
**Infant formula and adult
nutritionals — Determination
of pantothenic acid by ultra high
performance liquid chromatography
and tandem mass spectrometry
method (UHPLC-MS/MS)**

*Formules infantiles et produits nutritionnels pour adultes —
Détermination de la teneur en acide pantothénique par
chromatographie liquide à ultra haute performance et spectrométrie
de masse en tandem (CLUHP-SM/SM)*



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Foreword

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The committee responsible for this document is ISO/TC 34, *Food products* in collaboration with AOAC INTERNATIONAL. It is being published by ISO and separately by AOAC INTERNATIONAL. The method described in this International Standard is equivalent to the AOAC Official Method 2012.16: *Pantothenic acid (vitamin B₅) in infant formula and adult/pediatric nutritional formula ultra high pressure liquid chromatography — tandem mass spectrometry method*.

Infant formula and adult nutritionals — Determination of pantothenic acid by ultra high performance liquid chromatography and tandem mass spectrometry method (UHPLC-MS/MS)

WARNING — The use of this International Standard can involve hazardous materials, operations and equipment. This International Standard does not purport to address all the safety problems associated with its use. It is the responsibility of the user of this International Standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This International Standard specifies a method for the quantitative determination of pantothenic acid, excluding bound forms, in infant formula and adult nutritionals (i.e. powders) using ultra high performance liquid chromatography and tandem mass spectrometry method (UHPLC-MS/MS).

2 Terms and definitions

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

2.1

adult nutritional

nutritionally complete, specially formulated food, consumed in liquid form, which may constitute the sole source of nourishment, made from any combination of milk, soy, rice, whey, hydrolysed protein, starch and amino acids, with and without intact protein

2.2

infant formula

breast-milk substitute specially manufactured to satisfy, by itself, the nutritional requirements of infants during the first months of life up to the introduction of appropriate complementary feeding

[SOURCE: Codex Standard 72-1981]

3 Principle

Pantothenic acid is extracted using a 0,4 mol/l ammonium acetate buffer solution. After filtration, the final solution is subjected to ultra high performance liquid chromatography tandem mass spectrometry (UHPLC-MS/MS).

4 Reagents and materials

During the analysis, unless otherwise stated, use only reagents of recognized analytical grade and distilled or demineralized water or water of equivalent purity.