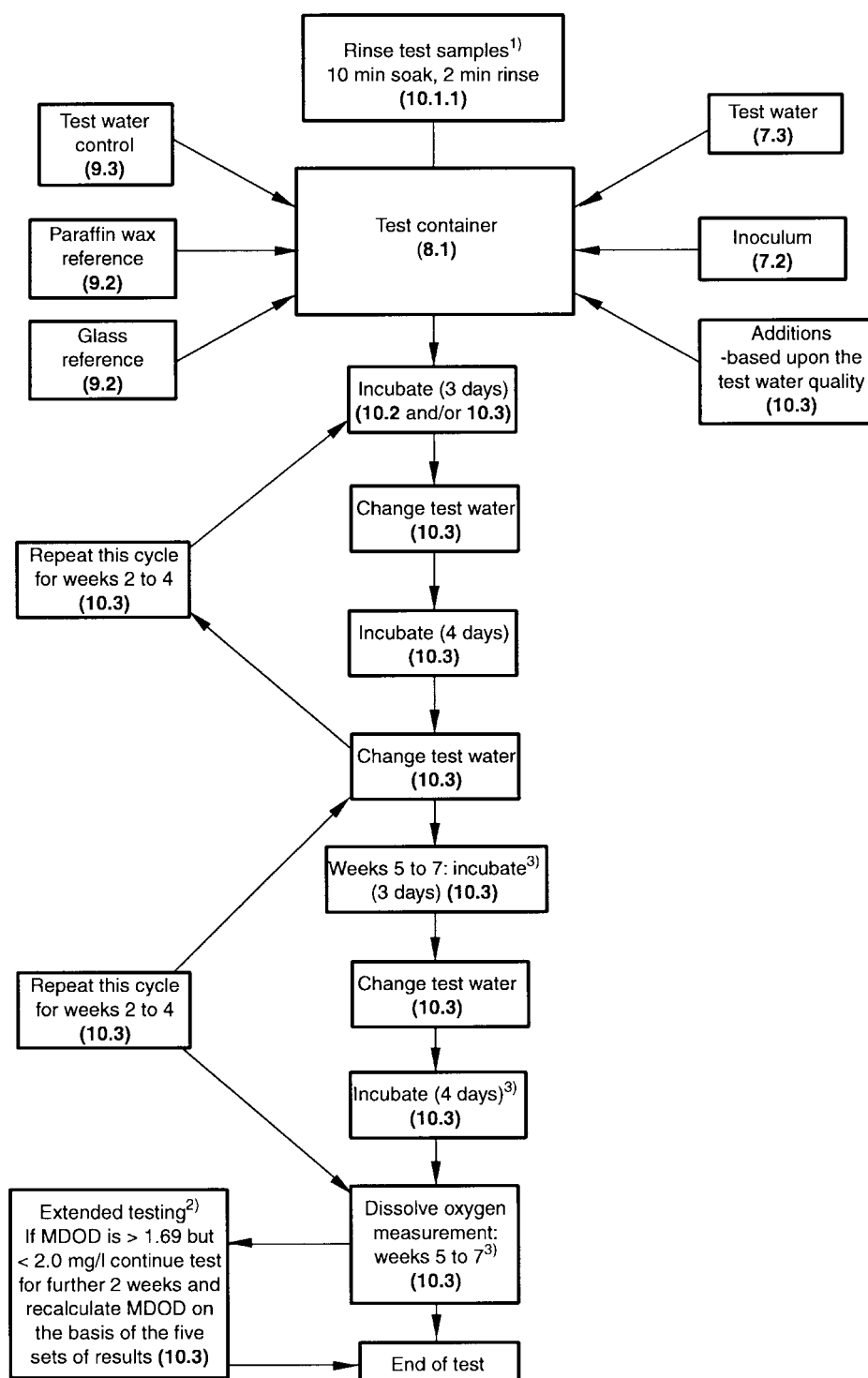
All previous results shall be included for the tested item(s) in any reissued reports containing the results of additional tests.

When it is necessary to issue a completely new test report, it shall be uniquely identified and a reference to the original that it replaces shall be included.

In reports based upon only some of the sections of BS 6920-2 the statement “NO OTHER TESTS WERE UNDERTAKEN ON THIS PRODUCT” shall be included.

Annex A (informative)

Test sequence



¹⁾ The same test sample is used throughout the test – only the water is changed.

²⁾ If two further samples are tested do not extend the test period for these samples.

³⁾ The incubation intervals of three and four days may be reversed to assist the organization of this test, however the dissolved oxygen measurements are always made at the end of the four day incubation period.

Figure A.1 — Test sequence

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Other publications

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