

Specification for lac and shellac

Part 3. Bleached lac

ICS 87.040

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee STI/3, Paints, media and related products, upon which the following bodies were represented:

- British Coatings Federation Ltd.
- European Resin Manufacturers' Association
- FOSFA International
- Ministry of Defence
- Oil and Colour Chemists Association
- Seed Crushers' and Oil Processors' Association

This British Standard, having been prepared under the direction of the Sector Board for Materials and Chemicals, was published under the authority of the Standards Board and comes into effect on 15 August 1997

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Amendments issued since publication

Amd. No.	Date	Text affected

The following BSI references relate to the work on this standard:
Committee reference STI/3
Draft for comment 95/120413 DC

ISBN 0 580 27944 8

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National foreword

This Part of BS 7897 has been prepared by Technical Committee STI/3. It is identical with ISO 57 : 1975 (*Incorporating Amendment No. 1 : 1996*), *Bleached lac — Specification*.

ISO 57 was prepared by Technical Committee ISO/TC50, Lac, with the active participation and approval of the UK.

This standard supersedes BS 1284 : 1960 which is withdrawn.

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

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, the ISO front cover and foreword, pages 1 to 26, an inside back cover and a back cover.

INTERNATIONAL STANDARD



57

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Bleached lac — Specification

Gomme laque blanche — Spécifications

First edition — 1975-02-01

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 57 was drawn up by Technical Committee ISO/TC 50, *Lac*, and circulated to the Member Bodies in February 1973.

It has been approved by the Member Bodies of the following countries :

Bulgaria	Netherlands	Thailand
Egypt, Arab Rep. of	Poland	United Kingdom
India	Portugal	U.S.A.

No Member Body expressed disapproval of the document.

This International Standard cancels and replaces ISO Recommendation R 57-1957, of which it constitutes a technical revision.

Descriptors : shellac, materials specifications, chemical analysis, determination of content, volatile matter, insoluble matter, chlorine, inorganic acids, ashes, arsenic, lead.

Bleached lac — Specification

0 INTRODUCTION

0.1 This International Standard covers bone-dry bleached lac, an intermediate surface-dry (air-dry) bleached lac, and wet bleached lac, the three differing in their requirements in the moisture content. No distinction is sought to be introduced between bone-dry, kiln-dry or vac-dry bleached lac or between the various designations of the intermediate type covering dried, crushed hanks, or flats in granules or flakes, or between wet-bleached lac in hank, bar or any other form. Only three conditions, i.e. bone-dry, surface-dry (air-dry) and wet, and two types in each condition, namely a) regular bleached lac (cloudy or waxy), and b) refined bleached lac (transparent or wax-free), more briefly indicated as "regular" and "refined" are recognized.

0.2 No limit has been specified for the chlorine content of bleached lac. Normally the chlorine content of bleached lac varies between 1,5 and 4,5 % in moisture-free material, but ISO/TC 50 has decided to place it on record that it is desirable to maintain it at a low value (say at 3 %, maximum).

0.3 Likewise, no limit has been specified for the acid value of bleached lac. This depends on the methods of bleaching. The acid value of a good bleached lac is normally between 65 and 100 on the moisture-free material. ISO/TC 50 considers it desirable to retain the acid value at as low a value as possible below 105.

0.4 Similarly the mineral acid content of bleached lac should also be as low as possible, requiring for neutralization under the conditions specified in annex K not more than 82 ml of 0,1 N sodium hydroxide per 100 g of the moisture-free material which is equivalent to 0,4 % of mineral acid calculated as sulphuric acid (H_2SO_4).

0.5 The maximum limit for the volatile matter (moisture) in the bone-dry material has been specified as a mandatory requirement, i.e. a maximum of 6 % (see clause 5). In so far as surface-dry (air-dry) and wet bleached lacs are concerned, the actual limits have been made the subject of agreement between purchaser and vendor. The normal moisture content of the surface-dry (air-dry) material does not exceed 12 %; that of wet bleached lac does not exceed 30 %.

0.6 The mesh sizes of sieves given in this International Standard have been indicated in terms of aperture dimensions, and a note, giving number designations of approximately equivalent sieves according to ISO 565 and according to the national standards of the U.S.A., the United Kingdom, France, Germany and India, has been added for the sake of convenience.

0.7 For the purpose of deciding whether a particular requirement of this International Standard is complied with, the final value observed or calculated, expressing the result of test or analysis, shall be rounded off to the same number of places as that in the specified value; it being always understood that the analyst will carry out his determination to at least one place more than in the specified value.

1 SCOPE AND FIELD OF APPLICATION

1.1 This International Standard specifies the requirements and methods of test for bleached lac in any form that may be agreed upon between the purchaser and the vendor.

1.2 This International Standard is intended chiefly to cover the technical provisions for guiding the purchase of the material, but does not include all the necessary provisions of a contract.

1.3 The limits specified in this International Standard are not to be exceeded.

2 DEFINITIONS

For the purposes of this International Standard, the following definitions apply :

2.1 sticklac : The natural product of lac insects.

2.2 seedlac : The product obtained by washing crushed sticklac.

2.3 shellac : The product obtained by refining seedlac by heat processes or by both heat and solvent processes.

2.4 bleached lac : The product obtained by subjecting seedlac or shellac in solution to a process of bleaching and then recovering the product in a solid form.

