AUSTRALIAN
OILSEEDS FEDERATION
LTD

Section 1: Quality Standards, Technical Information & Typical Analysis

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INTRODUCTION

General

This Manual is compiled by the Australian Oilseeds Federation Ltd (AOF) as an industry reference for Quality and Trading Standards (Standards) and Methods of Analysis. Use of these Standards is not mandatory however industry is encouraged to adopt all elements of the Standards where possible. Use and compliance with these Standards will provide consistency in the marketing and trading of oilseeds.

Development of Standards

The Standards are developed by the Australian Oilseeds Federation Technical Committee. This is a committee comprising industry experts in relevant fields of breeding, growing, marketing, processing and consumption of a range of oilseeds. The Standards are reviewed annually and published on the Australian Oilseed Federation website.

The Technical Committee meets at least three times a year to review all potential changes to the Standards. The procedure for developing standards is included on the AOF website. All changes must be approved by the Committee prior to adoption in the Standards.

As these Standards are a direct reflection of industry requirements, industry is encouraged to actively participate in their review and feedback from industry at any time is welcome. All feedback should be provided to the Australian Oilseeds Federation in written form.

The address for all correspondence is via admin@australianoilseeds.com.
Further information relating to technical issues and Standards used by the Australian oilseed industry can also be found at the AOF website.

Implementation by Industry

While the information in this Manual is current at the time of publication, you will need to monitor the AOF website and other applicable information to ensure that you are aware of the changes to the Standards and the impact on your own trading arrangements.

The Standards outlined in this Manual are applicable for oilseeds harvested during the season of 2026/27.

DISCLAIMER

This Manual lists the specifications and Standards which are agreed to by both the buyer and the seller on a contractual basis. However, this does not absolve either party from complying with the relevant human food and stock feed regulations which may apply at either the Federal and/or State level.

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Definitions

The following Definitions are to be read in conjunction with the respective method of assessment defined in the AOF Standards Manual, Section 2, Part 1, Methods of Analysis.

The following definitions are also to be reading in conjunction with the Visual Recognition Standards Guide available on the Grain Trade Australia website www.graintrade.org.au (refer to definition of Visual Recognition Standards Guide).

Appropriately Certified Laboratory

An Appropriately Certified Laboratory is defined as a laboratory that has one or more of the following accreditations:

- participates in the AOF Test Check Program and meets the defined performance criteria, or
- has NATA accreditation for the particular test method and oilseed commodity combination in question.

APVMA

The Australian Pesticides and Veterinary Medicines Authority (APVMA) sets Maximum Residue Limits (MRLs) for agricultural chemicals.

As Is

In terms of sample assessment, is the original representative sample (e.g. as taken from the load tendered for delivery) without any interference to the sample. That is, there has been no cleaning, screening or drying of the sample prior to analysis. "As Is" is also referred to as "tale quale" or "dirty" sample.

Bleached

Bleaching removes trace metals, colour such as chlorophyll, soaps and oxidation products. Bleached oils are relatively colourless and have a low peroxide value.

Broken or Split

Broken or Split seed is included in the Defective Seed category. Where applicable to a particular oilseed a separate tolerance exists for Broken or Split. Broken or split seed is to be determined as a percentage of clean seed retained above the screen and expressed to the nearest 0.1%.

Canola and Rapeseed (CSO1, CSO1a, CSJ1a, CSO2)

For canola and rapeseed, includes Insect Damaged. This definition is to be read in conjunction with the photo in the Visual Recognition Standards Guide which depicts the minimum affected standard for canola to be classified as Broken or Split.

Crushing Soybeans

Broken or Split soybeans are those soybeans not otherwise damaged that are three quarters of a soybean or less in size retained above the screen. Includes separated hulls.

Edible Soybeans

Broken or Split soybeans are those soybeans not otherwise damaged that are half of a soybean or greater in size (with or without hull) retained above the screen that do not come within the definition of Damaged soybean.

Peanuts

Not applicable.

