



Australian Government

Department of Health

Therapeutic Goods Administration

Standard for Medicinal Cannabis

Guidance on Therapeutic Goods Order No. 93

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TGA Health Safety
Regulation

Historical consultation document

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Introduction

This guidance document provides a plain English explanation of various requirements of Therapeutic Goods Order (TGO) No. 93 *Standard for Medicinal Cannabis* (TGO 93) and their application to assist sponsors in complying with their regulatory obligations.

This document does not form part of TGO 93.

General

The requirements of TGO 93 apply to medicinal cannabis products that come within the ambit of Part 3-1 of the *Therapeutic Goods Act 1989* ("the Act") which provides for the application of standards to therapeutic goods. They also apply to all ingredients, including the cannabis plant, used in the manufacture of those products.

Such standards may relate to any matter relevant to the quality, safety or efficacy of therapeutic goods and, generally, therapeutic goods must not be imported, exported or supplied if those goods do not conform to an applicable standard.

Paragraph (b) of subsection 10(2) of the Act states that an Order establishing a standard for therapeutic goods may require that a matter relating to the standard be determined in accordance with a particular test.

Responsibility for compliance with the requirements of TGO 93 rests with the sponsor of the medicinal cannabis products to which TGO 93 applies.

All requirements of relevant tests in TGO 93 must be complied with, unless consent is given by the Secretary under section 14 or 14A of the Act.

Explanation of sections

Section 1 - Name of order

This section states the legal title of TGO 93.

Section 2 - Commencement

This section states when TGO 93 will commence to have effect. All sections of TGO 93 will come into effect on the same date.

This is specified as the day following the day on which TGO 93 is registered on the [Federal Register of Legislation](#) (FRL), which is the official repository of Commonwealth legislative instruments and is where the authoritative text of TGO 93 can be located.

TGO 93 was registered on the FRL on *<to be advised>* and therefore took effect on *<to be advised>*.

Current and new medicinal cannabis products imported into, or sold within, Australia will be subject to TGO 93.

Stock that is released for supply/sale by a sponsor on and after the commencement date will be subject to TGO 93. Stock that has been released for sale/supply (e.g. to warehouses, retailers and consumers) prior to the commencement date will not be subject to TGO 93.

Sponsors of current medicinal cannabis products on the Australian Register of Therapeutic Goods (ARTG) should consult the regulatory guidelines for prescription medicines for information about notification or approval processes for specification or other changes that are consequent upon the requirements of a new Therapeutic Goods Order.

Section 4 - Interpretation

This section provides definitions of terms used in TGO 93 and, where relevant, directs the reader to meanings given in the Act or the *Therapeutic Goods Regulations 1990* ("the Regulations"). Readers should check the current compilation of the Act or the Regulations on the FRL.

Medicinal cannabis products are also subject to the *Narcotic Drugs Act 1967*, the *Narcotic Drugs Amendment Act 2016*, and the *Narcotic Drugs Regulation 2016*. The meaning of terms in TGO 93, the Act and the Regulations may differ from that in the narcotic drugs legislation.

Any other term not defined in TGO 93 has its usual English meaning.

In TGO 93, the term 'medicinal cannabis products' means therapeutic goods that contain, or are manufactured from, any part of the cannabis plant.

The term 'cannabis plant' means any plant, or part of a plant, of the genus *Cannabis*, including, but not limited to, the flowers, fruiting tops, seeds, stems and leaves of the plant. Therefore, the 'cannabis plant' covers a combination of the flowers and the leaves of the plant, for example.

The term 'active ingredient' has the same meaning as in the Regulations. The latest compilation of the Regulations (F2016C00943) defines the term as:

'a therapeutically active component in the medicine's final formulation that is responsible for its physiological or pharmacological action'

The term 'stated content' which is used in subsection 12(2) in relation to each active ingredient in a medicinal cannabis product means the quantity or proportion of each active ingredient that is:

- specified on the label to be present in the medicinal cannabis product in accordance with any decision made by the Secretary under section 25 of the Act in relation to that product; or
- disclosed to the Secretary in an application under section 19 of the Act, whether or not the quantity or proportion of each active ingredient is reproduced on the label or any supplementary material for the medicinal cannabis product approved under that section; or
- purported to be present in a medicinal cannabis product that is mentioned in item 6 of Schedule 5 to the Regulations or item 3 of Schedule 5A to the Regulations.

Section 5 - Object

This section states the purpose of TGO 93.

Standards, including TGO 93, apply throughout the shelf life of the therapeutic goods.