2.5 regular (cloudy or waxy) **bleached lac** : The ordinary type of bleached lac from which wax has not been removed.

2.6 refined (transparent or wax-free) **bleached lac** : The type of bleached lac from which wax has been removed during the process of manufacture.

2.7 approved sample : The sample agreed upon between the purchaser and the vendor as the standard for colour and appearance.

3 FORM

The form of bleached lac is subject to agreement between the purchaser and the vendor.

4 CONDITIONS AND TYPES

4.1 Three conditions of bleached lac are specified, namely :

- a) bone-dry,
- b) surface-dry (air-dry) and
- c) wet.

4.2 Two types are specified for each of these conditions, namely :

- a) regular (cloudy or waxy), and
- b) refined (transparent or wax-free).

5 VOLATILE MATTER (MOISTURE)

5.1 Bone-dry bleached lac shall contain not more than 6 % of volatile matter (moisture) as determined by the method described in annex A.

5.2 The percentage of volatile matter (moisture) present in surface-dry (air-dry) bleached lac shall be subject to agreement between the purchaser and the vendor and shall be determined by the method described in annex A (see 0.5).

5.3 The percentage of volatile matter (moisture) in wet bleached lac shall be subject to agreement between the purchaser and the vendor and shall be determined by the method described in annex A (see 0.5).

6 MATTER INSOLUBLE IN HOT ALCOHOL

Bleached lac shall not contain matter insoluble in hot alcohol, computed on the basis of moisture-free material, in excess of the limits given below :

- regular : 1,1 %
- refined : 0,2 %

Matter insoluble in hot alcohol shall be determined by either of the methods described in annex B, as agreed between the purchaser and the vendor.

7 COLOUR

The appearance and colour of bleached lac shall not be inferior to that of the approved sample when judged by visual examination. Alternatively the colour in solution may be tested by either of the methods described in annex C, as agreed between the purchaser and the vendor.

8 WAX

Bleached lac shall not contain wax, as determined by the appropriate method described in annex D and computed on the basis of moisture-free material, in excess of the limits given below :

- regular : 5,5 %
- refined : 0,2 %

9 ASH

Bleached lac shall not leave ash, as determined by the method described in annex E and computed on the basis of moisture-free material, in excess of the limits given below :

- regular : 1,0 %
- refined : 0,5 %

10 ROSIN AND COPALS

10.1 Bleached lac shall contain no rosin, as tested by the method described in annex F.

10.2 Bleached lac shall contain no copals, as tested by the method described in annex G.

11 MATTER SOLUBLE IN WATER

Bleached lac shall not contain matter soluble in water, as determined by the method described in annex H and computed on the basis of moisture-free material, in excess of the limits given below :

- regular : 1,0 %
- refined : 0,3 %

12 CHLORINE CONTENT

The chlorine content of bleached lac shall be subject to agreement between the purchaser and the vendor and, when specified, it shall be determined by the method described in annex J (see 0.2).

13 ACID VALUE AND MINERAL ACID

13.1 The acid value of bleached lac shall be subject to agreement between the purchaser and the vendor and, when specified, it shall be determined by the method described in annex K (see 0.3).

13.2 The mineral acid content of bleached lac shall be subject to agreement between the purchaser and the vendor and, when specified, it shall be determined by the method described in annex L (see 0.4).

14 FREE CHLORINE OR PEROXIDES

A requirement for the absence of free chlorine or peroxides shall be subject to agreement between the purchaser and the vendor. When specified, the aqueous extract of the material shall not show the presence of free chlorine or peroxides when tested by the method described in annex M.

15 ARSENIC

The arsenic content of bleached lac shall be subject to agreement between the purchaser and the vendor and, when specified, it shall be determined by the method described in annex N.

16 LEAD

The lead content of bleached lac shall be subject to agreement between the purchaser and the vendor and, when specified, it shall be determined by the method described in annex P.

17 REQUIREMENTS

The requirements for bleached lac are given in table 1.

The optional requirements are subject to agreement between the purchaser and the vendor.

TABLE 1 – Requirements for bleached lac

Reference	Character of requirement	Characteristic	Maximum limits for type		Method of testing : reference to annex
			Regular	Refined	
5	Essential	Volatile matter (moisture) % Bone-dry Other conditions	6,0	6,0	A A
			As agreed between purchaser and vendor		
6	Essential	Matter insoluble in hot alcohol, % ¹⁾	1,1	0,2	B
7	Essential	Colour	Close visual match to the approved sample		C
8	Essential	Wax, % ¹⁾	5,5	0,2	D
9	Essential	Ash, % ¹⁾	1,0	0,5	E
10.1	Essential	Rosin	Nil	Nil	F
10.2	Essential	Copals	Nil	Nil	G
11	Essential	Matter soluble in water, % ¹⁾	1,0	0,3	H
12	Optional	Chlorine content ¹⁾	As agreed between purchaser and vendor (see 0.2)		J
13.1	Optional	Acid value ¹⁾	As agreed between purchaser and vendor (see 0.3)		K
13.2	Optional	Mineral acid ¹⁾	As agreed between purchaser and vendor (see 0.4)		L
14	Optional	Free chlorine or peroxides	Absent	Absent	M
15	Optional	Arsenic ¹⁾	As agreed between purchaser and vendor		N
16	Optional	Lead ¹⁾	As agreed between purchaser and vendor		P

1) To be calculated on a moisture-free basis.