

Caseins and caseinates —

Part 9: Method for the determination of scorched particles

[ISO title: Caseins and caseinates — Determination of scorched
particles content]

NOTE This Part should be read in conjunction with Part 1 “*General introduction, including preparation of laboratory samples*”, published separately.

UDC 637.147.2.064:543.868

National foreword

This Part of BS 6248, which has been prepared under the direction of the Dairying Standards Committee, is identical with ISO 5739:1983 “*Caseins and caseinates — Determination of scorched particles content*”, prepared by ISO/TC 34, Agricultural food products, of the International Organization for Standardization (ISO) in cooperation with the International Dairy Federation (IDF) and the Association of Official Analytical Chemists (AOAC).

Terminology and conventions. The text of the International Standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Where the words “International Standard” appear, referring to this standard they should be read as “this Part of this British Standard”.

Cross-references. Related British Standards for ISO/R 707 and ISO 3310-1, referred to in the text, are respectively BS 809:1974 “*Methods for sampling milk and milk products*” and BS 410:1976 “*Specification for test sieves*”.

With reference to 6.8, a wire cloth test sieve of aperture size 500 µm, complying with BS 410:1976 is suitable.

With reference to clause 7, the methods for sampling given in BS 809:1974 may be employed. It is expected that the revision of ISO/R 707 will be published, when available, as a dual-numbered revision of BS 809.

Additional information. With reference to clause 5, water complying with BS 3978:1966 “*Water for laboratory use*” is suitable.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself 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.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Amendments issued since publication

Amd. No.	Date of issue	Comments

This British Standard, having been prepared under the direction of the Dairying Standards Committee, was published under the authority of the Board of BSI and comes into effect on 29 February 1984

© BSI 12-1999

The following BSI references relate to the work on this standard:
Committee reference DAC/3
Draft for comment 78/50231 DC

ISBN 0 580 13768 6

Contents

	Page
National foreword	Inside front cover
1 Scope and field of application	1
2 References	1
3 Definition	1
4 Principle	1
5 Reagents	1
6 Apparatus	1
7 Sampling	2
8 Procedure	2
9 Expression of results	4
10 Test report	4
Annex A Testing of filtering disks	5
Annex B Preparation of scorched particle standard disks	6
Publications referred to	Inside back cover

1 Scope and field of application

This International Standard specifies a method for the determination of the scorched particles content of caseins and caseinates.

2 References

ISO 707, *Milk and milk products — Methods of sampling*¹⁾.

ISO 3310-1, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*.

3 Definition

scorched particles content of caseins and caseinates

the amount of coloured residue, per 25 g or 10 g of sample, which is insoluble in a sodium carbonate, sodium polyphosphate, disodium ethylenediaminetetraacetate or sodium hydroxide solution, as determined and classified by the procedure specified in this International Standard

4 Principle

Dissolution of a test portion in hot sodium carbonate, sodium polyphosphate or disodium ethylenediaminetetraacetate solution, or in sodium hydroxide solution at room temperature or at 60 °C, filtration of the solution through a filtering disk and visual comparison of the dried disk with scorched particle standard disks.

5 Reagents

The reagents shall be of recognized analytical quality.

The water used in the preparation of the reagent solutions and in the determination shall be distilled water or water of at least equivalent purity, filtered before use.

5.1 Sodium carbonate solution (for acid caseins and for caseinates).

Dissolve 100 g of anhydrous sodium carbonate (Na_2CO_3) in water, dilute to 1 000 ml and filter.

5.2 Sodium polyphosphate solution (for rennet caseins).

Dissolve 20 g of a sodium polyphosphate [tripolyphosphate ($\text{Na}_5\text{P}_3\text{O}_{10}$) or a higher polyphosphate as used in the manufacture of processed cheese] in water, dilute to 1 000 ml and filter.

5.3 Disodium ethylenediaminetetraacetate solution (for calcium caseinates).

Dissolve 100 g of EDTA, disodium salt, dihydrate ($\text{C}_{10}\text{H}_{14}\text{N}_2\text{Na}_2\text{O}_8 \cdot 2\text{H}_2\text{O}$) in water, dilute to 1 000 ml and filter.

5.4 Sodium hydroxide, approximately 1 mol/l solution (for caseins and caseinates which do not dissolve completely in the other reagents).

Dissolve 40 g of sodium hydroxide in water, dilute to 1 000 ml and filter.

5.5 Ethanol, 95 ± 2 % (V/V) (for caseinates).

6 Apparatus

Usual laboratory equipment, and

6.1 Balance, accurate to 0,1 g.

6.2 Conical flask, of capacity 600 ml.

6.3 Measuring cylinders, of capacities 100 and 500 ml.

6.4 Water bath, capable of being controlled at 60 ± 1 °C.

6.5 Filtering disks, of cotton lintine, diameter 32 mm (1.25 in), suitable for use in the filtering device (6.6). The cotton lintine shall be of approximately 135 g/m² (4 oz/yd²) No. 1 filter cotton fibres. The disks shall be tested by the method specified in Annex A and shall meet the requirements specified therein.

6.6 Filtering device, aspirator or pressure type, with a filtering area of diameter 28,6 mm (1.125 in).

¹⁾ At present at the stage of draft. (Revision of ISO/R 707:1968.)