

**Microbiology of food and animal feeding stuffs –
Polymerase chain reaction (PCR) for the
detection of food-borne pathogens –
Requirements for sample preparation for
qualitative detection (ISO 20837:2006)**

ICS 07.100.30

Språk: engelska

Publicerad: juni 2006

Europastandarden EN ISO 20837:2006 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN ISO 20837:2006.

The European Standard EN ISO 20837:2006 has the status of a Swedish Standard. This document contains the official English version of EN ISO 20837:2006.

Upplýsingar om **sakinnehållet** i standarden lämnas av SIS, Swedish Standards Institute, telefon 08 - 555 520 00.

Standarder kan beställas hos SIS Förlag AB som även lämnar **allmänna upplýsingar** om svensk och utländsk standard.

Postadress: SIS Förlag AB, 118 80 STOCKHOLM
Telefon: 08 - 555 523 10. *Telefax:* 08 - 555 523 11
E-post: sis.sales@sis.se. *Internet:* www.sis.se

EUROPEAN STANDARD

EN ISO 20837

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2006

ICS 07.100.30

English Version

Microbiology of food and animal feeding stuffs - Polymerase chain reaction (PCR) for the detection of food-borne pathogens - Requirements for sample preparation for qualitative detection (ISO 20837:2006)

Microbiologie des aliments - Réaction de polymérisation en chaîne (PCR) pour la détection des micro-organismes pathogènes dans les aliments - Exigences relatives à la préparation des échantillons pour la détection qualitative (ISO 20837:2006)

Mikrobiologie von Lebensmitteln und Futtermitteln - Polymerase-Kettenreaktion (PCR) zum Nachweis von pathogenen Mikroorganismen in Lebensmitteln - Anforderungen an die Probenvorbereitung bei qualitativem Nachweis (ISO 20837:2006)

This European Standard was approved by CEN on 13 April 2006.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN ISO 20837:2006 (E)

Contents		Page
Foreword		iii
Introduction		iv
1	Scope	1
2	Normative references	1
3	Principle	1
4	General laboratory requirements	2
5	Reagents, apparatus and equipment	2
6	Procedure	2
Annex A (informative) Standards concerning the enrichment of microorganisms (bacteria)		4
Annex B (informative) Method for DNA extraction from Gram-negative bacteria		5
Bibliography		7

Foreword

This document (EN ISO 20837:2006) has been prepared by Technical Committee CEN/TC 275 "Food analysis - Horizontal methods", the secretariat of which is held by DIN, in collaboration with Technical Committee ISO/TC 34 "Agricultural 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 October 2006, and conflicting national standards shall be withdrawn at the latest by October 2006.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

EN ISO 20837:2006 (E)

Introduction

The detection of food-borne pathogens by PCR is usually performed by means of the following successive (or simultaneous) steps:

- homogenization of the sample;
- (cultural) enrichment of the pathogen under study and sample treatment;
- nucleic acid extraction (optional);
- amplification of nucleic acids from the pathogen under study;
- detection of the amplified DNA from the pathogen under study.

References to International Standards concerning enrichment of bacteria from food matrices are given in Annex A. An example of a specific method for sample preparation is given in Annex B.

This International Standard is related to a series of standards and a Technical Specification under the general title *Microbiology of food and animal feeding stuffs — Polymerase chain reaction (PCR) for the detection of food-borne pathogens*:

- *General requirements and definitions* (ISO 22174)
- *Requirements for sample preparation for qualitative detection* (ISO 20837)
- *Performance testing for thermal cyclers* (ISO/TS 20836)
- *Requirements for amplification and detection for qualitative methods* (ISO 20838).

The International Organization for Standardization (ISO) draws attention to the fact that it is claimed that compliance with this document may involve the use of one or more patents concerning the PCR technology.

ISO takes no position concerning the evidence, validity and scope of these patent rights.

ISO has been informed that Applied Biosystems, Roche Molecular Systems, Inc. and F. Hoffman-La Roche Ltd. hold patent rights concerning the PCR technology. The companies have assured ISO that they are willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statements of the holders of these patent rights are registered with ISO. Information may be obtained from:

Licensing Department
Applied Biosystems
850 Lincoln Centre Drive
Foster City, CA 94404
USA

and

Roche Molecular Systems, Inc.
Licensing Department
1145 Atlantic Avenue
Alameda, CA 94501
USA

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

