

National Standard for Recycling of Used Cooking Fats and Oils Intended for Animal Feeds

Review of Standards

To keep abreast of progress in industry, Standards are subject to periodic review and are kept up-to-date by the issue of amendments or new editions as necessary. It is important therefore that Standards' users ensure that they are in possession of the latest edition, and any amendments thereto.

Suggestions for improvements to this Standard should be addressed to:

PIMC Secretariat
Department of Agriculture, Fisheries and Forestry
GPO Box 858
Canberra ACT 2601

CONTENTS

| | |
|--|-----------|
| PREFACE | 4 |
| 1 DEFINITIONS | 5 |
| 2 MANAGEMENT AND PRODUCTION PRACTICES FOR COLLECTION AND PROCESSING OF USED COOKING FATS AND OILS | 7 |
| 3 COLLECTION OF FATS AND OILS | 8 |
| 4 PROCESSING REQUIREMENTS | 9 |
| 5 PACKAGING | 10 |
| 6 LABELLING | 10 |
| 7 IDENTIFICATION, TRACEABILITY, INTEGRITY AND RECORD KEEPING | 11 |
| 8 TESTING | 11 |
| 9 REFERENCES | 11 |
| 10 APPENDIX | 12 |

PREFACE

The Standard

This Standard has been approved by the Primary Industries Ministerial Council (PIMC) and implementation forms part of a broader national framework for managing risks associated with animal feed controls in Australia. The focus is on the safety of end products of recycling of used cooking fats and oils and provides for standards that are consistent with the principles and objectives of the world standards contained in Codex Alimentarius.

Objective

The prime objective of this Standard is to provide for the production of safe used cooking fats and oils by ensuring the hygienic collection, processing and repackaging of used fats and oils.

Scope

This Standard applies to all contractors and recycling operators of used cooking fats and oils in Australia and to all products of used cooking fats and oils. Where indicated, requirements for testing apply to recycled used cooking fats and oils intended for use in animal feed.

Equivalence

Requirements of this Standard are mandatory unless alternative compliance has been approved by the controlling authority.

Alternative compliance to that mandated in this Standard may be used by operators providing compliance with the overall goal can be independently validated through the use of Hazard Analysis Critical Control Point (HACCP) based programs.

Where the contractor or recycling operator of used cooking fats and oils proposes a technique different from those detailed in this National Standard the assessment of equivalence is to be determined by the Controlling Authority. The proposer of the alternative technique is to supply sufficient supporting information to validate the procedure to the relevant controlling authority. The submission must include a HACCP Plan which ensures that equivalence is maintained.

Primary Industries Ministerial Council

The Primary Industries Ministerial Council (PIMC) comprises the Australian Commonwealth, state and territory, and New Zealand ministers responsible for agriculture, soil, water and rural adjustment policy issues. The objective of PIMC is to develop integrated and sustainable agricultural land and water management policies, strategies and practices for the benefit of the community. This Standard falls within the jurisdiction of PIMC.

Under the PIMC arrangement, the Primary Industries Standing Committee (PISC) supports the Council in the achievement of objectives and develops cooperative and coordinated approaches to matters of concern to the Council. PISC is subsequently underpinned by three committees, one of which is the Primary Industries Health Committee (PIHC).

PIHC manages and reports to PISC on national and strategic issues in relation to quarantine policy; animal, fish (aquatic animal), plant and forest health; agricultural and veterinary chemicals; and related matters.

PIHC receives advice on meat issues involving non-food products from the Meat Standards Committee (MSC), which advises on standards, codes of practice and guidelines covering rendering, pet food and animal feed.