The requirements described in TGO 93 should not be regarded as comprehensive requirements but rather as the minimum requirements to be met throughout the shelf life of the goods.

To ensure compliance with the assay limits in subsection 12(2) of this standard, a prudent manufacturer will apply release specifications that are more exacting than those included in TGO 93.

Section 6 - Application

TGO 93 applies to medicinal cannabis products imported into Australia as well as those manufactured in Australia. Also, it applies to the cannabis plant used in the manufacture of those products as well as any other ingredients, such as excipients, used in the manufacture of those products.

However, TGO 93 does not apply to personal imports of medicinal cannabis products described in item 1 of Schedule 5 to the Regulations.

Also, TGO 93 does not apply to the medicinal cannabis products described in items 4, 8, 10, 11 or 12 of Schedule 5A to the Regulations, subject to compliance with the conditions specified in those items. These items cover the following therapeutic goods:

- therapeutic goods imported by a member of a sporting team visiting Australia to participate in a national or international sporting event (item 4);
- therapeutic goods imported by a member of a military force visiting Australia for military training (item 8);
- therapeutic goods imported by a medical practitioner/medical team accompanying a critically ill patient (item 10);
- therapeutic goods imported by a member of a visiting official foreign government delegation that includes the Head of Government or Head of State (item 11);
- therapeutic goods that are part of the medical supplies of a marine vessel or an aircraft visiting Australia (item 12).

Section 7 - Monograph

This section of TGO 93 incorporates the requirements of the European Pharmacopoeia (Ph Eur) general monograph titled *Pharmaceutical Preparations* (2619) that are applicable to medicinal cannabis products or the ingredients (including cannabis plant) used in the manufacture of those products, excluding any requirements that conflict with those of other sections of TGO 93

This general monograph encompasses the requirements of Ph Eur specific monographs for pharmaceutical raw materials (e.g. active ingredients, excipients) as well as those of Ph Eur general texts (e.g. *Residual Solvents*) and other Ph Eur general monographs.

The list of Ph Eur general monographs that may be relevant include:

- *Herbal Drugs* (1433)
- *Herbal Drug Preparations* (765)
- *Herbal Drug Extracts* (765)
- General monographs for dosage forms e.g. *Oromucosal Preparations*.

In respect to cannabis plant, the reader should particularly note there was no specific monograph for this raw material in the Ph Eur, or in either of the other two pharmacopoeia – namely, the British Pharmacopoeia (BP) and the United States Pharmacopoeia (USP) – recognised as standards ('default standards') under the Act – on the date that TGO 93 commenced.

Other current Therapeutic Goods Orders (TGOs) may apply to medicinal cannabis products or the ingredients of those products. These include *Therapeutic Goods Order No. 77 – Microbiological Standard for medicines* (which applies to medicinal cannabis finished products) and *Therapeutic Goods Order No. 78 – Standard for Tablets and Capsules* (which applies to medicinal cannabis tablets and capsules on the ARTG). A list of current TGOs and links to them on the FRL can be found at <<https://www.tga.gov.au/therapeutic-goods-orders>>.

Section 8 - Active ingredients

This section specifies that the active ingredients of medicinal cannabis products must be derived from the cannabis plant only. Examples of such active ingredients include:

- botanically derived delta-9-tetrahydrocannabinol (also commonly referred to as tetrahydrocannabinol, delta-9 THC, or THC)
- botanically derived cannabidiol (CBD)

This section prohibits, for example, the use of the synthetic form of delta-9-tetrahydrocannabinol, known as dronabinol, in the manufacture of a medicinal cannabis product. Therefore, a medicinal cannabis product containing synthetic dronabinol in addition to tetrahydrocannabinol derived from the cannabis plant would not comply with the requirements of this section.

This section also prohibits combination products with either other herbal active ingredients or pharmaceutical actives not derived from the cannabis plant.

Section 9 - Decontamination

This section specifies that where the cannabis plant used in the manufacture of medicinal cannabis products is subjected to a decontaminating treatment, such as gamma irradiation to reduce the microbial load, the treatment must not adversely affect the quality of those products.

It is the sponsor's responsibility to demonstrate and ensure that the treatment does not adversely affect the quality of the products.

Also, this section prohibits the use of ethylene oxide as a decontaminating treatment for cannabis plant. This prohibition is in line with current guidance on the quality of herbal medicinal products – see the European Medicines Agency (EMA) guideline - [Guideline on quality of herbal medicinal products1/traditional herbal medicinal products \(EMA/CPMP/QWP/2819/00 Rev. 2\)](#).