All Other Oilseeds (except canola, rapeseed, crushing soybeans, edible soybeans and peanuts)

All hulls, kernels or parts thereof, not otherwise damaged retained above the screen.

Cascade Rule

In relation to Edible Milling grade soybeans, if a sample fails this standard, it may be received as Edible Manufacturing grade soybeans providing it meets that standard.

Chlorophyll

The presence of high chlorophyll in seed devalues the seed and subsequent oil extracted from that seed. Green seed is an indicator of chlorophyll only. Chlorophyll is the primary method for assessment and green seed assessment is the secondary assessment method in canola. Chlorophyll assessment always over-rides the green seed count.

Chlorophyll is to be measured by spectrophotometer and the amount reported in ppm.

Clean Seed

Clean seed includes all seed material of the particular oilseed being tested other than that defined as Impurities, i.e. material retained above the screen after screening (where applicable) and/or removal of Impurities.

Cold Pressed Oil

Cold pressed oils are edible vegetable oils obtained by mechanical extraction from the parent oilseed without pre-cooking or heating and without subsequent chemical extraction and/or chemical refining. They may have been purified by washing with water, settling, filtering and centrifuging only.

Colour

For colour, analysis is to occur via different methods as indicated, with results expressed in AOCS Lovibond units or Gardner 1933. Where specified, the maximum Red value is indicated by R and the maximum Yellow value is indicated by Y. For all oil types and all methods, the colour value is to be reported to the nearest whole number.

Contaminants

Contaminants are defined as all other material other than seed of the Oilseed being assessed and includes Objectionable Material that has a nil tolerance. Individual definitions for each contaminant can be found in these standards.

Specific contaminants are listed in the respective commodity standard and generally include:

- Impurities, including Foreign Material, Snails / Stones, Insects, Ryegrass ergot and Sand / Soil.
- Objectionable Material.

Additional contaminants may be listed in the respective commodity standard.

Corrected Net Weight

The resultant weight once the Impurity content has been deducted from the gross weight. Only applies to linseed, sunflower, safflower, soybean, canola, linola, rapeseed and peanuts.

Crude Fibre

Crude fibre is a mixture of largely indigestible substances of vegetable origin and consists chiefly of cellulose and other vegetable cell wall substances. Crude fibre is to be determined from the entire sample and reported to the nearest percent.

Crude Oil

Crude oil, sometimes referred to as raw oil, is oil in an unrefined or natural state.

Crude Protein

Crude protein is defined as the amount of protein in the sample of meal or hull, based on the amount of nitrogen in the meal or hull. Crude protein is to be analysed on the entire sample. It is calculated from the total nitrogen content, i.e. % Protein = Total Nitrogen (%) x 6.25 and reported to the nearest percent.

Damaged

Damaged refers to oilseed commodities that are materially damaged that may or may not be defined within these Standards. This includes Otherwise Materially Damaged seed. Each quality parameter included in the Damaged category is separately defined within these Standards:

- For all oilseeds except edible soybeans, Damaged is included in the Defective category.
- For edible soybeans, a separate definition for Damaged exists.
- For peanuts the Damaged category does not apply.
- For Canola, frosted seeds are included in Impurities.

Damaged includes whole and pieces of seed that are listed below in Table 1.

Table 1: Damaged Classification

Quality Parameter	Oilseed Commodity		
	Canola and Rapeseed	**Edible Soybeans**	**All other commodities except Peanuts**
Diseased	Y	Y	Y
Field Fungi		Y (includes purple stain) Refer Weather Stained	
Frost Damaged	N	Y	Y
Green			Y
Insect Damaged	Refer Broken/Split	Y	Y
Otherwise Materially Damaged	Y	Y	Y
Weather Damaged	Y		
Weather Stained		Y	Y
Weed Stained (includes nightshade purple stain)		Y	

All quality parameters within the Damaged category are to be obtained from the clean seed material retained above the screen and combined. The total Damaged is to be determined as a percentage of the clean seed retained above the screen expressed to the nearest 0.1%, except for Weather Stained in Edible Soybeans.