1 DEFINITIONS

| | |
|---|---|
| Approved arrangement | When used in relation to a provision of this Standard means the arrangement for the business that is approved by the controlling authority. |
| Approved laboratory | Means a laboratory that has been certified by the National Association of Testing Authorities, Australia (NATA) and approved to test product for tests specified in this Standard or a laboratory approved by the controlling authority. |
| Approved supplier | A supplier of used cooking oil that has been informed about the materials that are suitable for recycling as used oils and is approved by a contractor or recycling operator as a reliable source of safe used cooking fats and oils. |
| Audit | A systematic and independent examination to determine whether activities and related results comply with planned and documented arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives. |
| Clean | When used in relation to used cooking fats and oils collection and processing equipment and premises means free of extraneous visible matter. |
| Contamination | When used in relation to used cooking fats and oils and recycled oils means the presence of objectionable matter, including substances or micro-organisms, that makes the product potentially unsafe. |
| Contractor | The person owner or manager of a business that collects used cooking fats and oils for delivery to a recycling operator for processing. |
| Controlling authority | Means the Commonwealth, State or Territory authority that is responsible for the enforcement of this Standard as it applies to recycled oils. |
| Critical control point (CCP) | Means a point, procedure or operation or stage in the used oil recycling process, at which control can be applied and is essential to prevent or eliminate a hazard or reduce it to an acceptable level. |
| HACCP Hazard analysis critical control point | Means a system which identifies, evaluates and controls hazards that are significant for product safety. |
| Prohibited prior cargo | Any substances in the Codex list of banned immediate previous cargoes in the Codex Alimentarius Recommended Code of Practice for the Storage and transport of Edible Fats and Oils in Bulk. |
| Raw material | Any used cooking fat or oil before it is processed according to this Standard. |
| Recycled oil | Used cooking fats and oils that have been collected and processed according to this Standard. |
| Recycling Operator | The person, owner or manager who is responsible for the operation of a business that collects, processes and sells used cooking fats and oils. |
| Restricted animal material | Restricted animal material (RAM) is any material taken from a vertebrate animal other than gelatin, milk, milk products and tallow. Note: For the purposes of the ruminant feed ban, tallow is defined as any product (not |

limited to but including products known as tallow, yellow grease and acid oil) containing rendered fats and oils from any animal and which complies with the specification of 2% maximum M+I (moisture plus insoluble impurities) as measured by American Oil Chemists' Society (AOCS) official methods.

Definitions from AHC resolution OOS 32, Meeting 6, Nov 2005.

- o tallow is defined as:

“any product (not limited to but including products known as tallow, yellow grease and acid oil), containing rendered fats and oils from any animal, or used cooking oil filtered or otherwise treated to remove visible particulate matter, and which complies with a specification of 2% maximum M+I (moisture plus insoluble impurities) as measured by American Oil Chemists' Society (AOCS) official methods¹”

OR for jurisdictions which require a separate definition of used cooking oil:

- o tallow is defined as:

“any product (not limited to but including products known as tallow, yellow grease and acid oil), containing rendered fats and oils from any animal and which complies with a specification of 2% maximum M+I (moisture plus insoluble impurities) as measured by American Oil Chemists' Society (AOCS) official methods¹” and,

- o used cooking oil is defined as:

“oil previously used for the purposes of cooking which has been filtered or otherwise treated to remove visible particulate matter and which complies with a specification of 2% M+I as measured by AOCS official methods”;

| | |
|-----------------------------------|---|
| Sources (of used oil) | Premises where used cooking fats and oils are available for collection. |
| Supplier | A business that generates used cooking fats and oils e.g. restaurants and food manufacturers. |
| Safe | Means: <ul style="list-style-type: none">• will not cause infection or intoxication when properly handled and prepared for its intended use;• does not contain chemical residues in excess of established limits;• free of inappropriate foreign matter;• produced under adequate hygiene control. |
| Used cooking fats and oils | Fats or oils of vegetable or animal origin that been used to cook food for human consumption. |
| Validation | The process of demonstrating the effectiveness of a system of controls. |

¹ AOCS official methods for determining M+I are described at the following website, and full details can be purchased there: <http://www.aocs.org/tech/onlinemethods/>. The relevant tests are for “moisture and volatile matter; hot plate method” and “insoluble impurities” and are conducted sequentially, with the results of the two tests being added to obtain the total M+I. NATA laboratory accreditation for conducting these tests is available in Australia.

