National Standards Authority of Ireland

IRISH STANDARD

I.S. CEN/TS 14537:2003

ICS 67.050

National Standards
Authority of Ireland
Dublin 9
Ireland

Tel: (01) 807 3800
Tel: (01) 807 3838

FOODSTUFFS - DETERMINATION OF NEOHESPERIDIN-DIHYDROCHALCON

This Irish Standard was published under the authority of the National Standards Authority of Ireland and comes into effect on:

August 29, 2003

Price Code F

Údarás um Chaighdeáin Náisiúnta na hÉireann

TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 14537

April 2003

ICS 67.050

English version

Foodstuffs - Determination of neohesperidin-dihydrochalcon

Lebensmittel - Bestimmung von Neohesperidin-Dihydrochalcon mit Hochleistungsflüssigkeitschromatographie (HPLC)

This Technical Specification (CEN/TS) was approved by CEN on 5 January 2003 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, 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

Ref. No. CEN/TS 14537:2003 E

Contents

Foreword

This document (CEN/TS 14537:2003) has been prepared by Technical Committee CEN/TC 275 “Food analysis - Horizontal methods”, the secretariat of which is held by DIN.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Annexes A, B and C are informative.

1 Scope

This Technical Specification specifies an HPLC-method for the determination of neohesperidin-dihydrochalcon (NHDC) in foodstuffs.

It has been validated in a collaborative test with cherry yoghurt containing 42,7 mg/kg and on a multi vitamin drink containing 35,6 mg/l NHDC [1].

The method has been successfully applied to a range of other foods including marzipan, bakery products, cream, custard powder, chocolate, ice cream.

2 Normative references

This Technical Specification incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this Technical Specification only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN ISO 3696, *Water for analytical laboratory use — Specification and test methods (ISO 3696:1987).*

3 Principle

The sample is diluted with methanol or extracted with a methanol/water – mixture and possibly filtered. NHDC is separated by HPLC on a reversed phase, detected spectrometrically and determined by the external standard method [1].

4 Reagents

4.1 General

During the analysis, unless otherwise stated, use only reagents of recognised analytical grade and water of at least grade 1 according to EN ISO 3696 or use distilled water.

4.2 tetra-n-butyl ammonium hydrogen sulfate-solution (mobile Phase A) for HPLC recommended

Substance concentration c = 0,01 mol/l

4.3 Methanol (mobile Phase B)

4.4 HPLC mobile phase

For the mobile phase, tetra-*n*-butyl ammonium hydrogen sulfate-solution (4.2) and methanol (4.3) are applied in appropriate ratios (gradient, e.g. as given in 6.3.1). Filter through a membrane filter (5.2) before use.

4.5 Standard substance

The NHDC standard substance shall fulfil the requirements according to EU directive 95/31/EU [2].

Commercially available NHDC can contain 4 mol of water. If using this commercially available substance, take its water content into account. The molecular weight of dried NHDC is 612,6 g/mol.