
**Instant coffee — Determination of
moisture content — Karl Fischer method
(Reference method)**

*Café instantané — Détermination de la teneur en eau — Méthode de
Karl Fischer (Méthode de référence)*



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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

ISO 20938 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 15, *Coffee*.

This document is a preview generated by EVS

Instant coffee — Determination of moisture content — Karl Fischer method (Reference method)

1 Scope

This International Standard specifies a method for the determination of moisture content in instant coffee by the Karl Fischer titration method, suitable for use as a reference method.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4788, *Laboratory glassware — Graduated measuring cylinders*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

moisture content

content of water, determined according to the procedure specified in this International Standard

NOTE The moisture content is expressed as a percentage mass fraction.

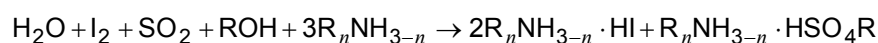
4 Principle

4.1 General

In a Karl Fischer apparatus, a test portion of instant coffee is dissolved in a water-free solution of formamide, methanol, and salicylic acid (FMS). Subsequent titration with a Karl Fischer reagent is applied under continuous stirring until the endpoint of the titration is reached and electrometrically detected. The volume of Karl Fischer reagent consumed is used to calculate the moisture content of the test portion.

4.2 Reaction

During the Karl Fischer titration, water present in the sample reacts with iodine and sulfur dioxide in the presence of an amine and an alcohol (e.g. methanol):



where R is an alkyl or alkoxyl group.

The endpoint of the reaction is detectable by a small, surplus amount of iodine and quantified electrometrically (either amperometrically or voltametrically). The procedure described in this International Standard is performed only with pyridine-free Karl Fischer (one-component) reagent (KFR).