2 MANAGEMENT AND PRODUCTION PRACTICES FOR COLLECTION AND PROCESSING OF USED COOKING FATS AND OILS

OUTCOME REQUIRED

Documented procedures and processes are in place to assure the production of safe recycled fats and oils.

- 2.1 The operator of a used cooking fats and oil collection and processing business must comply with all relevant regulations in addition to the provisions of this Standard. Relevant regulations may include but are not limited to:
- State EPA licensing conditions;
 - Council approval to operate a used cooking oil recycling business.
- 2.2 The operator of a used cooking oil collection and processing businesses shall have an approved arrangement that:
- a) includes the policy objectives of the business for the production of recycled oils that are safe and fit for purpose;
 - b) contains procedures for each stage of production at the premises;
 - c) describes the system of operational hygiene process controls that is effective in ensuring recycled oil products produced by the business are safe and fit for purpose;
 - d) uses records to validate and verify the production of recycled oils that are safe and fit for purpose;
 - e) provides for internal audits and management reviews to be conducted of the operational activities and policy objectives of the business. The results of these reviews and the action taken are to be documented;
 - f) includes a HACCP plan for each stage of production at the premises;
 - g) includes a system for the handling of raw material, including trace back.
- 2.3 The HACCP plan as required in 2.2 shall conform to the following seven principles as specified in A Guide to the Implementation and Auditing of HACCP (SCARM Report No.60):
- 1) list all potential hazards associated with each step, conduct a hazard analysis and consider measures to control hazards;
 - 2) determine critical control points (CCP);
 - 3) establish critical limits for each CCP;
 - 4) establish a monitoring system for each CCP;
 - 5) establish corrective action plans for deviations that may occur at CCPs;
 - 6) establish verification procedures;
 - 7) Establish record keeping and documentation.

3 COLLECTION OF FATS AND OILS

OUTCOME REQUIRED

Collection systems prevent the accidental contamination of recovered fats and oils

Used oil containers

- 3.1 Recycling operators must supply suitable containers for the recovery of used cooking fats and oils.
- 3.2 Recycled steel drums (e.g. 205 L drums) may be used to collect used oil provided that the drums have been reconditioned according to the Australasian Container Reconditioners Association Code of Operating Practice.
- 3.3 Drums that are identifiable as having carried prohibited prior cargoes must not be used to collect used cooking fats and oils.
- 3.4 Pails used to deliver fresh oil (e.g. 20 litre pails) may be used to collect used oil provided that they have not been used for any other purpose than to hold fresh cooking oil or used cooking oil. Collectors of used oil must clean pails before returning them to restaurants and other sources of used oil.
- 3.5 Used oil containers, including pails, must be clearly marked "Used cooking oil only".
- 3.6 Containers must be marked with the name and contact telephone number of the recycling operator who provides the collection service.
- 3.7 Where containers are located in secure areas close fitting lids are acceptable. Where containers are located in unsecured areas, lids must be close fitting and lockable or kept in secure areas.

Suppliers

- 3.8 Contractors of used cooking fats and oils must maintain a list of approved suppliers from which the contractor accepts used oil.
- 3.9 The recycling operator must inform all approved suppliers in writing that only used cooking oil may be put into containers supplied for collection of used cooking oil.

Contractors

- 3.10 When used cooking fats and oils are collected by contractors who supply used oil to recycling operators, the recycling operator must inform the contractor in writing about what material is suitable for recycling.
- 3.11 The recycling operator must obtain a signed acknowledgement that the contractor has received and understands the advice about what materials are suitable for recycling.
- 3.12 Contractors must maintain a list of approved suppliers from which they collect used cooking fats and oils.

Inspection of oils

- 3.13 All containers of used cooking fats and oils must be inspected for odour and appearance at the time they are collected from suppliers.
- 3.14 Any material that has an unusual odour or appearance must not be collected and mixed with other oil. Oil that has an unusual odour or appearance may be collected provided that is segregated from other used oil until it is assessed and a decision made on the disposition of the oil.

