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IS 13582 (1992): Agarbattis - Specification (Tentative Standard) [PCD 18: Natural and Synthetic Fragrance Materials]



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“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

अगरबत्ती – विशिष्ट

Tentative Indian Standard

AGARBATTIS — SPECIFICATION

UDC 665'582'84

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FOREWORD

Incense burning is a tradition at festive occasions, weddings and religious functions. The manufacture of agarbattis involves no typical or sophisticated chemicals and the raw materials consist of powdered odoriferous or otherwise roots barks, seeds, woods, leaves, flowers, etc, and resins, essential oils and aromatic chemicals. The paste made with the raw materials and water, gum and colour whenever required is applied to bamboo sticks on which additional perfumes may be added later. The process of manufacture is entirely manual.

The industry although well established needs scientific orientation. Skill and secret of performance still lies with individuals and there are innumerable varieties of agarbattis carrying innumerable fragrance patterns. It is hoped with the formulation of this standard quality products would be made available to the Indian and overseas consumers. *AGARBATTIS* being one of the items exported to overseas markets, it is hoped that this standard will ensure the export of quality goods.

As the manufacture of *AGARBATTIS* is mainly done by the cottage industry and the process of manufacture is entirely manual, there was a stiff resistance from *AGARBATTIS* manufacturers' associations to the formulation of any standard for *AGARBATTIS*. According to them it would kill the industry and create unnecessary hardships.

Keeping in view the significance of this product which is produced largely in rural sector and has a sizeable export market, the Committee formulated a standard covering only physical characteristics like fragrance, visual inspection, length, size, burning time, etc, initially with a view to improve it substantially after developing performance tests in due course to distinguish an acceptable product from non-acceptable one.

A suggestion was received to stipulate strictly the ingredients and raw materials that should be used along with the methods of test, for qualitative and quantitative determination of each of these ingredients in finished agarbattis mix. This was not found feasible practically to devise methods of test for detection of individual raw materials including the perfumery compound chemically with any reliability. The other alternative found was to prescribe a list of positive ingredients which should be used and a list of negative ingredients which are definitely known to be harmful and should not be used. It was observed that a warranty may be given by the manufacturer that raw materials listed in the negative list have not been used. In this manner the manufacturer would not be required to divulge his secret formula and at the same time he would be free to blend the raw materials of his choice including perfumery compounds. It was agreed that this list would be generated in due course after generating data on the subject.

The standard for agarbattis was finalized in 1984 but could not be sent to press in the light of strong representation made by the industry to formulation of any standard for agarbattis. However Export Inspection Council gazetted a notification for agarbattis covering minimum requirements for quality way back in 1984.

Lately some of the manufacturers have expressed their desire to develop a national standard for agarbattis and the Committee had agreed to print this standard as a tentative standard which would not be amenable to certification under BIS Act. The decision of printing this standard as tentative has been taken in view of the observation that specific well defined performance tests to distinguish a good from a bad agarbattis and ensuring in the process the free play of the ingenuity of the manufacturer to vary his formula including fragrance under a code of discipline which ensures that no harmful ingredients have been used, needs to be developed.

(Continued on third cover)

Tentative Indian Standard

AGARBATTIS — SPECIFICATION

1 SCOPE

This tentative standard prescribes the requirements and methods of sampling and test for *AGARBATTIS*, also known as incense sticks. This standard does not cover other incense items like cone, logs, etc.

2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

<i>IS No.</i>	<i>Title</i>
2284 : 1988	Methods for olfactory assessment of natural and synthetic perfumery material (<i>first revision</i>)
4905 : 1968	Methods for random sampling
6597 : 1988	Glossary of terms relating to natural and synthetic perfumery materials (<i>first revision</i>).

The above mentioned standards contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated above.

3 TERMINOLOGY

3.1 For the purpose of this standard, the definitions prescribed in IS 6597 : 1988 shall apply.

3.2 Sticks

Full length of the *AGARBATTIS* inclusive of paste and bare portion.

4 REQUIREMENTS

4.1 Visual Inspection

The sticks shall be strong enough to stand upright and shall not bend under their own weight.

NOTE — This however shall not be applicable to '*BALBATTI*'.

4.2 Coating

The application of the coating (paste) shall be reasonably uniform when tested as per procedure given in Annex A.

4.3 Fragrance

The sticks shall give out pleasant aroma continuously while burning for its full length of the coated portion when tested as per procedure given in Annex B. Reference may also be made to IS 2284 : 1988 for olfactory assessment of agarbattis sticks.

4.4 Size of the Sticks

Unless specified by the purchaser, the bare portion of the sticks shall not be more than 20 percent of the declared length.

4.5 Burning Quality

4.5.1 The agarbattis shall burn continuously and shall not extinguish even once before burning of the coated portion.

4.5.2 The smoke/fumes produced as a result of burning the agarbattis shall not be irritating to the nostrils/eyes.

4.5.3 While burning the *AGARBATTIS*, no sparks shall be produced nor shall any part of the glowing tip along with the unburnt coating shall fall off so as to constitute a fire hazard of any kind.

