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Mazdoor Kisan Shakti Sangathan
"The Right to Information, The Right to Live"

“पुराने को छोड़ नये के तरफ”
Jawaharlal Nehru
“Step Out From the Old to the New”

Indian Standard

KUM KUM POWDER — SPECIFICATION

( First Revision )

ICS 71.100.70
FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Cosmetics Sectional Committee had been approved by the Petroleum, Coal and Related Products Division Council.

*KUM KUM* powder is a homogeneous fine powder consisting of pigments, colours in a medium which may be having the following ingredients as base starch (potato, maize, tapioca, etc), magnesium stearate talc, zinc stearate, light calcium carbonate, etc, together with some perfume. It is applied on the forehead with a finger tip. Generally available in red shades.

In the present version (First Revision) requirements of pH, heavy metals (as lead) and arsenic have been included along with their test methods. Requirements of total plate count has also been included.

No stipulations have been made in this standard regarding definite composition of *KUM KUM* powder. However, it is necessary that the concentration of the raw materials used in the formulation of finished product should be free from any harmful effects. For evaluation of safety of new formulation or of a new raw material used in an old formulation, reference may be made to IS 4011 : 1997 ‘Methods of test for safety evaluation of cosmetics (*second revision*)’. It shall be the responsibility of the manufacturers to satisfy themselves of the dermatological and microbiological safety of their formulation according to IS 4011 : 1997 and Indian Standard on microbiological safety of cosmetics (*under preparation*) respectively before releasing it 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.
AMENDMENT NO. 1 MARCH 2001
TO
IS 10999 : 1999 KUM KUM POWDER — SPECIFICATION
(First Revision)

[Page 2, clause 4.2(g)] — Substitute the following for the existing:

'g) Best use before.............(Month and year to be declared by the manufacturer).

Note — This is exempted in case of pack sizes of 10g or less and if the shelf life of the product is more than 24 months.'

[Page 2, clause 4.2(h)] — Substitute the following for the existing:

'h) List of key ingredients.

Note — This is exempted in case of pack sizes of 30g or less.'

(PCD 19)

Reprography Unit, BIS, New Delhi, India
Indian Standard

KUM KUM POWDER — SPECIFICATION
(First Revision)

1 SCOPE

This standard prescribes the requirements and methods of sampling and test for KUM KUM powder.

2 NORMATIVE REFERENCES

The following standards contain provisions which through reference in this text constitute the provisions of the 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 below:

<table>
<thead>
<tr>
<th>IS No.</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>264 : 1976</td>
<td>Nitric acid (second revision)</td>
</tr>
<tr>
<td>266 : 1993</td>
<td>Sulphuric acid (fourth revision)</td>
</tr>
<tr>
<td>323 : 1959</td>
<td>Rectified spirit</td>
</tr>
<tr>
<td>460 (Part 1) : 1985</td>
<td>Test sieves: Part 1 Wire cloth test sieves (third revision)</td>
</tr>
<tr>
<td>1070 : 1992</td>
<td>Reagent grade water (third revision)</td>
</tr>
<tr>
<td>2088 : 1983</td>
<td>Methods for determination of arsenic (second revision)</td>
</tr>
<tr>
<td>3958 : 1984</td>
<td>Methods of sampling cosmetics (first revision)</td>
</tr>
<tr>
<td>4011 : 1997</td>
<td>Methods of test for safety evaluation of cosmetics (second revision)</td>
</tr>
<tr>
<td>4707 : 1988</td>
<td>Classification for cosmetics raw materials and adjuncts: Dyes, colours and pigments (first revision)</td>
</tr>
<tr>
<td>4707 : 1993</td>
<td>List of raw materials generally not recognized as safe for use in cosmetics (first revision)</td>
</tr>
<tr>
<td>14648 : 1998</td>
<td>Methods of tests for microbiological examination of cosmetics</td>
</tr>
</tbody>
</table>

3 REQUIREMENTS

3.1 Description

KUM KUM powder shall be homogeneous. It shall have an attractive appearance and shall not leave any stain on the skin after washing with water. It shall have a pleasant agreeable odour.

3.2 Ingredients

Unless specified otherwise, all the raw materials used in the manufacture of KUM KUM powder shall conform to the requirements prescribed in the relevant Indian Standard, where such standards exist.

3.2.1 Dyes, Colours and Pigments

The dyes, colours and pigments used in the manufacture of KUM KUM powder shall comply with the provisions of IS 4707 (Part 1) subject to the provisions of Schedule of the Drugs and Cosmetics Act and Rules, issued by the Government of India, as amended from time to time.