An individual seed may only be classified as one defect type within the Damaged category. Where this applies, a seed is to be classified as the defect type with the tightest tolerance in the standard.

Note: refer to Otherwise Materially Damaged.

Defective

There are a range of quality parameters that cause oilseed commodities to be classified as Defective. The category in which a defect type is classified varies by commodity. Each defect type may:

- Have a separate tolerance (e.g. Broken or Split, Heat Damaged, Mould, Sprouted, Green).
- Be included in the category of Damaged.
- Not be applicable (e.g. for Peanuts, no Defective quality parameters are applicable).

Note: Seeds that have a nil tolerance are included in Objectionable Material.

For all types of Defective seed where a tolerance exists, each quality parameter is to be determined as a percentage of the clean seed retained above the screen expressed to the nearest 0.1% or a count of the number of grains per half litre or other sized sample (ie 1,000 seeds).

An individual seed may only be classified as one defect type. Where a seed has more than one defect, the seed is to be classified based on the quality parameter with the tightest tolerance in the applicable standard.

The general category of Defective includes whole and pieces of seed that are listed below in Table 2.

Table 2: Defective Classification

Quality Parameter	Oilseed Commodity		
	Canola and Rapeseed	**Birdseed Sunflowers**	**Poly/Mono Sunflowers, Crushing Soybean, Cottonseed, Safflower, Linseed, Linola**
Damaged	Y	Y	Y
Green	Y	Y	
Sprouted	Y	Y	Y (except Cottonseed)
Broken or Split	Y	Y	Y (except Cottonseed)
Heat Damaged	Y	Y	Y (except Cottonseed)
Mould	Y	Y	Y
Field Fungi	Y	Y	Y

For Peanuts the category of Defective does not exist.

For Edible Soybeans separate categories of particular defects occurs.

Refer to each Standard to confirm the definitions and tolerances to apply for each quality parameter.

Degummed Oil

Degumming is the process of separating phosphatides/gums by using degumming agents such as water, enzymes and other permitted chemicals. The phosphatides content shall be expressed as the amount of Phosphorus (as phosphatides) in the oil, expressed to the nearest ppm.

Dehulled

A dehulled seed is a seed that has the hull completely removed from the kernel.

Discoloured Seed Coat

Canola: Seed coat that is distinctly off colour from the characteristic brown/reddish-brown colour of canola seed. This includes, but not limited to, the presence of mould or field fungi. Reference should also be made to the GTA Visual Recognition Standards Guide.

Edible Soybeans: Refer to Weather Stained.

Diseased

Diseased are those seeds that have not matured as per a normal seed. The Diseased seed may be caused by a number of factors including pathogens, insufficient nutrients or pollution. Seeds are generally whole and do not fall into other damaged seed categories listed in the definitions section. Diseased seed is to be classified as a part of Damaged seed.

Diseased seed is to be determined as a percentage of the clean seed retained above the screen expressed to the nearest 0.1%.

Earth

Refer to the definition for Sand and Soil.

Field Fungi - Edible Soybeans only

Field fungi affected seeds are those that have the seed coat discoloured by fungal spores due to the presence of air-borne fungal spores that adhere to the surface of the seed, generally after rain. Fungi grow on the seed as a result of high moisture conditions during the maturation phase. Field fungi seeds are to be classified as part of Damaged seed under Weather Stained.

Field Fungi causes a purple stain on the seed coat.

Field fungi seed is to be determined as the number of grains per half litre of the clean seed retained above the screen.

Refer to Weather Stained.

Flash Point

The Flash point is defined as the lowest temperature, corrected to a barometric pressure of 101.3 kPa (760 mm Hg), at which the application of an ignition source causes the vapours above the surface of the oil sample to ignite under specified test conditions. The closed cup equilibrium method is to be used and the result reported to the nearest degree Celsius.

Foots

Foots is defined as the sediment (fine solids) that forms during the refining of oil. Foots are to be reported as a percentage of the total oil content, reported to the nearest 1%.

Foreign Material

Refer to Impurities.