4.6 Burning Time

It shall be declared by the manufacturer if required by the purchaser.

5 PACKING AND MARKING

5.1 Packing

The sticks shall be packed in suitable packages in tubular, flat or rectangular form or as agreed to between the purchaser and the supplier.

5.2 Marking

Each packet shall be marked with the following:

- a) Indication of the source of manufacture;
- b) Net mass in grams and/or number of sticks;
- c) Burning time, if required by the buyer; and
- d) Batch number in code or otherwise.

NOTE — This standard is used as a tentative standard in order to enable collection of data on the prescribed requirements and to gain experience on the test methods, etc. Based on these, issuance of this standard as a firm standard will be considered. In view of this, certification of product as per this standard would not be possible under BIS Act. The standard is, however, recommended for wider implementation by the all concerned.

6 SAMPLING

6.1 Scale of Sampling

6.1.1 Lot

In a single consignment, all cartons of *AGARBATTIS* belonging to the same batch of manufacture shall be grouped together and each group shall constitute a lot.

6.1.2 For ascertaining the conformity of the material to the requirements of the specification, samples shall be tested from each lot separately.

6.1.3 The number of *AGARBATTIS* to be chosen from the lot depends on the size of the lot and shall be in accordance with col 1, 2 and 3 of Table 1. From each selected carton approximately equal number of *AGARBATTIS* shall be taken from each packet so as to constitute the required sample size given in col 3 of Table 1.

6.1.3.1 The required number of packets from each selected carton and the required number of sticks from each selected packet shall be chosen at random. In order to ensure the randomness of selection procedure given in IS 4905 : 1968 may be followed.

6.2 Number of Tests and Criteria for Conformity

6.2.1 Visual and Dimensional Characteristics (4.1 and 4.4)

Each stick selected according to 6.1.3 shall be examined for visual and dimensional requirements. A stick failing to satisfy any of these requirements shall be considered as defective.

6.2.1.1 The lot shall be deemed to have satisfied these requirements if the number of defective sticks found in the sample is less than or equal to the corresponding permissible number of defectives given in col 4 of Table 1. The lot, having been found satisfactory for these requirements, shall be further examined under 6.2.2.

6.2.2 Characteristics other than Visual and Dimensional

For fragrance, coating and burning quality, number of tests given in col 5 of Table 1 shall be carried out. For this purpose, required number of *AGARBATTIS* shall be taken from those already examined according to 6.2.1 and found satisfactory.

6.2.2.1 The lot shall be declared to have met these requirements if there is no failure under 6.2.2.

6.2.3 The lot shall be considered as conforming to the requirement of the specification if 6.2.1 and 6.2.2 are satisfied.

Table 1 Scale of Sampling and Permissible Number of Defectives
(Clause 6.1.3)

No. of Cartons* in the Lot	No. of Cartons* to be Chosen	For Visual and Dimensional Requirements		No. of Tests for Each of the Characteristics Other Than Visual and Dimensional
		No. of Sticks to be Taken	Permissible No. of Defectives	
(1)	(2)	(3)	(4)	(5)
Up to 100	2	20	2	1
101 to 300	3	32	3	1
301 to 1000	5	50	5	1
1 001 to 3 000	7	80	7	2
3 001 to 5 000	10	125	10	2
5 001 and above	15	200	14	3

*Carton consists of 12 packets, rolls, etc.

ANNEX A

(Clause 4.2)

METHODS OF TEST FOR UNIFORMITY OF COATING (PASTE) AND BURNING QUALITY OF *AGARBATTIS*

A-1 UNIFORMITY OF COATING

A-1.1 Procedure

Take two sticks from the sample and cut each

into three equal parts of the coated portion. Scrap out the paste from each portion, collect it separately and weigh. The average mass of the coating of the three portions of the same stick shall not vary by more than ± 10 percent.

ANNEX B

(Clause 4.3)

METHOD FOR OLFACTORY ASSESSMENT OF FRAGRANCE (AROMA OF *AGARBATTIS*)

B-0 GENERAL

The method is based on olfactory assessment of a given material by a panel of three persons.

B-1 REQUIREMENTS

B-1.1 General Requirements

B-1.1.1 Selection and Training

Better results are obtained if individuals with a keen sense of smell are selected for making the olfactory assessment.

B-1.1.2 Fatigue

Continuous smelling causes olfactory fatigue, decreases critical odour perception. To avoid this, the number of samples assessed during a session should be limited as far as is practical. Further, during smelling the body shall be relaxed. Resting for an interval between smelling different samples is also advantageous. If the number of samples to be tested is fairly large, it is advisable to examine last those samples which are known to be fatiguing.

B-1.1.3 Time Olfactory Assessment

The evidence relating to the most favourable time for conducting olfactory assessment is somewhat conflicting. However, the morning appears to be generally favoured.

