



BSI Standards Publication

Rubber, raw — Determination of water content by Karl Fischer method

National foreword

This British Standard is the UK implementation of ISO 12492:2025. It supersedes BS ISO 12492:2012, which is withdrawn.

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A list of organizations represented on this committee can be obtained on request to its committee manager.

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**International
Standard**

ISO 12492

**Rubber, raw — Determination of
water content by Karl Fischer method**

*Caoutchouc brut — Détermination de la teneur en eau par la
méthode de Karl Fischer*

**Second edition
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CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	1
5 Reagents	2
6 Apparatus	3
7 Calibration	5
8 Sampling and preparation of test piece	5
9 Procedure	6
9.1 Method A	6
9.1.1 Power on	6
9.1.2 Selection of the generator electrode	6
9.1.3 Filling the electrolysis cell	6
9.1.4 Equipment check	6
9.1.5 Analysis	7
9.2 Method B	8
9.2.1 Preparation of apparatus	8
9.2.2 Checking the instrument	8
9.2.3 Determination	8
10 Expression of results	9
10.1 Method A	9
10.2 Method B	9
11 Precision	10
12 Test report	10
Annex A (normative) Calibration schedule	11
Annex B (informative) Precision	12
Bibliography	13

Foreword

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This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 3, *Raw materials (including latex) for use in the rubber industry*.

This second edition cancels and replaces the first edition (ISO 12492:2012), which has been technically revised.

The main changes are as follows:

- addition of a new method B using a vial type oven in the Scope ([Clause 1](#));
- addition of water standard KF-oven in [5.2](#);
- addition of a coulometric Karl Fischer titrator with an evaporator of vial type oven in [6.2](#) and sample vials in [6.6](#);
- addition of the procedure of method B in [9.2](#);
- addition of the expression of results in [Clause 10](#);
- addition of the precision data in [Annex B](#).

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Introduction

The water content of raw rubber is one of the important characteristics to be determined as a quality control test. Different synthetic rubbers contain varying amounts of water. Water can affect product quality, texture, shelf life, chemical stability and reactivity. A high amount of water can cause processing difficulties.

Water contamination is a cause for major concern in a large number of applications. In the rubber industry, water is one of the major damaging contaminants and is often overlooked as a primary cause of component failure. For certain applications in the rubber industry, even a small amount of water can have damaging effects on production.

Several methods are available for the determination of water content. A Karl Fischer (KF) coulometric titrator is one of the most accurate methods. Unlike other techniques, it can trace low levels of free, emulsified and dissolved water (which cannot be detected with normal gravimetric methods). The test is capable of measuring water levels as low as 0,01 %.

Unlike gravimetric measurements, which are indirect methods that assume that all volatiles removed are water, the Karl Fischer titration is a direct method that is almost specific for water. The method is especially useful for low moisture levels (< 1 %).

The new test method can help determine the water content of the raw rubber and rubber compounds in the shortest possible time and can be helpful for quality control in laboratories. Coulometric determination of water is an absolute method.