

Methods for

Analysis of dried milk and dried milk products —

Part 16: Determination of nitrate and
nitrite contents —

Section 16.3 Screening method for
nitrate content by cadmium reduction
and spectrometry

[ISO title: Dried milk — Determination of nitrate content —
Method by cadmium reduction and spectrometry
(Screening method)]

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

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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 23 December 1987

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The following BSI references relate to the work on this standard:
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National foreword

BS 1743-16.3, which has been prepared under the direction of the Dairying Standards Committee, is identical with ISO 8151:1987 “*Dried milk — Determination of nitrate content — Method by cadmium reduction and spectrometry (Screening method)*”, prepared by ISO/TC 34 Agricultural food products, of the International Organization for Standardization (ISO). It should be noted that any nitrite present will be determined as nitrate.

The method described in ISO 8151 was developed jointly 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.

The symbol “ml” has been used to denote millilitre. In British Standards it is current practice to use the symbol “mL”.

In British Standards it is current practice to use the spelling “sulphur”, etc. instead of “sulfur”, etc.

Wherever the words “International Standard” appear, referring to this standard, they should be read as “Section of BS 1743”. In footnote 1) to 5.7 “ISO” should be read as “BSI”.

Cross-references

International Standard	Corresponding British Standard
ISO 707:1985	BS 809:1985 <i>Methods for sampling of milk and milk products</i> (Identical)
ISO 835-1:1981	BS 700 <i>Graduated pipettes</i> Part 1:1982 <i>Specification for general requirements</i> (Identical)
ISO 1042:1981	BS 1792:1982 <i>Specification for one-mark volumetric flasks</i> (Identical)

The Technical Committee has reviewed the provisions of ISO 648, to which reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard. A related British Standard to ISO 648 is BS 1583:1986 “*Specification for one-mark pipettes*”.

Additional information. BS 1743-16.1 describes a method of determining the nitrate and nitrite contents of dried milk using cadmium reduction and photometry.

With reference to clause 5, water complying with grade 3 of BS 3978 “*Specification for water for laboratory use*” may be used.

The wording of the first sentence of 5.6 could be interpreted as an instruction to add water to concentrated sulphuric acid. The wording should be construed as meaning “To approximately 600 ml of water in a 1 000 ml one-mark volumetric flask, add carefully 17 ml of the concentrated sulphuric acid.”

Experience in using the method indicates that in order to achieve a clear filtrate (see 8.5.2), it is necessary to allow the solution to stand for at least 15 min but no longer than 1 h. After standing, the solution should be filtered through the fluted filter paper.