

# *Indian Standard*

## **SPECIFICATION FOR SILK-WORM PUPAE OIL**

### **1 SCOPE**

**1.1** This standard prescribes requirements and methods of sampling and test for silk-worm pupae oil.

### **FOREWORD**

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 30 August 1980, after the draft finalized by the Oils and Oilseeds Sectional Committee had been approved by the Agricultural and Food Products Division Council and the Chemical Division Council.

**0.2** To augment the production of vegetable oils in the country and to overcome their shortage a number of sources of oils other than conventional oil seeds are being tapped. Silk-worm pupae form a new source of oil which hitherto has not been commercially exploited. Such oils when put to industrial use would release pressure on edible oils.

**0.3** Silk-worm pupae are a by-product of sericulture industry. About 7 000 tonnes of spent pupae belonging to mulberry, tassar, eri and muga varieties are estimated to be produced annually in India. With the rapid development of sericulture industry in the country, the production of pupae can be stepped up further. 70 percent of the total production. Mulberry silk-worm pupae form 70 percent of the total production. The silk industry is spread over the states of Andhra Pradesh, Assam, Tamil Nadu, Karnataka, Jammu and Kashmir and Uttar Pradesh.

**0.3.1** Spent pupae contain about 25 percent of oil and this could be recovered by solvent extraction process. The major fatty acids of pupae oil are : palmitic about 25 percent; oleic about 22 percent; linoleic about 38 percent; and linolenic about 15 percent. The oil is used for soap manufacture. The meal is rich in proteins ( about 75 percent ) and is used as a poultry feed, as a substitute for fish meal. Silk-worm pupae oil has already become an article of commerce and a few plants in Andhra Pradesh and Karnataka are already extracting the oil for the past several years. This specification is based on oil obtained from mulberry variety.

**0.4** This standard contains clause 4.1 which calls for agreement between the purchaser and the supplier.

**0.5** In the preparation of this specification considerable assistance has been drawn from data supplied by the Oil Technological Research Institute, Anantapur which is thankfully acknowledged.

**0.6** 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\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

---

\*Rules for rounding off numerical values (*revised*).