3.2.2 Other Ingredients

Ingredients other than dyes, colours and pigments shall comply with the provisions of IS 4707 (Part 2).

3.3 All the pigments shall be insoluble in water and rectified spirit when tested in accordance with the method prescribed in Annex A.

3.4 KUM KUM powder shall also comply with the requirements given in Table 1, when tested according to methods prescribed in Annexes B to E.

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Characteristic</th>
<th>Requirement</th>
<th>Method of Test, Ref to Annex/IS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>i)</td>
<td>Fineness residue on 75 micron IS Sieve, percent by mass, Max</td>
<td>1.5</td>
<td>B</td>
</tr>
<tr>
<td>ii)</td>
<td>pH of aqueous suspension</td>
<td>5.5 - 9.0</td>
<td>C</td>
</tr>
<tr>
<td>iii)</td>
<td>Heavy metals (as Lead), parts per million, Max</td>
<td>20</td>
<td>D</td>
</tr>
<tr>
<td>iv)</td>
<td>Arsenic (as As2O3), parts per million, Max</td>
<td>2.0</td>
<td>E</td>
</tr>
<tr>
<td>v)</td>
<td>Total plate count, Max</td>
<td>1 000</td>
<td>14648</td>
</tr>
</tbody>
</table>

If all the raw materials requiring tests for heavy metals and arsenic have been so tested and comply with the requirements, then the manufacturer may not test the finished cosmetics for these requirements.

Table 1 Requirements for KUM KUM Powder
4 PACKING AND MARKING

4.1 Packing

4.1.1 *KUM KUM* powder shall be packed in a metallic, plastic or any other suitable leakproof container.

4.2 Marking

Each container shall be legibly marked with the following information:

a) Name of the material;
b) Manufacturer's name and/or his recognized trade-mark, if any;
c) Shade number or shade name;
d) Batch number, in code or otherwise, to enable the lot of manufacturer to be traced back from records;
e) Net mass/volume of contents in container and the year of manufacture;
f) Month and year of manufacturing/packing;
g) Best use before ........ (Month and year to be declared by manufacturer); and
h) List of ingredients.

4.2.1 BIS Certification Marking

The container may also be marked with the Standard Mark.
The use of the BIS Certification Mark is governed by the provisions of the *Bureau of Indian Standards Act*, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

5 SAMPLING

5.1 Representative samples of the material shall be drawn as prescribed in IS 3958.
5.2 Tests for all characteristics shall be carried out on the composite sample.
5.3 The material shall be taken as conforming to the specification if the composite sample passes all the tests.

6 QUALITY OF REAGENTS

Unless specified otherwise, pure chemicals and distilled water (see IS 1070) shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.
ANNEX A

(Clause 3.3)

TEST FOR SOLUBILITY OF PIGMENTS

A-1 Take about 1 g of the material and add 50 ml of water. Boil for 15 min and filter. The filtrate shall be colourless or faintly coloured.

ANNEX B

[Table 1, Sl No. (i) and Clause 3.4]

DETERMINATION OF RESIDUE ON SIEVE

B-1 REAGENTS

B-1.1 Denatured Spirit

B-2 PROCEDURE

B-2.1 Weigh accurately about 10 g of the material. Place it in 75 micron sieve [see IS 460 (Part 1)]. Wash the material by means of a slow stream of running water and finally with fine stream from a wash bottle until as much material as would pass through the sieve has passed. In case the material is not easily wetted by water, the washing could be started with a slow stream of filtered denatured spirit. Let the water drawn from the sieve. Dry the sieve at about 80°C. Transfer the residue on to a tared watch glass carefully and dry it to constant mass at 105 ± 2°C.

B-3 CALCULATION

Residue on sieve, percent by mass = \( \frac{100 \times M_1}{M} \)

where

\( M_1 \) = mass in g of the residue on the sieve, and
\( M \) = mass in g of the material taken for the test.

ANNEX C

[Table 1, Sl No. (ii) and Clause 3.4]

DETERMINATION OF pH OF AQUEOUS SUSPENSION

C-1 PROCEDURE

Take 10 g of the material in a 150 ml beaker and add 90 ml of freshly boiled and cooled water. Stir well to make a thorough suspension. Determine the pH of the suspension using a pH meter within 5 min of making the suspension. In case a material shall not wet, the pH shall be determined on the filtrate.

