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भारतीय मानक मसौदा
नीट्सफुट तेल — विशिष्टि
(IS 4054 का पहला पुनरीक्षण)

Draft Indian Standard
Neatsfoot Oil — Specification
(*First Revision of IS 4054*)

(ICS 59.140.35)

Leather, Tanning Materials and Allied Products Sectional Committee, CHD 17

Last Date for Comments: 29-01-2025

Leather, Tanning Materials and Allied Products, Sectional committee CHD 17

FORWORD

(Formal clause will be added later)

Neatsfoot oil, also known as babulum oil, or hoof oil is used in leather industry for fat liquoring; waterproofing and softening of leather. It is also used for oiling wool and as lubricant.

This standard was first published in 1966. This revision has been taken up in order to bring out the standard in latest style and format of the Indian Standards. The relevant clauses have been added and the references have been updated

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: 2-2022. 'Rule for rounding off numerical value (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Draft Indian Standard
NEATSFOOT OIL — SPECIFICATION
(First Revision)

1 SCOPE

This standard prescribes the requirements and the methods of sampling and testing for neatsfoot oil for use in the leather industry.

2 REFERENCES

The standards listed in Annex A 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 edition of the standards:

3 TERMINOLOGY

For the purpose of this standard, the definitions given in Clause 3 of IS 548 (Part 1/Sec 1) and IS 548 (Part 1/Sec 2) shall apply.

4 REQUIREMENTS

4.1 Description

The material shall be obtained by solvent extraction or by boiling the water in cattle's shin bones and feet (deprived of hoofs).

4.2 The material shall be clean and pale yellow in colour. It shall also be free from contaminants, impurities, sediment, suspended and other foreign matter, separated water, and added colouring matter.

4.3 Admixture with Other Oils

The material shall be free from admixture with other oils, when tested in accordance with the methods prescribed in IS 548(Part 2), IS 548 (Part 2/Sec 9), IS 548(Part 2/Sec 20), IS 548 (Part 2/Sec 21),and IS 548 (Part 2/Sec 22).

4.4 The material shall also comply with the requirements given in Table 1.

Table 1 Requirements for Neatsfoot Oil for Leather Industry
(Clauses 4.4 and 7.1)

Sl. No.	Characteristics	Requirement	Method of Test (ref to Cl No. IS 548 (Part 1/sec 2))
(1)	(2)	(3)	(4)
i)	Refractive Index at 40°C,	1.4580 to 1.4610	11
ii)	Specific gravity at 30°C,	0.906 to 0.911	12
iii)	Iodine value (Wijs),	67-95	15
iv)	Unsaponifiable matter, percent by weight, <i>Max</i>	1.0	9
v)	Saponification Value,	192 to 198	16
vi)	Titre, °C,	20 to 30	13
vii)	Acid value, <i>Max</i>	10	8
viii)	Solidification test	To pass the test	Annex B

5 PACKING AND MARKING

5.1 Packing

The material shall be supplied in suitable well-closed containers as agreed to between the purchaser and the supplier.

5.2 Marking

The packages shall be marked with the following:

- a) Name and type of the material;
- b) Name of the manufacturer and/or trade-mark, if any;
- c) Quantity (number of pieces of the material);
- d) Month and year of manufacture; and
- e) Batch number.

5.2.1 Bis Certification Mark.

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

6 SAMPLING

The Representative samples of the material shall be drawn as prescribed in Clause 3.4 or 3.5 of IS 548 (Part 1/Sec 1).

7 TESTS

7.1 Tests to carry out and check the characteristics or properties shall follow the methods and applicable clauses in Col 4 of Table 1.

7.2 Quality of Reagents

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

ANNEX A
(Clause 2)
LIST OF REFERRED STANDARDS

<i>IS/ISO No.</i>	<i>Title</i>
IS 548	Method of sampling and test for oils and fats
Part 1	Sampling, physical and chemical tests
Sec 1 : 2021	Sampling
Sec 2 : 2021	Physical and chemical tests
Part 2 :	Purity test (<i>third revision</i>)
Sec 9 : 1988	Test for presence of karanja (pungam) oil in other oils (<i>fourth revision</i>)
Sec 20 : 1983	Test for detection of taramira oil in mustard
Sec 21: 1988	Test for detection of animal fat in vegetable oils and fats and vice-versa by GLC (<i>fourth revision</i>)
Sec 22 : 1993	Detection of tricresyl phosphate in edible oil
IS 582 (Part 6/Sec 2) : 2024/	Methods of chemical testing of leather: part 6 Determination of metal content Section 2 Total metal content (<i>first revision</i>)
ISO 17072-2 : 2022	
IS 1070 : 2023	Reagent grade water specification (<i>fourth revision</i>)

ANNEX B
[Table 1, Sl No. (viii)]
SOLIDIFICATION TEST

B-1 METHOD OF TEST

B-1.1 General

Keep the dried oil in a refrigerator at 2 °C for 24 h. It shall be cloudy and dull when removed and shall flow slowly when warmed to 8 °C to 10°C

B-1.2 Apparatus

B-1.2.1 Measuring Cylinder —100 ml measuring capacity

B-1.2.2 Desiccator — Containing an efficient desiccant, such as phosphorus pentoxide.

B-1.2.3 Air Oven — Preferable electrically heated with temperature control device.

B-1.2.4 Refrigerator — With facility for measuring the temperature

B-1.3 Preparation of the Sample

Dry a little more than 100 ml of the material thoroughly in an air-oven maintained at 105 °C ± 2 °C for 5 h in a porcelain/glass dish. Then, take it from the oven and keep it in the desiccator for room temperature cooling. After cooling, weigh accurately, and the weight shall not differ by more than one milligram.

B-1.4 Procedure

Fill up to the mark of 100 ml measuring cylinder with the dried material and place in the refrigerator maintained at 2 °C for 24 h. Remove after 24 h from the refrigerator, and the oil should flow slowly, although tilted maximum. The material at that temperature shall be cloudy and dull. Warm it to 8 °C to 10 °C.

B-1.4.1 Consider the material has passed the test if it is clear and bright when warmed to 8 °C to 10 °C after removal from the refrigerator.