

Textiles — Methods for the determination of certain aromatic amines derived from azo colorants —

Part 2: Detection of the use of certain azo colorants accessible by extracting the fibres

The European Standard EN 14362-2:2003 has the status of a
British Standard

ICS 59.080.30

National foreword

This British Standard is the official English language version of EN 14362-2:2003, including Corrigendum March 2005.

The UK participation in its preparation was entrusted to Technical Committee TCI/80, Textiles — Chemical testing, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

This British Standard, was published under the authority of the Standards Policy and Strategy Committee on 25 November 2003

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 17 and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

Amendments issued since publication

Amd. No.	Date	Comments
15931 Corrigendum No. 1	March 2006	Multiple text corrections

© BSI 6 March 2006

ISBN 0 580 42973 3

English version

Textiles - Methods for determination of certain aromatic amines derived from azo colorants - Part 2: Detection of the use of certain azo colorants accessible by extracting the fibres

Textiles - Méthodes de détermination de certaines amines aromatiques dérivées de colorants azoïques - Partie 2: Détection de l'utilisation de certains colorants azoïques accessibles par l'extraction des fibres

Textilien - Verfahren für die Bestimmung bestimmter aromatischer Amine aus Azofarbstoffen - Teil 2: Verwendungsnachweis bestimmter Azofarbstoffe durch Extraktion der Fasern

This European Standard was approved by CEN on 1 September 2003.

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 Management Centre 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 Management Centre has the same status as the official versions.

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

Contents

	page
Foreword	3
1 Scope	4
2 Normative references	4
3 General	4
4 Principle	5
5 Safety precautions	6
6 Reagents	6
7 Apparatus	7
8 Procedure	8
8.1 Preparation of test specimens	8
8.2 Extraction	8
8.3 Reductive cleavage	8
8.4 Separation and concentration of the amines	8
8.5 Amine detection and quantification	9
9 Evaluation	9
9.1 Calculation	9
9.2 Reliability of the method	9
10 Test report	9
Annex A (informative) Chromatographic analyses	10
A.1 Preliminary remark	10
A.2 Thin layer chromatography (TLC)	10
A.3 High performance liquid chromatography (HPLC)	11
A.4 Capillary gas chromatography (GC)	11
A.5 Capillary electrophoresis (CE)	12
A.6 Check of the analytical system	12
Annex B (normative) Calculation	14
Annex C (informative) Reliability of the method	15
Annex D (informative) Assessment guide-interpretation of analytical results	16
Annex E (informative) Apparatus - Extractor according to Baumgarte	17

Foreword

This document (EN 14362-2:2003) has been prepared by Technical Committee CEN/TC 248 “Textiles and textile products”, the secretariat of which is held by BSI.

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 April 2004, and conflicting national standards shall be withdrawn at the latest by April 2004.

Annexes A, C, D and E are informative. Annex B is normative.

This European Standard calls for the use of substances and/or procedures that may be injurious to health if appropriate precautions are not observed. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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.

1 Scope

This part of EN 14362 describes a procedure to detect the use of certain azo colorants that may not be used in the manufacture or treatment of certain commodities made of synthetic fibres dyed with extractable dyes.

For the direct test method, see EN 14362-1 *Detection of the use of certain azo colorants accessible without extraction*.

For certain fibre blends both parts of this standard may need to be applied.

2 Normative references

This European Standard 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 European Standard 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)*

ISO 4787, *Laboratory glassware — Volumetric glassware — Methods for use and testing of capacity*

3 General

Certain azo colorants may release, by reductive cleavage of azo group(s), one or more of the following aromatic amines, which are proscribed under Directive 2002/61/EC.

Table 1 – Aromatic amines proscribed under Directive 2002/61/EC.

No.	CAS number	Index number	EC number	Substances
1	92-67-1	612-072-00-6	202-177-1	biphenyl-4-ylamin 4-aminobiphenyl xenylamine
2	92-87-5	612-042-00-2	202-199-1	benzidine
3	95-69-2		202-441-6	4-chloro-o-toluidine
4	91-59-8	612-022-00-3	202-080-4	2-naphthylamine
5*	97-56-3	611-006-00-3	202-591-2	o-aminoazotoluene 4-amino-2',3-dimethylazobenzene 4-o-tolylazo-o-toluidine
6*	99-55-8		202-765-8	5-nitro-o-toluidine
7	106-47-8	612-137-00-9	203-401-0	4-chloroaniline
8	615-05-4		210-406-1	4-methoxy-m-phenylenediamine