Fractions in Proportion

This term relates to the determination of premiums and discounts for various quality parameters. Refer to Section 1: AOF 2-1, for more details on how to calculate results.

Free Fatty Acids

Free fatty acids shall be defined as oleic acid unless otherwise specified. Free fatty acid content is to be determined on a weight basis on clean seed.

All results are to be reported to the nearest 0.1%.

Frost Damaged

Frost damaged seeds are those seeds affected by frost during the growing phase. Seeds are generally recognised as intact shells only with no core (ie not whole seeds).

Frost damaged seed is included in Damaged seeds, except for Canola. For Canola, Frost damaged seeds are included in Impurities. Frost damaged seed is to be determined as a percentage of the clean seed retained above the screen expressed to the nearest 0.1%.

Genetic Modification

Genetic Modification is the direct manipulation of an organism's genes using biotechnology. More information on biotechnology and genetic modification can be found on the Office of the Gene Technology Regulator (OGTR) website, http://www.ogtr.gov.au/.

In these definitions, Genetic Modification refers to GM events approved by the Australian Government Office of the Gene Technology Regulator.

Specific limits for the Low-Level Presence (LLP) of approved GM events are specified in the relevant commodity standards. For meals and hulls refer to Section 1, AOF 1-3; Oilseed (vegetable protein) Meal and Hull Quality Standards.

Where required, genetic modified seed or meal is to be expressed as the percentage by weight of the clean seed or meal and reported to the nearest 0.1%.

Refer to Low Level Presence.

Germination

Germination is defined as the initiation of growth of a dormant seed. Depending on the seed type, the definition may refer to different levels of initial growth of the seed that is seen visually by the naked eye.

Glucosinolates

The glucosinolates are a class of organic compounds that contain sulphur, nitrogen and a group derived from glucose. They occur as secondary metabolites of many plants and plants use substances derived from glucosinolates as natural pesticides and as a defence against herbivores. Glucosinolates are to be determined from the entire sample and reported to the nearest micromole per gram of oil-free air-dry solids.

Gossypol

Gossypol is a toxic phenolic compound that occurs in seed as a natural defence against insects. Gossypol effects the animals fed the resultant oilseed meal. Gossypol is to be determined on the entire sample and reported to the nearest 0.01%.

Green Seeds

Green seeds are those that are distinctively green when crushed or show an intense green colour. Seeds that are yellow-green are not considered green.

Canola and Rapeseed (CSO1, CSO1a, CSJ1a, CSO2)

While being within the definition of Defectives, a separate tolerance for Green seeds applies to canola and rapeseed. Green seed is to be determined on the clean seed retained above the 1.0mm screen and reported to the nearest 0.1%. Where Green canola seed is measured, the Chlorophyll result overrides any Green seed result determined by the 100 or 500 grain seed ruler method.

For canola, this definition is to be read in conjunction with the photo in the Visual Recognition Standards Guide which depicts the minimum affected standard for canola to be classified as Green.

Refer also to Chlorophyll.

Peanuts

Green seeds are not assessed.

Edible Soybeans

A separate definition and tolerance exists for Green seeds. Green seeds are those soybeans that show an intense green colour and are of a chalky consistency.

All Other Commodities (except Canola, Rapeseed, Peanuts and Edible Soybeans)

For all other commodities Green seeds are included in the definition and tolerance within Defectives.

Gumnuts

The woody fruit of trees of the genus Eucalyptus

Heat Damaged

Heat damaged seed are those seeds and pieces of seed that are materially discoloured and damaged by heat. Seeds may have a heated odour or a brown powdery appearance when crushed.

Heat damaged is to be assessed on the number of seeds in a 1,000 seed sample where required.

Canola and Rapeseed (CSO1, CSO1a, CSJ1a, CSO2)

For canola and rapeseed, the assessment is based on the visual appearance of the grains when crushed. This definition is to be read in conjunction with the photo in the Visual Recognition Standards Guide which depicts the minimum affected standard for a canola seed to be classified as Heat Damaged.

