Australian Renderers Association Inc.

2011 ARA Code Of Practice for Hygienic Rendering of Animal Products

Supersedes Version 2007

Introduction

The Australian Renderers Association Code of Practice for Hygienic Rendering of Animal Products was first published in 1994. Adoption of the Code by industry was voluntary and demonstrated a commitment to continuous improvement in feed safety for the stockfeed industry.

The Code was then revised and published in December 1996. The second Code was closely based on the first version but introduced the requirements to have a quality assurance program including HACCP and requirements to test product for Salmonella. The outcome-based approach and requirements for quality assurance brought the Code more into line with the Australian Standards for meat production.

The ARA Code provided an industry benchmark for the manufacture of rendered products. The Australian Standard for Hygienic Rendering of Animal Products AS 5008 was derived from the Code and provided the legislated minimum requirements for manufacturing practice.

The Code was updated again in 2007 by the ARA subcommittee representing a cross section of members from the association.

This latest revision incorporates annual reporting of Salmonella testing to the ARA and includes raw material quality criteria.

Compliance to the Australian Standard AS 5008 is the minimum required standard for the operation of a rendering plant in Australia. The Code of Practice offers manufacturers further opportunity to strengthen existing manufacturing systems to ensure product integrity and safety to compliment feed safety programs.

The review process and industry adoption of the Code is evidence of the industry's continual improvement process and endeavour to safeguard the stockfeed industry.

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1 Scope and Application

The scope of the ARA Code of Practice applies to the construction, equipment and operation of Australian rendering plants. The Code is intended to provide a set of standards which, when applied, will provide control over the production of rendered products including animal protein meals, tallow, oils and greases.

The Code has the following components:

- Specific requirements for standards of construction, equipment and methods of operations
- A quality assurance program.
- A sampling and testing program designed to verify that post processing contamination of rendered products is under control and the finished product is fit for intended purpose.
- Compliance with applicable legislative requirements
- Establishment of a training program

The ARA provides accreditation to establishments. The compliance required for accreditation is defined in the Code. An independent auditor appointed by the ARA judges compliance at establishments.

2 Objectives of the Code

The objectives of the Code are:

2.1 Prescribe standards and give guidance to rendering plant management on hygienic production of rendered products, and on the application of quality assurance to the production of rendered products.

2.2 Provide for consistent application of heat treatments in the rendering process to minimise the risk of survival of microorganisms that are hazardous to animal health.

2.3 Minimise the risk of recontamination of rendered product after the heat treatment.

2.4 Use HACCP techniques to identify and control contamination hazards.

2.5 Provide a coordinated sampling program to verify that the HACCP programs and provisions of the Code are effective.

2.6 Operate the rendering plant with regard to applicable legislation.

2.7 Assist with production of rendering products that are suitable for intended use.

3 Definitions

Approved Laboratory
A Laboratory that has been certified by NATA and approved to test product for Salmonella and Clostridium Perfringens.

Animal Protein Meal
Defatted and dried solid product of rendering after milling. May include meat meal, meat and bone meal, blood meal, feather meal, poultry meal or fishmeal. Product tested to meet specifications.

Audit
A systematic and independent examination of the effectiveness of the quality assurance system and the degree of compliance with the Code of Practice.

Cake
The defatted and dried solid product of rendering before milling.

Casual Contamination
Intermittent microbiological contamination from sources outside meal handling equipment e.g. raw material splashes and aerosols, water splashes, birds vermin and insects, personnel, dust, shovels and barrows.

Cleaning Agents
Chemicals used to assist cleaning

Critical Control Point (CCP)
A point, step or procedure where control can be exercised to eliminate or reduce the risk of a hazard to product quality.

Dry Cleaning
Removal of objectionable matter and debris without the use of water or water-based cleaning agents. Cleaning by scraping, sweeping, brushing, and/or vacuuming.

Drying
Removal of moisture by heat.

HACCP
Hazard Analysis and Critical Control Points

Heat Treatment
The total heat applied to the core of particles in the principal heating step of the rendering process to destroy pathogenic micro-organisms.

Meal Handling Area
The area of the rendering plant where dried material is milled, screened, stored and bagged.

