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Animal feeding stuffs — Enzymatic determination of total starch content —

Part 2: Method by enzymatic determination with a hexokinase system and potassium hydroxide dispersion

Alimentation animale — Dosage enzymatique de la teneur totale en amidon —

Partie 2: Méthode par dosage enzymatique avec un système hexokinase et dispersion à l'hydroxyde de potassium

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 10, *Animal feeding stuffs*.

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Animal feeding stuffs — Enzymatic determination of total starch content —

Part 2: Method by enzymatic determination with a hexokinase system and potassium hydroxide dispersion

1 Scope

This document specifies an enzymatic method for determining starch in animal feeding stuffs containing starchy ingredients (cereals, tubers, etc.). The method is also applicable to beans and to the animal digestive contents because it involves the hexokinase system for the final glucose determination.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 6498, *Animal feeding stuffs — Guidelines for sample preparation*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Principle

Washing of the sample with a volume fraction of 40 % ethanol to eliminate the soluble sugars and soluble starch degradation products. Dispersion of the residue by means of potassium hydroxide, hydrolysis of starch into glucose units with amyloglucosidase, determination of the glucose obtained with a hexokinase system.

5 Reagents

Unless otherwise specified, use only reagents of recognized analytical grade and distilled water or water of equivalent purity.

NOTE Reagents 5.7 to 5.10 are also marketed in the form of a ready-to-use kits.

5.1 Water, conforming to at least grade 3 in accordance with ISO 3696.

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