INTERNATIONAL STANDARD

ISO 8669-4

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Urine collection bags —

Part 4:
Determination of freedom from leakage

Poches de recueil d'urine —

Partie 4: Détermination de l'absence de fuites

Reference number
ISO 8669-4:1990(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 8669-4 was prepared by Technical Committee ISO/TC 173, *Technical systems and aids for disabled or handicapped persons*.

ISO 8669 consists of the following parts, under the general title *Urine collection bags*:

— *Part 1: Vocabulary*

— *Part 2: Determination of dimensions*

— *Part 3: Verification of rated volume*

— *Part 4: Determination of freedom from leakage*

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

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Urine collection bags —

Part 4:
Determination of freedom from leakage

1 Scope

This part of ISO 8669 specifies a method for determining the freedom of urinary collection bags from leakage of water. The method tests for leakage from joints and the drainage tap, and through the film of which the bag is constructed. The method does not test drip chambers.

NOTE 1 Other methods for leakage detection will examine aspects other than those covered by this part of ISO 8669.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 8669. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 8669 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 8669-1:1988, *Urine collection bags — Part 1: Vocabulary*.

3 Definitions

For the purposes of this part of ISO 8669, the definitions given in ISO 8669-1 apply.

4 Principle

The bag is filled with coloured water and positioned horizontally to wet all internal surfaces. It is then suspended vertically and inspected visually for leakage.

5 Temperature for testing

A test temperature of 23 °C ± 2 °C shall be used for testing.

6 Apparatus and fluid

6.1 Reservoir, vented to the atmosphere and capable of holding the rated volume of water, fitted with an outlet tube and a closure near its end.

6.2 Means of connecting the outlet of the reservoir to the inlet tubing of the bag.

6.3 Manufacturer's recommended suspension system for non-body-worn bags.

6.4 Means of suspending a body-worn bag in a manner that does not restrict its rated volume capacity, and that allows the bag to hang freely in a vertical position.

6.5 Test liquid, consisting of tap water at 23 °C ± 2 °C containing 0,1 g/l Methylene Blue.

6.6 Device(s) for sealing the inlet tubing and any air vent or filter.

6.7 Graduated measuring cylinder, large enough to hold the rated volume.

7 Procedure

7.1 Seal all air vents or filters, if present.

7.2 Suspend the bag in one of the following ways:

a) for non-body-worn bags, use the manufacturer's recommended suspension system (see 6.3);

b) for body-worn bags, use means that will not restrict its capacity (see 6.4).

7.3 If the bag is fitted with a drainage tap (closure), initially operate the tap ten times as follows. Pour test liquid into the bag, open and close the drain ten times, ensuring that test liquid is present in the bag during the whole operation.

7.4 Ensure that the closure of the reservoir is closed. Add to the reservoir by means of the measuring cylinder a volume of test liquid equal to the rated volume.

7.5 Remove air from the reservoir outlet (e.g. by opening the closure and allowing a small quantity of water to drain into the measuring cylinder. Return this water to the reservoir.)

7.6 Ensure that the bag is deflated, and connect the inlet tubing to the outlet of the reservoir. Ensure that the bag hangs freely in a vertical position and is clear of any obstruction.

7.7 Open the closure of the reservoir and allow the water in the reservoir to drain into the bag under gravity. Take care not to spill test liquid on the outside surface of the bag. If spillage occurs, dry the area affected.

7.8 Visually inspect the bag and tubing for leakage.

7.9 Seal the inlet tubing. Remove the bag from the suspension device, position the bag horizontally on a flat surface and leave undisturbed for 17 h $\pm$ 1 h. Visually inspect the bag and tubing for leakage.

7.10 Reposition the bag in a vertical position as described in 7.2. Leave undisturbed for 4 h and then visually inspect the bag and tubing for leakage.

8 Test report

The test report shall include the following information:

a) a reference to this part of ISO 8669;

b) identity of the bag tested;

c) the test result;

d) the date and place of testing.

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