4 PROCESSING REQUIREMENTS

OUTCOME REQUIRED

Solids and water-based contaminants are removed from the recovered fats and oils.

General

- 4.1 All used cooking fats and oils must be heated to 70°C for at least 20 minutes and must be at least 70°C when they are clarified by settling or centrifugation.
- 4.2 All recycled fats and oils must be clarified both by filtration or screening to remove solids including floatable solids; and by centrifugation or settling and draining off to remove water and solids.
- 4.3 After processing, used cooking fats and oils must have a moisture and insoluble impurities (M&I) content of no more than 2% (w/w basis) if they are intended for use as ruminant animal feed and labelled "This product does not contain restricted animal material". The product must be labelled according to relevant State regulations. See footnote to definition for "Restricted animal material" for the methods to be used to determine M&I content.

Equipment

- 4.4 The design of the working space and layout of the premises and its equipment shall facilitate
 - safe and hygienic production and storage of all materials used in and produced from used cooking fats and oils recycling operations;
 - any inspection or auditing necessary during or after production.
- 4.5 Premises shall:
 - be adequately supplied with continuous hot and cold water at a volume and pressure to enable hygienic practice;
 - be provided with a reliable energy supply that ensures efficient operations; and
 - have waste disposal systems sufficient to handle, and where necessary, treat all liquid and solid waste.
- 4.6 Facilities shall be provided for the cleaning of equipment.
- 4.7 Cleaning facilities shall be constructed to ensure equipment is effectively cleaned and that the cleaning processes do not jeopardise the safety of recycled oil.
- 4.8 Facilities shall be provided for the storage of cleaned equipment.
- 4.9 Hand washing facilities shall be provided which are:
 - (a) provided with hot and cold water from a central outlet;
 - (b) provided with a liquid hand cleaning agent;
 - (c) located to enable ready access by operators; and
 - (d) connected to a drainage system.

5 PACKAGING

OUTCOME REQUIRED

Drums and containers used to package processed recycled fats and oils do not contaminate product

Drums

- 5.1 Drums that are identifiable as having carried prohibited prior cargoes must not be used for packaging recycled oil.
- 5.2 Drums used to pack recycled oil must be new or reconditioned according to the Australasian Container Reconditioners Association Code of Operating Practice.
- 5.3 Drums supplied by container recyclers must be inspected for cleanliness before they are filled with used oil.
- 5.4 Drums that are reused by recycling operators must be inspected for cleanliness and must be clean before they are filled with recycled oil.
- 5.5 Where recycling operators clean their own drums, the approved arrangement must include procedures for cleaning and procedures for documenting evidence that verifies that drums are cleaned before use.
- 5.6 All drums must be leakproof.

Bulk

- 5.7 Bulk tankers used for transport of processed recycled oil must be cleaned before they are filled.
- 5.8 Tankers must be accompanied by a certificate to attest that they have been cleaned and have not contained a prohibited prior cargo.
- 5.9 Tankers must be inspected for signs of previous cargoes or contaminants before they are filled. Tankers must not be filled with recycled oil if they are not clean or contain residues of incompatible previous cargoes.

6 LABELLING

OUTCOME REQUIRED

Animal feeds are labelled to state whether they contain restricted animal material

- 6.1 Recycled oils that are intended for use as animal feed and which have a moisture and insoluble impurities content of no more than 2% must be labelled:

“This product does not contain restricted animal material.”
- 6.2 Processed used oils that are intended for use as animal feed and which have a moisture and insoluble impurities content of more than 2% must be labelled:

“This product contains restricted animal material — DO NOT FEED TO CATTLE,
SHEEP, GOATS, DEER, OR OTHER RUMINANTS.”

The product must be labelled according to relevant State regulations.

- 6.3 Labels must be applied to packages e.g. drums or to delivery dockets in the case of product dispatched in bulk.

7 IDENTIFICATION, TRACEABILITY, INTEGRITY AND RECORD KEEPING

OUTCOME REQUIRED

All batches of processed recycled fats and oils must be traceable to the supplier of the used oil and to the customer to whom the batch is dispatched.

