
INTERNATIONAL STANDARD



56 / 1

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

Shellac — Specification — Part I : Hand-made shellac

Gomme laque en feuilles — Spécification — Partie I : Gomme laque en feuilles de fabrication manuelle

First edition — 1979-04-01

UDC 668.447.31

Ref. No. ISO 56/I-1979 (E)

Descriptors : shellac, materials specifications, chemical analysis, determination of content.

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 56/1 was developed by Technical Committee ISO/TC 50, *Lac*, and was circulated to the member bodies in March 1977.

It has been approved by the member bodies of the following countries :

Austria	Egypt, Arab Rep. of	Sweden
Belgium	India	Turkey
Czechoslovakia	Netherlands	Yugoslavia

No member body expressed disapproval of the document.

Acknowledgement is due for the assistance that has been derived from the specifications and publications of the American Society for Testing and Materials, the American Bleached Shellac Manufacturers' Association, the United States Shellac Importers' Association, the British Standards Institution, the Agricultural Marketing Adviser to the Government of India, Messrs. Angelo Brothers Ltd., Calcutta and the Indian Lac Research Institute. Considerable assistance has been derived also from *A Handbook of Shellac Analysis*, by M. Rangaswami and H.K. Sen, issued by the Indian Lac Research Institute.

CONTENTS

	Page
0 Introduction	1
1 Scope and field of application	1
2 Definitions.	1
3 Form and condition.	2
4 Grades	2
5 Mandatory requirements.	2
6 Optional requirements	2
7 Sampling.	3

Annexes

A Determination of matter insoluble in hot alcohol	4
B Detection of rosin (Halphen-Hicks method).	9
C Detection of orpiment.	10
D Determination of arsenic content	11
E Determination of volatile matter (moisture) content.	16
F Determination of colour index	17
G Determination of wax	18
H Determination of ash	20
J Determination of matter soluble in water and test for neutrality of aqueous extract	21
K Flow test	22
L Heat polymerization test	25
M Determination of acid value	27
N Determination of lead content	28
P Determination of grit content.	30
Q Determination of iodine value.	31
R Sampling	33

Shellac — Specification — Part I : Hand-made shellac

0 INTRODUCTION

0.1 ISO/R 56, published in 1957, covered shellac, hand-made as well as machine-made. It has now been revised into two parts, one for each kind.

0.2 The usual trade descriptions of hand-made shellac are based on the Indian names of the host trees, the season of cropping the sticklac, visual differences, or a combination of any of these. The use of these grade designations has led to confusion and some marketing difficulties. When ISO/R 55 was prepared in 1957, it was decided to adopt only six grades of hand-made shellac, which were independent of the names of host trees or seasons. However, the expectation that the ISO grades for hand-made shellac would be increasingly adopted in trade and ultimately replace the traditional grade designations has not come about. A new system has, therefore, been adopted in this International Standard so that hand-made shellac can now be completely identified by combination of the ISO grade and the trade grade.

0.3 For matter insoluble in hot alcohol, two limits are prescribed, in line with the trade practice, a basic limit and a relaxed limit. The relaxed limit shall be the limit for rejection.

0.4 The requirement for non-volatile matter soluble in cold alcohol has not been retained as the requirement is applied in practice to waste products of lac only. The methods for quantitative determination of rosin have also been dropped since this type of adulteration is no longer in evidence. In ISO/R 56, an alternative method (the Westinghouse method) was given for determination of flow. In this International Standard it has been dropped.

0.5 Three of the requirements for hand-made shellac, namely those for

- a) matter insoluble in hot alcohol,
- b) absence of rosin, and
- c) absence of orpiment,

are included in this International Standard as essential clauses.

The remaining requirements, namely those for

- d) volatile matter (moisture),
- e) colour index,

- f) wax,
- g) ash,
- h) matter soluble in water,
- j) flow test,
- k) heat polymerization test,
- m) acid value,
- n) lead content,
- p) grit, and
- q) iodine value,

are optional.

0.6 The sizes of sieves given in the text of this International Standard have been indicated in terms of aperture dimensions, in accordance with ISO 565, *Test sieves — Woven metal wire cloth and perforated plate — Nominal sizes of apertures*.

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 a test or an analysis, shall be rounded off to the same number of places as the specified value, it being always understood that the analyst will carry out the determination to at least one place more than in the specified value.

1 SCOPE AND FIELD OF APPLICATION

1.1 This International Standard specifies requirements and corresponding methods of test for hand-made shellac.

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

1.3 The limits prescribed in this International Standard are limits for rejection.

2 DEFINITIONS

For the purpose of this International Standard, the following definitions apply.