
**Milk and milk powder — Determination of
aflatoxin M₁ content — Clean-up
by immunoaffinity chromatography and
determination by high-performance liquid
chromatography**

*Lait et lait en poudre — Détermination de la teneur en aflatoxine M₁ —
Purification par chromatographie d'immunoaffinité et détermination par
chromatographie en phase liquide à haute performance*



Foreword

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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.

International Standard ISO 14501 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Subcommittee SC 5, *Milk and milk products*, in collaboration with International Dairy Federation (IDF) and the Association of Official Analytical Chemists (AOAC International), and will also be published by these organizations.

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WARNINGS

- 1 The method described in this International Standard requires the use of chloroform and aflatoxin M₁ solutions. Chloroform is an ozone-depleting substance. Aflatoxins are carcinogenic to human subjects. Attention is drawn to the statement made by the International Agency for Research on Cancer (WHO) [4, 5].
- 2 Adequately protect from daylight the laboratory where the analyses are performed, and keep aflatoxin standard solutions protected from light, for example by using aluminium foil.
- 3 The use of non-acid-washed glassware (e.g. tubes, vials, flasks, beakers, syringes) for aqueous aflatoxin solutions may cause loss of aflatoxin. Moreover, brand new laboratory glassware coming into contact with aqueous solutions of aflatoxin should be soaked in dilute acid (e.g. sulfuric acid, 2 mol/l) for several hours, then rinsed well with distilled water to remove all traces of acid (check to ensure pH is in the range 6 to 8).
- 4 Use a decontamination procedure for laboratory wastes such as solid compounds, solutions in organic solvents, glassware, aqueous solutions and spills. The procedure for decontamination was developed and validated in a programme of the International Agency for Research on Cancer (WHO) [4, 5]

1 Scope

This International Standard specifies a method for the determination of aflatoxin M₁ content of milk and milk powder. The lowest level of validation is 0,08 µg/kg for whole milk powder i.e. 0,008 µg/l for reconstituted liquid milk. The method is also applicable to low fat milk, skimmed milk, low fat milk powder and skimmed milk powder.

2 Term and definition

For the purposes of this International Standard, the following term and definition apply.

2.1

aflatoxin M₁ content

mass fraction of substances determined by the procedure specified in this International Standard

NOTE The aflatoxin M₁ content is expressed as micrograms per litre or micrograms per kilogram.