Non-compliance
A failure to install facilities or operate procedures according to the requirements of the Code of Practice.

Plant
Building or equipment and rendering process environment and boundaries

Processing Area
The area of the plant where rendering processes take place. Dry rendering, wet rendering and separation of tallow and solids by pressing, decanting or basket centrifuge, are all part of the processing area.

Typically, rendering plants are separated into the areas of:

- Raw material receipt - the area where raw materials are received, handled prepared for rendering
- Processing area-the area where materials are cooked and tallow is separated from solids.
- Meal handling area-the area where defatted and dried material is transferred from the processing equipment, milled, screened, stored and loaded out.

Quality Assurance
All the planned and systematic actions to be implemented to provide confidence that a product will satisfy given requirements for quality.

RBQSA
An international company that provides training and certification services for auditors

Raw Material
All tissues derived from slaughtered animals or fish for the purpose of processing onto fats, oils, protein meals or fertiliser.

Raw Material Area
The area of the plant designated for cleaning, storing, conveying and size reduction of raw material in preparation for the rendering process

Rendering
The process of heating raw materials to liberate fat from tissues and to separate fat from other solid tissues.

Restricted Animal Material
Any material taken from a vertebrate animal, other than tallow, gelatine, milk products or oils extracted from fish. It includes rendered products such as blood meal, meat meal, meat and bone meal, fish meal, poultry meal and feather meal, and compound feeds made from these products.

Ruminant Feed Ban
Legislation in Australia that bans feeding of restricted animal material to Ruminants.

Specified Heat Treatment
A heat treatment operated according to specific parameter. Specified heat treatments may be designed to comply with regulatory requirements, and/or achieve a specific microbial outcome.

Tallow
Rendered fat or oil extracted from animal tissue

Tallow – Feed Grade
Inedible fat with a moisture and insoluble (M&I) content of 2% maximum.

Validate
Provide evidence to demonstrate the effectiveness of a system of controls

Wet cleaning
Removal of objectionable matter and debris with the use of water and water-based cleaning agents.

4 Construction of Processing Premises

4.1 Site and services

Outcome required
Premises are provided with essential services for hygienic rendering

4.1.1 Rendering plants shall conform to relevant Government and statutory body requirements including planning, environmental protection, water supply, drainage, waste disposal, occupational health and safety, transport and any other applicable requirements.

4.1.2 Rendering plants shall have:

- Adequate supplies of hot and cold water.
- A drainage system designed to prevent overflow and/or pooling onto the floor onto the ground.
- Waste disposal systems sufficient to manage solid and liquid wastes

4.2 Hygienic Construction

Outcome required
Facilities should be maintained in a clean and hygienic condition

4.2.1 Buildings in which rendering operations take place and rendered products and rendered products are handled and stored should be fully roofed. The roof should be in good repair and should be weatherproof. Rendered products may be stored outside the building in enclosed bins, silos, containers or tanks that are weatherproof.

4.2.2 Walls and internal divisions or bays should be of solid construction and impervious.

4.2.3 Doors should be soundly constructed and close fitting. Doors should be kept closed as far as possible.

4.2.4 Drainage should not flow or seep into the meal handling area unless it is properly contained.

4.2.5 External areas, storage tank areas and roadways should be constructed so that they can be easily cleaned and should be kept clean.

4.3 Defined Areas

Outcome required
The plant layout and operational procedures must minimise the risk of contamination of rendered / heat treated products

4.3.1 Buildings should be constructed or internally separated so that there are clearly defined areas. There should be defined areas for raw material handling processing, handling and storage of rendered product, and load-out.

4.3.2 The areas of the rendering plant should be defined and recognised for the purpose of controlling personnel traffic between the areas.

4.3.3 There shall be no direct contamination from the raw material area to the meal handling area.

5 Raw Material Collection and Reception

5.1 Raw Material Vehicles

Outcome required
Raw material transport equipment is maintained to ensure: • raw material is not lost through leaks or spills, and • minimise the risk of contamination of rendered product either directly or indirectly

5.1.1 All raw materials should be transported and conveyed from the source to the processing site as quickly as possible.

5.1.2 All vehicles used for collection and transport of raw materials should be leak proof and should be suitable for the purpose for which they are used.