B-1.1.4 Freedom from Contaminating Odour

It is necessary to ensure that the hands, the nose are free from contaminating odour as these are likely to vitiate the result. It is recommended that the individual responsible for assessing odour washer his/her hands several times during a smelling session.

B-1.2 Material Requirements

B-1.2.1 Stand

A cruciform patterned 3-clip stand, approximately 21 cm high, or any other suitable device to hold *AGARBATTIS* (see Fig. 1).

B-1.2.2 Environment

A well-ventilated room, as free as possible from all outside disturbances. Ideally, the temperature and humidity suited are about 20°C and 80 percent RH, respectively. The colouring of the room shall be sober and the furnishings restricted. The general environment shall have a restful rather than a distracting effect.

B-2 PROCEDURE

B-2.1 The three sticks from the sample and cut each into three equal parts of the coated portion. Take one part, burn and place in the stand. Keep the stand at such a distance from the nose that there is incipient yet distinct perception of odour. While smelling, concentrate wholly on the sensations received and make mental observations. The stick shall give out pleasant aroma while burning for its full length. Test each part separately and independently to assess the aroma. The lower part of each stick shall be tested first then middle and then upper.

B-2.1.1 It is important to note that, although the room shall be well ventilated, the sticks kept under examination should not be exposed to a direct draught.

B-2.1.2 All the three persons of the panel should agree to uniformity and pleasing aroma of *agarbattis* sample.

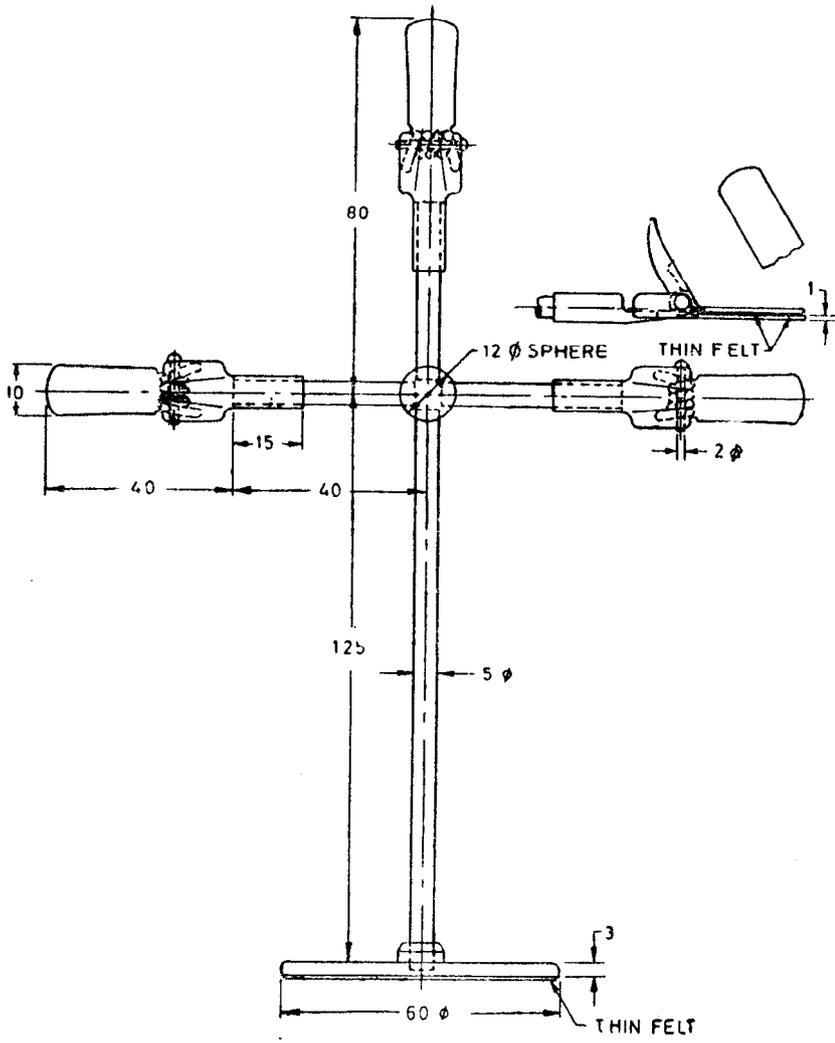


FIG. 1 STRIP STAND

(Continued from second cover)

Initially a period of two years from the month of its publication has been assigned to this standard as its validity period, after expiry of which the Sectional Committee would review its issuance as a firm standard.

Although no stipulation have been in the standard regarding the composition of *AGARBATTIS*, it is necessary that the raw materials used are such that in the concentrations in which they are likely to be present in *AGARBATTIS* after interaction with other raw materials used either through storage or during burning, are free from and harmful effects. It shall be the responsibility of manufacturers of agarbattis to satisfy themselves regarding the safety of their product from this stand point before releasing the product for sale.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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