- 7.1 There must be a system of document keeping in place that ensures the identification of the source of all used cooking oil and the traceability of processed recycled oil.
- 7.2 If any processed recycled oil is required to be recalled, the documents kept by the business shall be comprehensive enough to identify all of the products that should be recalled.
- 7.3 All documentation accompanying consignments of bulk or packaged recycled oils must be labelled with the following:
- (a) the date of production or packaging
 - (b) the identity of the recycling business at which it was produced or packed.

8 TESTING

OUTCOME REQUIRED

Recycled oils must be tested to verify that they are suitable for use in animal feeds

- 8.1 The operator of used cooking oil collection and processing businesses must develop sampling and testing procedures to verify that recycled oils intended for use as animal feeds are suitable for the intended use and comply with regulatory requirements.
- 8.2 Sampling and testing procedure must specify methods and frequency of collection of samples; methods of pooling or making composite samples; frequency of testing; tests to be carried out and acceptable limits of contaminants.
- 8.3 Samples should be submitted for testing to an approved laboratory.
- 8.4 The table in the Appendix provides a summary of maximum residue limits (MRL) for contaminants in fats and oils used for stockfeed.

9 REFERENCES

Standing Committee on Agriculture and Resource Management (1997) A Guide to the Implementation and Auditing of HACCP. SCARM Report No. 60, CSIRO Publishing, Melbourne.

10 APPENDIX

| Compound | Residue definition that applies | Maximum permitted residue (mg/kg)§ |
|------------|--|------------------------------------|
| PCBs | | 0.5 |
| Aldrin | Sum of HHDN and HEOD | 0.1 |
| Chlordane | Sum of cis-, trans- chlordane and 'oxychlordane' | 0.1 |
| DDT | Sum of p,p '-DDT; o,p '-DDT; p,p '-DDE and p,p '-TDE (DDD) | 0.5 |
| Dieldrin | Sum of HHDN and HEOD | 0.1 |
| Endrin | Sum of endrin and Δ-keto-endrin | 0.3 |
| HCB | Hexachlorobenzene | 0.1 |
| Heptachlor | Sum of heptachlor and heptachlor epoxide | 0.2 |
| Lead | | 2 |
| Mercury | | 0.2 |

§residue levels based on limits for stock food and assuming recycled fats and oils are incorporated at a maximum of 10% of the animals diet as indicated in Section 6.

The basis for the above table is below:

| Compound | Residue definition (MRL Standard) | Maximum permitted residue (mg/kg) | | | If can only feed at 10% diet (limit×10) |
|--------------------------|---|-----------------------------------|------|--------------|--|
| | | NSW | Qld | MRL Standard | |
| PCBs | - | 0.05 | 0.05 | | 0.5 |
| PBBs | - | Nil | | | Nil |
| Aldrin | Sum of HHDN and HEOD | 0.01 | | E0.01 | 0.1 |
| BHC (other than lindane) | Sum of isomers of 1,2,3,4,5,6-hexachlorocyclohexane, other than lindane | | | E0.02 | 0.2 |
| Chlordane | Sum of cis-, trans- chlordane and 'oxychlordane' | 0.01 | | E0.01 | 0.1 |
| DDT | Sum of p,p '-DDT; o,p '-DDT; p,p '-DDE and p,p '-TDE (DDD) | 0.05 | | E0.05 | 0.5 |
| Dieldrin | Sum of HHDN and HEOD | 0.01 | | E0.01 | 0.1 |
| Endrin | Sum of endrin and Δ-keto-endrin | 0.03 | | E0.03 | 0.3 |
| HCB | Hexachlorobenzene | 0.01 | | E0.01 | 0.1 |
| Heptachlor | Sum of heptachlor and heptachlor epoxide | 0.02 | | E0.02 | 0.2 |
| Lindane | Lindane | 0.1 | | E0.1 | 1 |
| Lead | | 0.2 | 0.2 | | 2 |
| Mercury | | 0.02 | | | 0.2 |