Heat Test

The Heat Test determines the cloud and break temperature, the amount of break and quality of heat bleach of oil when exposed to high temperature. Results are to be expressed as a descriptor of the break and bleach at the relevant temperature.

Immature

Immature seeds are those that have not developed fully. Seeds may appear soft when pressed or crushed.

Immature seed is to be determined as a percentage of the clean seed retained above the screen expressed to the nearest 0.1%.

Impurities

Impurities generally refer to all material other than the oilseed being assessed. Depending on the commodity, Impurities may also include:

- All material, including whole seed and partial seed material of the respective oilseed being assessed, passing through the screen where a screen is prescribed for that oilseed.
  - Using 40 shakes for slotted screens
  - Using 10 shakes for round hole screens
- Separate tolerances for specific weed seeds as described under the definition for Weed Seeds.
- Specific tolerances for other elements of Impurities such as Other Contaminants within each commodity Standard.

The Impurities content is to be determined on a weight basis from the entire half litre sample and reported to the nearest 0.1%.

All Commodities (except Canola, Rapeseed, Cottonseed and Peanuts)

Impurities include:

- All Foreign Material (organic or inorganic) other than seeds of the respective oilseed being assessed.
- All material, including whole seed and partial seed material of the respective oilseed being assessed, passing through the screen where a screen is prescribed for that oilseed.
- Outer shells or husks, either whole or broken, of the oilseed being assessed.
- Unthreshed seed (e.g. seed pods) containing seed, whether whole or broken.
- Pieces of seed pods not containing seed, including attached surrounding plant material.

Canola and Rapeseed (CSO1, CSO1a, CSJ1a, CSO2)

Impurities include:

- All Foreign Material (organic or inorganic) other than canola or rapeseed seeds respectively.
- All material, including whole canola or rapeseed seed and partial canola or rapeseed seed material respectively, passing through the 1.0mm screen.
- Frost Damaged seeds.

Cottonseed

Impurities include all foreign material other than cottonseed material, where cottonseed material includes:

- Whole or broken cottonseeds and seed coats or hulls.
- Cotton fibre attached to the seed coat.

Peanuts

Impurities include:

- All Foreign Material (organic or inorganic) other than peanut seeds or intact peanut shells.
- Broken outer shells or broken hulls.

Insect Damaged

All Commodities (except Canola and Rapeseed)

Insect Damaged seeds are those that have been eaten in part by field or Stored Product Insects. Insect Damaged seeds are visually recognised through any level of damage to the seed. Insect Damaged is included in the Damaged category for all commodities except canola and rapeseed.

Insect Damaged is to be determined as a percentage of the clean seed retained above the screen expressed to the nearest 0.1%.

Canola and Rapeseed (CSO1, CSO1a, CSJ1a, CSO2)

Insect Damaged is included in Broken/Split.

Insects – Large and Small

This category includes insects (and other invertebrates) that contaminate the seed through their presence on or in the vicinity of the growing crop. These insects generally do not harm seed.

Note that there may be variances with the tolerances applied at export by Plant Export Operations.

There are separate tolerances for Large and Small Insects. They include but are not restricted to those as listed below in Table 3.

Table 3: Insects – Large and Small

Large Insects	Small Insects
Desiantha Weevil (*Desiantha spp*)	Aphids
Grasshoppers, Locusts	Minute Mould Beetle (*Corticaria spp*)
Hairy Fungus Beetle (*Typhaea stercorea*)	Mites (*Acarina spp.*)
Ladybirds	Stored Product Insects (dead only)
Pea Weevil (*Bruchus pisorum*) (dead only)	
Rutherglen bugs (*Nysius vinitor*)	
Sitona Weevil (*Sitona spp*)	
Vegetable Bugs *(Nezara viridula)*	
Wood Bugs	
Earwigs	
Millipedes	

Tolerances apply to either Live and/or Dead whole Insects for most species. Note however for Live Stored Product Insects and live Pea Weevil a nil tolerance applies – refer to the definition of Stored Product Insects.

