

Animal feeding stuffs - Determination of phytase activity

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 30024:2009 sisaldab Euroopa standardi EN ISO 30024:2009 ingliskeelset teksti.

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ICS 65.120

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ICS 65.120

English Version

Animal feeding stuffs - Determination of phytase activity (ISO
30024:2009)

Aliments des animaux - Détermination de l'activité
phytasique (ISO 30024:2009)

Futtermittel - Bestimmung der Phytaseaktivität (ISO
30024:2009)

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN ISO 30024:2009) has been prepared by Technical Committee CEN/TC 327 "Animal feeding stuffs - Methods of sampling and analysis", the secretariat of which is held by NEN, in collaboration with Technical Committee ISO/TC 34 "Food products".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2010, and conflicting national standards shall be withdrawn at the latest by January 2010.

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Contents

Page

Foreword.....	iv
Introduction.....	v
1 Scope.....	1
2 Terms and definitions.....	1
3 Principle.....	1
4 Reagents.....	2
5 Apparatus.....	3
6 Sampling.....	4
7 Sample preparation.....	4
8 Procedure.....	4
8.1 Blank solutions.....	4
8.2 Standards.....	4
8.3 Standard curve.....	5
8.4 Phytase level control.....	5
8.5 Feed test portions.....	6
9 Calculations.....	7
9.1 Formulation standard curve.....	7
9.2 Calculation phytase activity.....	8
9.3 Correction for phytic acid purity and water content.....	9
9.4 Interference with blank values.....	9
10 Precision.....	9
10.1 Limit of detection and limit of quantification.....	9
10.2 Interlaboratory test.....	10
10.3 Repeatability.....	10
10.4 Reproducibility.....	10
11 Test report.....	10
Annex A (informative) Interlaboratory study results.....	11
Bibliography.....	12

Introduction

This International Standard has been developed to quantify phytase products in feed samples to enable the European Commission to control the phytase content of animal feed products. However, the method cannot be used to evaluate the *in vivo* efficacy of the phytase products.

Animal feeding stuffs — Determination of phytase activity

1 Scope

This International Standard specifies the determination of phytase activity in feed samples.

The method does not distinguish between phytase added as a feed additive and endogenous phytase already present in the feed materials.

The method cannot be used to evaluate or compare the *in vivo* efficacy of the phytase product. It is not a predictive method of the *in vivo* efficacy of phytases present on the market as they can develop different *in vivo* efficacy per unit of activity.

The method is suitable and validated exclusively for the determination of phytase activity and exclusively in complete feeds.

NOTE The harmonized method was developed on the basis of the presently existing phytase products [E1600 (EC 3.1.3.8, 3-phytase), E1614 (EC 3.1.3.26, 4-phytase), and E1640 (EC 3.1.3.26, 4-phytase)]. Therefore, it might not necessarily be suitable as such for phytase products that are developed in the future. The harmonized method is thus a tool which is useful only to evaluate the total phytase activity in feed samples.

2 Terms and definitions

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

2.1

phytase unit

U

amount of enzyme that releases 1 μmol of inorganic phosphate from phytate per minute under the reaction conditions specified in this International Standard

3 Principle

Phytase releases phosphate from the substrate *myo*-inositol hexakisphosphate (phytate). The released inorganic phosphate is determined by forming a yellow complex with an acidic molybdate/vanadate reagent. The optical density (OD) of the yellow complex is measured at a wavelength of 415 nm and the inorganic phosphate released is quantified from a phosphate standard calibration curve.