5.1.3 Other equipment, either moveable of fixed, used for transporting raw material should be leak proof and should be identified to indicate that it is for the use with raw material.

5.1.4 Vehicles and equipment used for transporting raw materials must not be used for transporting cooked products unless they have been thoroughly cleaned and sanitised.

5.1.5 Vehicles and equipment used for collection and transport of raw material must be maintained in a clean state.

5.1.6 Vehicles and other moveable equipment used for transport of raw material should be cleaned in a designated area. This area should be situated or designed to prevent the risk of contamination of heat treated products.

5.2 Raw Material Contamination

Physical contaminants in raw materials must be controlled so that product safety and quality is not jeopardised by plastic, metal or other raw material contamination. There must be documented raw material handling procedures that are consistent with the ARA's guideline on Contamination of Raw Material.

6 Heat Treatment

Outcome required
Heat treatments must be sufficient to kill vegetative bacteria and should be capable of eliminating the risk of transferring pathogens that may be in raw materials to livestock.

6.1 Heat Treatment Parameters

6.1.1 The extent of the heat treatments applied in rendering must be defined for each rendering process. This is achieved by specifying minimum process values for the parameters that contribute to the effectiveness of the heat treatment. These parameters may include (depending on the rendering process):

- Raw material particle size.
- Temperature achieved in the heat treatment process.
- Pressure applied during rendering.
- Duration of heat treatment process or feed rate to a continuous system.

Minimum process values should be specified for each applicable critical control point.

6.1.2 Records should be maintained to show that the minimum process values for each critical control point are applied.

6.1.3 Accurately calibrated temperature gauges/recorders should be used to monitor the processing conditions continuously. Records should be kept to show the date of calibration of temperature gauges/recorders.

6.1.4 Material that has not received the specified heat treatment must reprocessed through the heat treatment.

6.2 Process Validation

The effectiveness of heat treatments must be demonstrated for each rendering process. This shall be done by annually testing samples of rendered product collected immediately after completion of the heat treatment for Clostridium Perfringens. One sample per day must be tested from ten consecutive days of operation. Samples must be tested according an approved method. The results for the ten samples must all be <10 cfu/g. If Clostridium Perfringens is detected in any sample the heat treatment must be adjusted and a further ten samples tested until the heat treatment is validated by demonstrating that Clostridium Perfringens is <10 cfu/g in ten consecutive samples.

The parameters of the heat treatment (see 6.1.1) must be recorded at the time that the samples are collected for Clostridium Perfringens testing. The process validation applies to the heat treatment as defined by these parameters.

7 Storage and Despatch of Processed Animal Protein Meals

Outcome required
Meal and meal cake are handled in equipment that minimises the risk of recontamination of product

7.1 Processed animal protein meals must be packaged and/or stored and despatched in hygienic conditions. All rendered products must be protected in such a manner that safeness of the product is maintained.

7.2 Bins, conveyors, and elevators must be adequately ventilated to minimise condensation inside equipment.

7.3 Product must be protected from casual contamination.

7.4 Cake and meal handling equipment should be maintained in a clean and dry condition and should have adequate inspection points so that equipment can be examined for cleanliness. All storage facilities must be emptied and cleaned regularly.

7.5 Every vehicle must be inspected and must be clean and dry before it is loaded.

8 Ruminant Feed Ban

Outcome required
Ensure compliance with applicable Legislation

8.1 Legislation

Establishments must comply with the relevant State legislation for labelling animal material for the purpose of identifying those materials that may not be fed to ruminants.

8.2 Labelling of Animal Protein Meals

All animal protein material is restricted animal material and cannot be fed to ruminants with the exception of:

- Tallow;
- Gelatine;
- Milk and Dairy products.

Restricted animal material must be labelled with the statement:
"This product contains restricted animal material - DO NOT FEED TO CATTLE, SHEEP, GOATS, DEER OR OTHER RUMINANTS".

For bulk product including product in bulka bags the statement shall be applied to a delivery docket and/or invoice. The lettering must be at least 3 mm high.

For bagged material the statement must be on a label measuring at least 120x45mm and attached to every bag. The lettering on the label must be at least 3 mm high. Alternatively the statement may be printed or stencilled on every bag in letters at least 10 mm high.

