



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 39748.7-2021

**Urine-absorbing aids for incontinence - Test methods for
characterizing polymer-based absorbent materials - Part 7:
Gravimetric determination of absorption under pressure**

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Foreword

GB/T 39748 "Test Method for Characteristics of Polymer Matrix Absorbent Materials for Urine Absorption Aids for Incontinence" is divided into the following parts.

- Part 1.Determination of pH;
- Part 2.Determination of residual monomer content;
- Part 3.Determination of particle size distribution by sieving method;
- Part 4.Determination of moisture content by heating weight loss method;
- Part 5.Determine the water absorption rate by weighing method in normal saline;
- Part 6.Gravimetric method to determine the retention rate of normal saline after centrifugation;
- Part 7.Gravimetric method to determine the amount of liquid absorbed under pressure;
- Part 8.Determination of flow by weighing method;
- Part 9.Determination of density by weighing method;
- Part 10.Potentiometric titration method to determine the amount of extractable polymer;
- Part 11.Determination of the content of inhalable particles.

This part is Part 7 of GB/T 39748.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

The translation method used in this part is equivalent to the ISO 17190-7:2001 "Characteristics of Incontinence Urine Absorption Aids Polymer Matrix Absorbent

Test methods for performance Part 7. Gravimetric method to determine the amount of liquid absorbed under pressure".

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows.

---GB/T 10739-2002 Standard atmospheric conditions for handling and testing of paper, paperboard and pulp samples (equiv ISO 187:1990);

---GB/T 6682-2008 Analytical laboratory water specifications and test methods (ISO 3696:1987, MOD);

---GB/T 6379.2-2004 Measurement method and accuracy of results (accuracy and precision) Part 2. Determine standard measurement

The basic method of measurement method repeatability and reproducibility (ISO 5725-2:1994, IDT).

Introduction

The GB/T 39748 series of test methods were originally formulated by the European Disposable Nonwovens Association, without technical modification, and integrated into

ISO 17190 is an international standard published in 11 parts.

These test methods have been used in practice for many years, and their reliability is measured according to the general standards (validity and reproducibility, etc.) of the test methods.

It has been proved to be suitable for the detection of sodium polyacrylate superabsorbent materials in sanitary products, including the material detection of urine absorption aids for incontinent persons

Measurement. These test methods are specifically used for testing materials, and are not applicable or applicable to the testing of finished urine absorption aids.

This part of GB/T 39748 is in accordance with ISO 17191 "Urine absorption aids for incontinence. Polyacrylic acid can be inhaled in the air. Highly absorbent water

Material Sodium Atomic Absorption Spectrometry for the Determination of Dust in the Collection Box" is used together.

Urine absorption aids for incontinence

Testing method of polymer matrix absorbent material properties

Part 7. Gravimetric method to determine the amount of liquid absorbed under pressure

1 Scope

This part of GB/T 39748 specifies the determination of the absorption of salt solution by polyacrylate (PA) super absorbent powder under specific pressure method.

This section applies to materials whose particle size is less than 45 μm and does not exceed 0.1%.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

ISO 187 Standard atmospheric conditions for the treatment and testing of paper, paperboard and pulp samples (Paper, board and pulps-Standard at-

mosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioni

ng of samples)

ISO 3696 Analytical laboratory water specifications and test methods (Water for analytical laboratory use-Specification

and test methods)

ISO 5725-2 Measurement methods and accuracy of results (accuracy and precision) Part 2. Determination of repeatability of standard measurement methods

And the basic method of reproducibility

[Accuracy (trueness and precision) of measurement methods and results-Part

2

Basic method for the determination of repeatability and reproducibility of a standard measurement

method]

3 Principle

Weigh the sample, spread the sample on the filter screen at the bottom of the prescribed test cylinder, and place the test cylinder in a petri dish filled with salt solution.

On the filter plate, uniformly apply pressure to the sample, and after contact and absorption for 1 hour, remove the test cylinder, weigh it, and determine the amount of liquid absorbed.

4 Reagents

Unless otherwise specified, only analytical reagents can be used.

4.2 Sodium chloride solution, $c(\text{NaCl}) = 0.9\%$ (mass fraction).

Weigh 9g of sodium chloride to the nearest 0.1g, add it to a 1L volumetric flask (5.4), add deionized water (level 3, see 4.1) to the mark. Shake to

Dissolve.

5 Instruments

5.1 The instrument for measuring the absorption rate under pressure is shown in Figure

1. The composition is as follows.