Section 10 - Identification

Identification testing of the cannabis plant material used in the manufacture of medicinal cannabis products must be performed to confirm the identity of the plant material and differentiate it from potential adulterants and substitutes.

Generally, monographs for plant material in pharmacopoeias such as the Ph Eur, BP or USP specify carrying out a battery of tests for identification of the plant material, rather than a single test. The battery of tests usually consists of 3 types of test – macroscopic examination, microscopic examination, and chromatographic procedures. The latter procedures are chemical tests used to confirm that characteristic chemical constituents of the plant are present in the plant material. In the case of cannabis plant material, the principal chemical constituents are the cannabinoids tetrahydrocannabinol (THC) and cannabidiol (CBD), which are unique to the genus *Cannabis*. Examples of chromatographic procedures include high-performance liquid chromatography (HPLC), thin-layer chromatography (TLC), and gas chromatography (GC). The battery of tests can include 1 or more chromatographic procedures. The BP monograph for *Holy Basil Leaf*, for example, employs macroscopic examination, microscopic examination, and 2 TLC test procedures for identification of the plant material.

In line with pharmacopoeial practice, this section of TGO 93 specifies that the battery of identification tests must be carried out to identify the cannabis plant material used in the manufacture of medicinal cannabis products. Where particular test methods are not specified in TGO 93, as is the case here, then suitably validated test methods must be used.

Guidance on the identification of plant materials, such as cannabis plant material, that do not have a monograph in a pharmacopoeial standard is given in the TGA document titled '[Identification of herbal materials and extracts](#)'. The guidance specifies that the macroscopic, microscopic, and chemical characteristics of the plant material should be compared against either an authenticated reference specimen or the descriptions given in an authoritative literature source.

Acceptable authoritative literature sources for cannabis plant material include the following:

- UNODC website: [Recommended methods for the identification and analysis of cannabis and cannabis products](#)
- the American Herbal Pharmacopoeia monograph titled Cannabis inflorescence

Further guidance on identification testing is given in USP General Chapter 563 *Identification of articles of botanical origin*.

Section 11 - Adulteration

This section of TGO 93 includes a provision to prevent adulteration of the formulated medicine and any of its ingredients with undeclared substances. Notable examples of such substances include tobacco and calamus.

'Incidental minor excipients' which may not be declared in the formulation of a product are excluded as adulterants. These substances are defined in section 4. They comprise excipients or processing aids used in the manufacture of ingredients in the formulation as well as processing aids used in the manufacture of the formulation itself.

Subsection (3) specifies that certain matters are irrelevant in determining whether adulteration has occurred.

Section 12 - Tests

Subsection (1) requires that the cannabis plant material used in the manufacture of medicinal cannabis products must comply with the requirements of a series of quality tests.

The test parameters and their limits are specified in Schedule 1 of the TGO.

The tests are standard pharmacopoeial tests applied to herbal materials used in the manufacture of medicinal products – see, for example, the general Ph Eur monograph titled *Herbal Drugs* (1433) and the [EMA guideline - Guidance on Specifications: Test Procedures and Acceptance Criteria for Herbal Substances, Herbal Preparations and Herbal Medicinal Products/Traditional Herbal Medicinal Products \(CPMP/QWP/2820/00 Rev 2\)](#).

They include tests for the following potential toxic contaminants:

- Aflatoxins
- Ochratoxin A
- Heavy Metals (Arsenic, Cadmium, Lead and Mercury)
- Pesticides

as well as tests for:

- Foreign matter
- Loss on drying
- Total ash

The test methods prescribed in Column 3 of Schedule 1 are standard Ph Eur test methods.

Guidance on the sample size and sample preparation of herbal plant material for analysis is given in Ph Eur method 2.8.20 *Herbal Drugs: Sampling and Sample Preparation*.

Subsection (2) specifies the requirements for the content of each active ingredient in the final dosage form of a medicinal cannabis product. The requirements differ, depending on the type of dosage form.

Paragraph 2 (a) applies to dosage forms in a herbal form, such as sachets of cannabis plant material. The requirement in this paragraph is that the content of each active ingredient, including any corresponding acid, in a representative sample is in the range of 80.0 – 120.0% of the stated content of that active ingredient.

Paragraph 2 (b) applies to tablets or capsules not included on the ARTG. The requirement in Paragraph 2 (a) is that the average content of each active ingredient, determined in a pooled sample of not fewer than 20 tablets or capsules, is in the range of 90.0 – 110.0% of the stated content of that active ingredient.

Paragraph 2 (c) applies to any other dosage form e.g. an oromucosal spray. The requirement in this paragraph is that the content of each active ingredient, including any corresponding acid, in a representative sample is in the range of 90.0 – 110.0% of the stated content of that active ingredient.