8.3 Feed Grade Tallow

Tallow intended to be used for stock feed manufacture must be processed to ensure the moisture and insoluble material (M&I) does not exceed 2%

8.4 Labelling Feed Grade Tallow

Feed grade tallow must be labelled with the relevant regulation warning statement

9 Hygiene Procedures

Outcome required
The plant is maintained in a clean condition to ensure the hygienic processing and handling of rendered products

9.1 A documented pest control program including an appropriate use of pesticide must be used to prevent infestation of the processing area by insects, vermin, birds or other pests.

9.2 Appropriate cleaning procedures must be documented and implemented for all parts of the premises.

9.3 Suitable equipment and cleaning agents must be provided and controlled.

9.4 Hygiene control shall include regular inspections of the plant environment and equipment. Inspection schedules and results shall be documented.

9.5 All materials collected during cleaning must be reprocessed through the heat treatment or disposed of in an appropriate manner.

9.6 A documented traffic movement procedure shall be established to control the movement of personnel between areas.

10 Quality Assurance

Outcome required
Implementation of a management system to control all aspects of production that effect the hygienic quality of finished products

A documented HACCP based quality assurance program must be established to exercise control over all aspects of hygienic rendering and meet the requirements of the Australian Standard for Hygienic Rendering of Animal Products.

11 Microbiological Testing Program

Outcome required
Microbiological verification of HACCP. Protein meals are tested for Salmonella and corrective actions taken where required.

11.1 One sample of each protein meal per production week must be submitted to an approved laboratory for testing for the presence of Salmonella in 25g by an approved method. Weekly samples shall be a composite of daily samples of about 250g collected over the week. The daily samples shall be collected on every production day from load-outs or bagging operations. On days when there is no load-out or bagging, daily samples shall be collected from bulk storage bins.

11.2 Microbiological reports for samples tested shall be maintained for examination by the approved auditor and the Controlling Authority.

11.3 Where any sample is positive for Salmonella management must:

- Conduct an immediate review of hygiene procedures
- Implement and record corrective action taken

11.4 If the incidence of Salmonella in protein meal is 3 positives in a window of 10 samples corrective action shall be taken (i.e. the source of the contamination should be identified and eliminated). Daily testing shall be initiated and continued until Salmonella is not detected in samples collected on 5 consecutive days and there are no more than 2 samples positive for Salmonella in a window of 10. In addition, corrective action must be taken if Salmonella is detected in consecutive weekly samples.

11.5 If the level of contamination of samples exceeds current standards, management must:

11.5.1 Inform the auditor of action taken.

11.5.2 Record the corrective action taken

11.6 If the establishment fails to control the level of contamination within 60 days from the initial notification of exceeding the trigger for taking corrective action the auditor and the ARA must be notified and the ARA may suspend accreditation.

11.7 If accreditation is suspended, it may not be resumed until:

- A satisfactory audit has been conducted, and
- Verification of the effectiveness of corrective action is achieved through testing for Salmonella, and
- No more than two out of 10 consecutive daily samples are positive for Salmonella.

11.8 Accredited plants must submit collated annual results of Salmonella testing as requested by the ARA Executive Officer.

12 Staff and Training

Outcome required
All processing staff should understand the principles of hygienic processing and handling of rendered products

12.1 An establishment shall employ in a supervisory role at least one member of staff who is accredited in hygienic production of rendered products

12.2 All rendering production staff shall receive training on hygienic rendering practices to a competent standard. Records shall be kept of employee training.

12.3 The ARA Code of Practice should be available to staff in the rendering plant

13 Voluntary Accreditation Mechanism

The ARA will provide accreditation of rendering plants. Accreditation will be available to establishments that comply within the specified limits of this Code.

The ARA also provides supplementary accreditation for the purpose of listing establishments for selected markets. The requirements for supplementary accreditation for selected markets are contained in the ARA documented protocols for listing establishments for export of rendered products.

Accreditation status will be conferred if:

a) The auditor reports that the establishment complies with the Code within the limits specified in the Code.

b) In the opinion of the auditor, the establishment operates a satisfactory quality assurance program.

c) Requirements for sampling and testing product are complied with.

