

Australian Standard<sup>®</sup>

**Oil of *Melaleuca*, terpinen-4-ol type  
(Tea Tree oil)**

STANDARDS  
Australia



This Australian Standard® was prepared by Committee CH-021, Essential Oils. It was approved on behalf of the Council of Standards Australia on 6 March 2009. This Standard was published on 31 March 2009.

---

The following are represented on Committee CH-021:

- Australian Society of Cosmetic Chemists
  - Australian Society of Perfumers and Flavourists
  - Australian Tea Tree Industry Association
  - Cosmetic Toiletry and Fragrance Association
  - Essential Oil Producers Association of Australia
  - Flavour and Fragrance Association of Australia & New Zealand
  - NSW Department of Primary Industries
  - Royal Australian Chemical Institute
  - Southern Cross University
  - University of New South Wales
  - University of Tasmania
- 

This Standard was issued in draft form for comment as DR 08179.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

---

#### **Keeping Standards up-to-date**

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting [www.standards.org.au](http://www.standards.org.au)

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at [mail@standards.org.au](mailto:mail@standards.org.au), or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

---

Australian Standard<sup>®</sup>

**Oil of *Melaleuca*, terpinen-4-ol type  
(Tea Tree oil)**

Originally as AS K175—1967.  
Previous edition AS 2782—1997.  
Third edition 2009.

**COPYRIGHT**

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia

ISBN 0 7337 9059 3

## PREFACE

This Standard was prepared by the Standards Australia Committee CH-021, Essential Oils. This Standard is identical with, and has been reproduced from ISO 4730:2004, *Oil of Melaleuca, terpinen-4-ol type (Tea Tree oil)*.

The objective of this Standard is to provide general characteristics of the oil of Melaleuca, terpinen-4-ol (Tea Tree oil), in order to facilitate assessment of its quality.

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number appears on the cover and title page while the International Standard number appears only on the cover.
- (b) In the source text 'this International Standard' should read 'this Australian Standard'.
- (c) A full point substitutes for a comma when referring to a decimal marker.
- (d) Substitute 'mL' for 'ml' wherever it appears.

References to International Standards should be replaced by references to Australian Standards as follows:

<i>Reference to International Standard</i>		<i>Australian Standard</i>	
ISO		AS	
212	Essential oils—Sampling	4550	Essential oils—Sampling
11024	Essential oils—General guidance on chromatographic profiles	5025	Essential oils—General guidance on chromatographic profiles
11024-1	Part 1: Preparation of chromatographic profiles for presentation in standards	5025.1	Part 1: Preparation of chromatographic profiles for presentation in standards
11024-2	Part 2: Utilization of chromatographic profiles of samples of essential oils	5025.2	Part 2: Utilization of chromatographic profiles of samples of essential oils

Only references that have been adopted as Australian Standards have been listed.

The term 'informative' has been used in this Standard to define the application of the annex to which it applies. An 'informative' annex is for information only.

## AUSTRALIAN STANDARD

**Oil of *Melaleuca*, terpinen-4-ol type (Tea Tree oil)****1 Scope**

This International Standard specifies certain characteristics of the oil of *Melaleuca*, terpinen-4-ol type (Tea Tree oil), in order to facilitate assessment of its quality.

**2 Normative references**

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/TR 210, *Essential oils — General rules for packaging, conditioning and storage*

ISO/TR 211, *Essential oils — General rules for labelling and marking of containers*

ISO 212, *Essential oils — Sampling*

ISO 279, *Essential oils — Determination of relative density at 20 °C — Reference method*

ISO 280, *Essential oils — Determination of refractive index*

ISO 592, *Essential oils — Determination of optical rotation*

ISO 875, *Essential oils — Determination of miscibility in ethanol*

ISO 11024-1, *Essential oils — General guidance on chromatographic profiles — Part 1: Preparation of chromatographic profiles for presentation in standard*

ISO 11024-2, *Essential oils — General guidance on chromatographic profiles — Part 2: Utilization of chromatographic profiles of samples of essential oils*

**3 Terms and definitions**

For the purposes of this document, the following terms and definitions apply.

**3.1****oil of *Melaleuca*, terpinen-4-ol type  
Tea Tree oil**

essential oil obtained by steam distillation of the foliage and terminal branchlets of *Melaleuca alternifolia* (Maiden et Betche) Cheel, *Melaleuca linariifolia* Smith, and *Melaleuca dissitiflora* F. Mueller, as well as other species of *Melaleuca* provided that the oil obtained conforms to the requirements given in this International Standard

NOTE For information on the CAS number, see ISO/TR 21092

**4 Requirements****4.1 Appearance**

Clear, mobile liquid.

**4.2 Colour**

Colourless to pale yellow.

**4.3 Odour**

Characteristic.

**4.4 Relative density at 20 °C,  $d_{20}^{20}$** 

Minimum: 0,885

Maximum: 0,906

**4.5 Refractive index at 20 °C**

Minimum: 1,475 0

Maximum: 1,482 0