Separate tolerances for pieces of Insects Large and Small do not apply. Whole and pieces of Insects Large and Small are included in Impurities.

Insects Large and Small are to be reported to the nearest whole number in the entire half litre sample.

Iodine Value

The iodine value shall be defined as the Wijs Iodine value. The iodine value for various oil types varies subject to seasonal variation with the range permitted as specified for the various oils listed in the Quality Specifications table. For all oil types, the iodine value is to be reported to the nearest whole number.

Load

A load is a bulk unit tendered for delivery.

Low Level Presence

Low Level Presence is defined, for the purpose of these standards only, as the unintended presence (i.e. unplanned presence) of:

- Seed/meal containing GM event(s) approved by the OGTR in non-GM seed/meal; and/or
- Seed/meal containing GM event(s) approved by the OGTR in a seedlot or meal from another GM variety approved by the OGTR.

Linoleic, Linolenic, Oleic Acid

For all oil types, the Linoleic, Linolenic or Oleic Acid content is to be determined by gas chromatography on a weight by weight basis and the result is to be reported to the nearest percent.

Maximum Residue Limits

Maximum Residue Limits (MRLs) are the maximum amount of a chemical residue or its metabolite that is legally permitted on or in an agricultural commodity. The Agricultural Pesticides and Veterinary Medicines Authority (APVMA) sets MRLs. These MRLs are set at levels which are not likely to be exceeded if the agricultural or veterinary chemicals are used in accordance with approved label instructions and can be found on the ComLaw website at:

https://www.legislation.gov.au/Details/F2019L01105Australian MRLs may differ significantly from those prescribed by foreign countries and the International Codex Alimentarius Commission. Consequently, oilseed, oil and meal exporters must be aware of MRLs of importing countries and which countries accept Codex MRLs. Foreign country MRLs may be accessed directly from foreign government websites or the NRS grains database at:
http://www.agriculture.gov.au/ag-farm-food/food/nrs/databases.

Industry should always confirm the accuracy of these MRL listings through their own means.

Meals

Oilseed meals are the product remaining after oil production and are a good source of protein for stockfeed.

Moisture Content

This is the amount of water present in the sample as determined by the appropriate analytical method.

The addition of water to an oilseed prior to tendering for delivery is prohibited.

Rapid direct reading moisture testers shall be used only as a guide for acceptance or rejection of a consignment by the crusher or his agent. Where a moisture deduction is to be made from a receival account, the results of the prescribed oven test method expressed to the nearest 0.1%, as received basis, shall be applied. Moisture deductions shall only be based on the results obtained in this way.

Moisture content is to be determined on the entire sample as received and reported to the nearest 0.1%.

Moisture, Volatiles and Impurities

For all oils, the moisture, volatiles and impurities content is to be determined on a weight basis. For bleached or refined oils, the results are to be reported to the nearest 0.01%. For all other oil types, the results are to be reported to the nearest 0.1%.

Mould

Mould refers to the presence of fungi or bacteria on seeds. Affected seeds may appear discoloured, rotten, swollen and soft, feel spongy under pressure, show the presence of fungal spores or visibly affected by mould on the seed coat. Mould is included in defective. Refer also to Defective.

Note: a nil tolerance applies where affected seeds emit a mouldy odour (musty). Refer also to Objectionable Material.

Canola and Rapeseed (CSO1, CSO1a, CSJ1a, CSO2)

For canola and rapeseed, Mould includes Field Fungi seeds. This definition is to be read in conjunction with the photo in the Visual Recognition Standards Guide which depicts the minimum affected standard for canola to be classified as Mould.

The tolerance applies to the number of grains in a 1,000 seed sample.

Cottonseed

For cottonseed, the tolerance applies to the number of seeds in a 0.5kg sample.

All Other Commodities (except canola, rapeseed and cottonseed).

The tolerance applies to the number of grains in a half litre sample.