13.1 Auditing Conduct

13.1.1 The auditor shall be independent of the establishment to be audited and certified by RABQSA International as a Food Safety Auditor with Code 17 in the scope of certification. Audit reports must state the auditor's name and RABQSA certification number.

13.2.2 Audits are conducted annually and must be conducted within three months of the anniversary of the original date of accreditation. After each audit the ARA will confirm accreditation status and the date of expiry of accreditation.

13.2.3 Third party audit results and details of completed corrective action requests shall be sent to the ARA for verification purposes.

13.2.4 Supplementary accreditation audits may be required as necessary.

13.2 Auditing procedure

Initial audits are conducted as requested by rendering establishments. For accredited establishments the ARA will notify the management of the establishment 2 months before the audit is due. Accreditation may lapse if an audit is not requested within the applicable time frame.

The audit will:

a) Compare the establishment's performance with the requirements of the Code of Practice.

b) Assess the performance of the quality assurance program.

The establishment's performance in complying with the requirements of the Code of Practice is assessed by identifying points of non-compliance with the Code and points of non-compliance that affects the hygienic status of rendered product. The auditor will take into account the required outcome of each section of the Code of Practice when judging the degree of non-compliance with the Code.

A major non-compliance means that the auditor believes that the point of non-compliance results in a high risk that finished products are consistently contaminated in such a manner may represent a hazard to animal health.

A moderate non-compliance means that the auditor believes that the point of non-compliance results in a low risk that finished products could be contaminated in such a manner may represent a hazard to animal health.

A minor non-compliance means that the auditor believes that the point of non-compliance will not result in contamination of finished product unless combined with other minor or moderate points of non-compliance.

The auditor will recommend to the ARA that establishments are accredited if the audit results in:

- No major non-compliance identified.
- No more than 15 other non-compliances with a maximum of 5 moderate non-compliances.

The quality assurance program is assessed separately from the other sections of the Code and non-compliances with the requirements for a quality assurance program are not included in the allowed number on non-compliances for accreditation purpose.

The auditor must be satisfied that the quality assurance program provides an appropriate level of control over all operations that affect the hygienic status of rendered product.

The auditor will report the audit finding to the establishment. The report will identify all points of non-compliance including non-compliances with the quality assurance program. The auditor will issue corrective action requests for all moderate and major non-compliances.

13.3 Sanctions

An establishment will not be accredited until the auditor reports that:

a) it complies with the Code of Practice within the limits of compliance necessary for accreditation.

b) it operates an appropriate quality assurance program.

If the limits of compliance are exceeded at accredited establishments, the auditor informs the ARA that the establishment is provisionally accredited. Non-compliances are identified by corrective action requests. If the auditor is satisfied either by conducting a further audit, or by other evidence, that the corrective action requests have been attended to by the date agreed with the management of the establishment, the ARA should be informed that full accreditation status is resumed.

If corrective action requests are not attended to by the agreed date, the auditor will recommend to the ARA that accreditation should be withdrawn. Accreditation will not be resumed until a satisfactory audit has been completed.

14 Listing for access to overseas markets

14.1 The ARA will recommend to AQIS that establishments should be listed as eligible to export rendered product to specified countries in the following circumstances.

14.1.1 There must be an industry-based quality assurance arrangement agreed between AQIS and the ARA.

14.1.2 Individual establishments must be accredited by the ARA according to the Code of Practice and Australian Standard for Hygienic Rendering of Animal Products.

14.1.3 The establishment must be audited by an ARA appointed auditor for compliance with importing country requirements according to the industry-based quality assurance arrangement for the specified country.

14.1.4 The establishment must apply for export listing by submitting AQIS form ABP 10/04 “Application form for EXPORT LISTING of establishments producing Animal By-products.” to the ARA. When the ARA receives a satisfactory audit report from the auditor it will endorse the form and lodge with AQIS.

ADDENDUM – NOVEMBER 11, 2015

At a meeting convened on November 11, 2015 to review the ARA Code of Practice, the ARA Review Committee revised the definition of **Raw Material** as follows:

Raw Material
Any biological material from animals used for the purpose of processing into fats, oils, processed animal protein or fertiliser.