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METHOD FOR THE PREPARATION OF TEST SAMPLES OF ESSENTIAL OILS

(First Revision)

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard

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SLS 210 : 2009

Gr. 4

SRI LANKA STANDARDS INSTITUTION
No. 17, Victoria Place,
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Sri Lanka

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This standard does not purport to include all the necessary provisions of a contract.

Sri Lanka Standard
METHOD FOR THE PREPARATION OF TEST SAMPLES OF ESSENTIAL OILS
(First Revision)

FOREWORD

This Sri Lanka Standard was approved by the Sectoral Committee on Agricultural and Food Products and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 2009-07-23.

This standard was first published in 1973, which has been derived from the International Organization for Standardization Recommendation, R 356. This revision has been undertaken to update the standard to be in line with the latest ISO standard for Essential oils.

In the preparation of this standard, the valuable assistance derived from the following publication is gratefully acknowledged.
ISO 356 : 1996 Essential oils – Preparation of test samples

1 SCOPE

1.1 This standard prescribes general guidelines for the preparation of samples of essential oils submitted to a laboratory for analysis.

1.2 This standard is applicable, in particular, to those essential oils that cannot be analysed directly; that is those which are solid or partially solid at room temperature or those which are cloudy due to the presence to water or suspended particles.

1.3 This method cannot be used for samples for determination of water.

2 PRINCIPLE

Filtration of the essential oil, if necessary liquefied by heating at a suitable temperature, after addition of magnesium sulphate or sodium sulphate with a view to eliminating the water and the insoluble substances.

3 APPARATUS

Usual laboratory apparatus and, in particular, the following .

3.1 *Oven*
3.2 *Conical flasks*
3.3 *Suitable filtration equipment*

4 REAGENT

4.1 ***Magnesium sulphate,*** recently desiccated and neutral or ***sodium sulphate,*** recently desiccated.

To desiccate the magnesium sulphate or sodium sulphate, heat to a constant mass at 180 ^{0}C to 200 ^{0}C (temperature taken in the continuously stirred material). Grind to a fine powder and keep in a dry flask with an airtight closure.

5 PROCEDURE

5.1 Essential oils which are solid or partially solid at ambient temperature

Liquefy the essential oil by placing it in the oven (**3.1**) maintained at the lowest temperature at which liquefaction may be obtained in less than 10 min. This temperature is usually about 10 ^{0}C above the presumed freezing point. During this operation, especially in the case of essential oils containing aldehydes, avoid allowing air to enter the container holding the essential oil. To achieve this, loosen, but do not remove, the stopper. Pour the liquefied essential oil into a dry conical flask (**3.2**), previously warmed in the oven to the temperature indicated above, so that the flask is filled to not more than two-thirds of its capacity.

During all subsequent operations, the oil shall be kept at the lowest temperature at which it will remain liquid.

5.2 Essential oils which are liquid at the ambient temperature

Transfer the essential oil to a dry conical flask (**3.2**) at the same temperature, so that the flask is filled to not more than two-thirds of its capacity.

5.3 Treatment of the essential oil

In the two cases indicated, (**5.1**) or (**5.2**), add to the flask a mass of the dehydrating agent [magnesium sulphate or sodium sulphate (**4.1**)] equal to about 15 % of the mass of the essential oil. Shake vigorously from time to time over a period of at least 2 h. Filter the sample.

Verify the action of the dehydrating agent by adding about 5 % of magnesium sulphate or sodium sulphate.

Wait 2 h then filter.

The dehydrating agent should still be in a powdery form and the oil should be clear and limpid.

In the first case (**5.1**), carry out the filtration in the oven at the appropriate temperature (see **5.1**), but do not keep the oil in the oven longer than is necessary.

NOTE 1 : *These operations should immediately precede the analysis. If not, the filtered oil should be kept in a cool place protected from strong light, in a previously dried well-filled container fitted with an airtight closure.*

NOTE 2 : *In certain cases, to be specified in the relevant Standard, the metallic phenolates which colour the essential oil should be eliminated by agitation with citric or tartaric acid.*

SRI LANKA STANDARDS INSTITUTION

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The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

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The development and formulation of National Standards is carried out by Technical Experts and representatives of other interest groups, assisted by the permanent officers of the Institution. These Technical Committees are appointed under the purview of the Sectoral Committees which in turn are appointed by the Council. The Sectoral Committees give the final Technical approval for the Draft National Standards prior to the approval by the Council of the SLSI.

All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution endeavours to ensure adequate representation of all view points.

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