## IDF 142-1

Second edition 2009-10-01

# Dried skimmed milk — Determination of vitamin A content —

# Part 1: Colorimetric method

Lait écrémé en poudre — Détermination de la teneur en vitamine A — Partie 1: Méthode colorimétrique



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#### **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 12080-1 IDF 142-1 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*, and the International Dairy Federation (IDF). It is being published jointly by ISO and IDF.

ISO 12080 IDF 142 consists of the following parts, under the general title *Dried skimmed milk* — *Determination of vitamin A content*:

- Part 1: Colorimetric method
- Part 2: Method using high-performance liquid chromatography

This second edition of ISO 12080-1 IDF 142-1 cancels and replaces the first edition (ISO 12080-1:2000), of which it constitutes a minor revision.

### **Foreword**

**IDF** (the International Dairy Federation) is a non-profit organization representing the dairy sector worldwide. IDF membership comprises National Committees in every member country as well as regional dairy associations having signed a formal agreement on cooperation with IDF. All members of IDF have the right to be represented on the IDF Standing Committees carrying out the technical work. IDF collaborates with ISO in the development of standard methods of analysis and sampling for milk and milk products.

The main task of Standing Committees is to prepare International Standards. Draft International Standards adopted by the Action Teams and Standing Committees are circulated to the National Committees for voting. Publication as an International Standard requires approval by at least 50 % of the IDF National Committees casting a vote.

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

ISO 12080-1 IDF 142-1 was prepared by the International Dairy Federation (IDF) and Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*. It is being published jointly by IDF and ISO.

All work was carried out by the former Joint ISO-IDF Group of Experts (E46 — *Vitamins A and D in dried milk*) which is now part of the Joint ISO-IDF Action Team on *Organic contaminants and veterinary residues* of the Standing Committee on *Analytical methods for additives and contaminants*.

ISO 12080 IDF 142 consists of the following parts, under the general title *Dried skimmed milk* — *Determination of vitamin A content*:

- Part 1: Colorimetric method
- Part 2: Method using high-performance liquid chromatography

This edition of ISO 12080-1 IDF 142-1, together with ISO 12080-2 IDF 142-2, cancels and replaces IDF 142:1990, of which it constitutes a minor revision.

### Introduction

The methods specified in ISO 12080 IDF 142 (all parts) have been selected after consideration and laboratory testing of a variety of alternative procedures. Their advantages include the absence of highly dangerous reagents as in, for example, the Carr-Price method, and the avoidance of reagents that are not universally available.

The decision to provide two separate methods was taken to meet the needs both of laboratories with sophisticated equipment (HPLC) and those without such apparatus.

Although the International Standard for vitamin A was discontinued in 1954, the International Unit for this substance has continued to be widely used and its use has been maintained in this International Standard. The International Unit for vitamin A was redefined in 1960 as the activity of  $0,344 \, \mu g$  of pure all-trans-vitamin A acetate (see Annex A).