ANNEX D

[Table 1, Sl No. (iii) and Clause 3.4]

DETERMINATION OF HEAVY METALS

D-1 PRINCIPLE OF THE METHOD

KUM KUM powder is decomposed by perchloric acid and the silica is removed by hydrofluoric acid. Heavy metals are isolated by precipitation with hydrogen sulphide. After dissolving the sulphides in dilute mineral acid, the heavy metals are again treated with hydrogen sulphide and the colour produced is compared with standards.

D-2 APPARATUS

D-2.1 Nessler Cylinders

50 ml capacity.

D-3 REAGENTS

D-3.1 Perchloric Acid

60 percent (m/m).

D-3.2 Hydrofluoric Acid

40 percent (m/m).

D-3.3 Dilute Ammonium Hydroxide

1:10 (v/v).

D-3.4 Bromophenol Blue Indicator

Dissolve 0.1g of bromophenol blue in 100 ml of rectified spirit [see IS 323].
D-3.5 Copper Sulphate
D-3.6 Hydrogen Sulphide Gas
from Kipp's apparatus.
D-3.7 Dilute Nitric Acid
Approximately 1 percent (m/v).
D-3.8 Thymol Blue Indicator
Dissolve 0.04 g of thymol blue in 50 ml of rectified spirit (see IS 323) and dilute with water to 100 ml.
D-3.9 Potassium Cyanide Solution
10 percent (m/v).
D-3.10 Hydrogen Sulphide Solution
Saturated and freshly prepared.
D-3.11 Standard Lead Solution
Dissolve 1.600 g of lead nitrate [Pb(NO₃)₂] in water and make up the solution to exactly 1000 ml. Pipette out 10 ml of solution and dilute it again with water to 1000 ml. 1.0 ml of the final solution contains 0.01 mg of lead (Pb). The solution should be freshly prepared.
D-4 PROCEDURE
D-4.1 Place 2.000 g of the material in a platinum dish and incinerate for about 2 h at 525-550°C. Cool and treat with 5 ml of perchloric acid. Take to fumes on a hot plate with three successive portions of hydrofluoric acid. Cool and dilute with water. Filter the solution, if necessary, with suction through a fine fitted glass filter catching the filtrate in a 500 ml glass stoppered conical flask. Dilute to about 200 ml and adjust to pH 3.0-3.4 by adding dilute ammonium hydroxide (yellow purple colour with bromophenol blue indicator). Add about 10 mg of copper sulphate to act as co-precipitant. Precipitate sulphides by passing hydrogen sulphide until solution is saturated. Filter and reject the filtrate. Dissolve the precipitate, without previous washing, with 5 ml of hot dilute nitric acid, drawing solution through filter into the original flask, wash with hot water and collect the washings along with the solution in nitric acid. Boil to remove hydrogen sulphide. Transfer to a Nessler cylinder, make ammoniacal to pH between 8.5 and 10 (bluish-green to blue towards a drop of thymol blue indicator) and add 5 ml of potassium cyanide solution. Add 15 ml of hydrogen sulphide solution, dilute to mark and mix.
D-4.2 Carry out a control test using 4 ml of standard lead solution and the same quantities of other reagents as used in test with the material.
D-4.3 The material shall be taken as having satisfied the requirement prescribed in Table 1 if the intensity of colour produced in the test with the material is not greater than that produced in control test.

ANNEX E

[Table 1, Sl No. (iv) and Clause 3.4]

TEST FOR ARSENIC

E-1 REAGENTS
E-1.1 Concentrated Sulphuric Acid
See IS 266.
E-1.2 Concentrated Nitric Acid
See IS 264.
E-1.3 Hydrofluoric Acid
Same as in D-3.2.
E-2 PROCEDURE
E-2.1 Preparation of Solution
Place 2.000 g of the material in a platinum dish and incinerate for about 2 h at 525-550°C. Cool and treat with a mixture of 5 ml concentrated sulphuric acid and 5 ml of concentrated nitric acid. Take to fumes on a hot plate. Cool and again take to fumes with three successive portions of hydrofluoric acid. Cool and dissolve cautiously in water and make up the volume to exactly 100 ml.
E-2.2 Take 50 ml of the solution prepared in E-2.1. Carry out the test for arsenic as prescribed in IS 2088 using for comparison a stain obtained with 0.002 mg of arsenic trioxide (as As₂O₃).
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This Indian Standard has been developed from Doc: No. PCD’ 19 (1685).

Amendments Issued Since Publication

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