Paragraphs 2 (a), (b) and (c) each refer to the 'stated content' of that active ingredient. The term 'stated content' has a special meaning and is defined in section 4 of TGO 93.

Paragraph 2 (a) refers to the term 'corresponding acid'. Some cannabinoids such as tetrahydrocannabinol (THC) and cannabidiol (CBD) predominantly exist in the cannabis plant material in the form of their corresponding acid, namely tetrahydrocannabinol-acid (THC-acid) and cannabidiol-acid (CBD-acid), respectively. These acids undergo decarboxylation during storage or heating to form THC and CBD. It is common practice to express the contents of THC and CBD in the plant material as the equivalent amounts of total THC (sum of THC and THC-acid) and total CBD (sum of CBD and CBD-acid).

Subsection (3) specifies that any cannabinoid present in a medicinal cannabis product with a content of at least 1.0% w/w or 1.0 % w/v is deemed to be an active ingredient for the purposes of subsection (2).

Subsection (2) applies to each cannabinoid present as a declared active ingredient in a medicinal cannabis product, irrespective of whether its content is less than 1.0% w/w or 1.0 % w/v.

Section 12 also advises that the assay limits in TGO 78 apply to registered medicinal cannabis products in tablet or capsule form. The limits in TGO 78 are tighter than those in TGO 93.

Where particular test methods are not specified in TGO 93, as is the case in subsection (2), then suitably validated test methods must be used.

Questions and answers relating to standard for medicinal cannabis

Why is this order necessary?

TGO 93 is necessary because there are no specific monographs for medicinal cannabis products or the cannabis plant material used in the manufacture of such products in the Ph Eur, BP or USP that could constitute standards for the quality of products and the cannabis plant material.

TGO 93 will help ensure the consistency and quality of cannabis products used for medical purposes.

Can we use our own in-house test methods or USP methods, instead of Ph.Eur test methods for the tests in Schedule 1?

Equivalent USP methods are acceptable alternatives.

The use of appropriately validated in-house test methods is acceptable as well.

With regard to in-house test methods, guidance on the principles and practice of validation of analytical procedures can be found at [ICH Harmonised Tripartite Guideline Validation of Analytical Procedures: Text and Methodology Q2 \(R1\)](#).

However, in the event of a dispute, the methods of analysis specified in TGO 93 are the official methods.

Why is there no assay method specified in subsection 12(2) of TGO 93?

The assay method will depend on the active ingredient, the dosage form and the formulation of the product.

Any appropriately validated in-house or literature assay method that is suitable for the intended purpose can be used. Please refer to the guidance on validation of test methods above.

Examples of literature assay methods can be found on the Dutch Office of Medicinal Cannabis website: [Monograph Cannabis Flos Version 7.1 \(November 28, 2014\) 40953](#) and at the UNODC

website: [Recommended methods for the identification and analysis of cannabis and cannabis products](#).

Do all the tests specified in Schedule 1 have to be carried out on every batch of cannabis plant material?

No. Reduced testing or rotational testing can be carried out where properly justified.

Is compliance with TGO 93 all I have to demonstrate to gain product approval?

No. The Order defines the general and minimum requirements for medicinal cannabis products. It does not anticipate every quality attribute for every medicine, although the majority may be covered in the Ph Eur general monograph for *Pharmaceutical Preparations* (2619). The sponsor should familiarise themselves with the requirements of this general monograph.

Medicines must also comply with *Therapeutic Goods Order No. 77 - Microbiological standards for medicines*. Registered tablets and capsules must also comply with *Therapeutic Goods Order No. 78 - Standard for Tablets and Capsules*.

My medicinal cannabis product does not meet the requirements of TGO 93. Can I get permission to supply it?

The Secretary can, in accordance with section 14 or 14A of the Act, give consent for the supply, importation or export of a medicine that does not conform to an applicable standard, such as an Order or parts of an Order. The consent may be granted unconditionally or subject to conditions, and can relate to one batch or all batches of a medicine.

Where such consent is sought, the sponsor should apply in writing to the TGA, stating precisely the particular section or sections of the Order against which the consent is sought and providing justification for not meeting the requirements.

When consent is granted, information concerning the consent is published in the Commonwealth Government Notices Gazette or on the TGA's website.

Further information on obtaining consent can be found <<https://www.tga.gov.au/consent-import-supply-or-export-therapeutic-goods-do-not-comply-standards-information-industry#publication-consent-decisions>>.

Version history

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