National Residue Survey

The National Residue Survey (NRS) gathers information and supplies chemical residue results on domestic and export oilseed commodities. The NRS results show Australian oilseed is of a high quality with respect to residues and contaminants. All oilseed exporters, container packers, bulk export terminal operators, Bulk Handling Companies and processors are encouraged to actively participate in the NRS oilseeds residue monitoring program. Contravention of an overseas MRL may cause the rejection of cargoes resulting in severe financial cost being incurred and potentially jeopardising Australian oilseed exports into that market. Information about the NRS is located at: http://www.agriculture.gov.au/ag-farm-food/food/nrs

Nil

Unless otherwise stated, nil in these Standards means a level of zero and/or not detected:

- In a half litre sample representative of the entire load (or parcel of oilseed being assessed); or
- In any subsequent sub-sample used for assessment; or
- In any part of the load prior to or during the sampling process; or
- In/on the delivery vessel; or
- At any stage of the receival process.

Objectionable Material

This includes harmful substances and material which may or may not be listed in these Standards that significantly devalues the appearance of the commodity, imparts an unacceptable odour, renders the commodity unfit for human or animal consumption, is commercially unacceptable or is a food safety issue.

Material included in this definition varies by oilseed commodity. There may be separate tolerances in some commodities for particular quality parameters within Objectionable Material. Where those tolerances exist, that material is included in Impurities.

Unless otherwise stated, Objectionable Material is to be determined in the entire half litre sample (refer to definition for Nil).

Objectionable Material may include but is not limited to the following:

Animal Material

This refers to meat meal, bone meal, poultry offal, meal or any other animal proteins. Animal Material also includes carcasses of dead animals such as rats and mice.

Chemicals not Approved for Oilseeds

Refers to the following:

- Chemicals used on the growing crop in the State or Territory where the oilseed was grown in contravention of the label.
- Chemicals used on stored oilseeds in contravention of the label.
- Chemicals not registered for use on oilseeds.

- Oilseeds containing any artificial colouring, pickling compound or marker dye commonly used during crop spraying operations that has stained the oilseed.
- Oilseeds treated with or contaminated by Carbaryl, Organochloride chemicals, or diatomaceous earth.
- Chemical residues in excess of Australian Commonwealth, State or Territory legal limits (see Maximum Residue Limit and National Residue Survey).

Fertiliser

A fertiliser is any material added to the soil or applied to a plant to improve the supply of nutrients and promote plant growth.

Odour

A commercially unacceptable Odour is defined as a musty or other objectionable odour emanating from the oilseed which is not natural or normally associated with that oilseed. Odour may be caused by various means which may or may not be physically discernible in the sample being assessed.

Pickling Compounds or Artificial Colouring

Pickling Compounds are those chemicals added to an oilseed as a seed treatment or as a seed dressing prior to sowing. This definition includes seeds that may be affected by marker dye commonly used during crop spraying operations that has stained the oilseed. They are usually associated with a colouring agent. Seeds contaminated in this way may be identified by an unnatural surface colour and/or a colour that rubs off. Any seeds that are artificially coloured regardless of intensity are defective and a nil tolerance applies.

Stick/Stubble

Defined as ligneous material, crop stubble or other plant material not otherwise listed greater than 6cm in length or 1.5cm in diameter. It does not include seed pods. Material smaller than these dimensions is included in Impurities.

Stones

For all commodities where a tolerance applies, any Stone above 4.0g in weight is included under Objectionable Material and a nil tolerance applies.

Refer also to the separate definition under Stones.

Stored Product Insects and Pea Weevil

Live only. A nil tolerance for live Stored Product Insects and Pea Weevil exists in all Standards. Note that a separate tolerance exists for dead Stored Product Insects and dead Pea Weevil. Refer to the separate definition.

Tainting Agents

A Tainting Agent is any contaminant that imparts a smell or taint to the oilseed. It includes but is not limited to plant parts and seeds of *Eucalyptus spp*.

Water Addition

The addition of water to an oilseed prior to delivery is a prohibited practice.

Weed Seeds

Specified weed seeds in excess of the lowest limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds.

Other

This refers to any other commercially unacceptable contaminant such as animal excreta, glass, concrete or metal.

Objective Test

An objective test is one where the analytical result is determined by an instrument, e.g. Oil content.

Official Sample

The Official Sample is that sample representing the oilseed or oilseed product that is to be assessed for classification purposes and following analysis, payment for the commodity is to occur.

OGTR

Office of the Gene Technology Regulator, responsible for administering the national regulatory system for gene technology as set out in the Gene Technology Act 2000.

Oil Content

The oil content is the quantity of oil contained in the sample of clean seed as determined by the relevant prescribed solvent extraction method or by any rapid test procedure whose calibration is based thereon.

$$\text{Oil content (delivered)} = \text{Oil content (retest)} \times \frac{(100 - \text{delivered moisture})}{(100 - \text{retest moisture})}$$

Oil content is to be expressed to the nearest 0.1% and determined on a clean seed basis.

Oilseed Hulls

The hull is defined as the outer covering of a vegetable oilseed, also referred to as the husk.

Otherwise Materially Damaged

Otherwise Materially Damaged is a general term for damage to an oilseed commodity that is not otherwise listed in these Standards. Alternatively, the damage may not be able to be readily identified and defined under a term listed in these standards.

Otherwise Materially Damaged is included in the Damaged category.

Otherwise Materially Damaged is to be determined as a percentage of the clean seed retained above the specified screen and expressed to the nearest 0.1%.

Edible Soybeans

For edible soybeans, Otherwise Materially Damaged generally refers to water damage during storage.

Pea Weevil

Pea Weevil refers to all life stages of insects of the species *Bruchus pisorum*. Note that a separate tolerance applies to Live and Dead Pea Weevils:

Live

A nil tolerance applies to all live Pea Weevils.

Dead

Dead Pea Weevils are included in the definition for Insects – Large.

Dead whole and Pieces of Pea Weevils are classified as Impurities.

As Pea Weevils are commonly found inside field pea seeds, it is recommended that a number of field peas present in a load of an oilseed should be broken open and assessed for the presence of this insect.

Peroxide Value

The peroxide value is to be reported to the nearest whole number and the units are mEq/kg.

Phosphorus

Phosphorus is to be reported to the nearest whole number in ppm.

Pickling Compounds or Artificial Colouring

Refer to Objectionable Material.

Plant Export Operations

This service is part of the Australian Government Department of Agriculture, Fisheries and Forestry. Plant Export Operations provides import and export inspection and certification to help retain Australia's plant health status. Plant Export Operations maintain the MICoR database guide listing importing country requirements for oilseeds. Refer to http://www.agriculture.gov.au/export/micor.

Importing countries may apply tighter limits for some pests, weed seeds and diseases than specified in these standards. Exporters should check importing country requirements.

Pressed

Pressed extraction is the mechanical method used to remove oil from vegetable oilseeds.

Protein

Proteins are a group of complex organic macromolecules that contain carbon, hydrogen, oxygen, nitrogen, and usually sulphur and are composed of one or more chains of amino acids. Protein is calculated from the total nitrogen content, i.e. % Protein = Total Nitrogen (%) x 6.25.

Refined Oil

Refined Oil may be defined as the second stage of oil production where the crude oil is subjected to a combination of heat, chemicals or enzyme treatments to remove odours, discoloration or contamination.

Refractive Index

The refractive index is defined as the ratio of the velocity of light in a vacuum to that in the particular oil. It is regarded as a measure of the purity of the oil. Refractive index is measured at the temperature specified in the limits and reported to the nearest 0.001.

A Fatty Acid Profile test overrides the results from a Refractive Index test.

Relative Density 25°C

Relative density is the density of oil relative to the density of water. It is measured at 25°C and reported to the nearest 0.001.

Reporting Level

Is defined as the number of decimal places at which results are to be reported following analysis.

Note that mg/kg is equivalent to ppm where listed in these Standards.

Retention

Retention is defined as the amount of the commodity remaining above the screen after shaking. Screen hole sizes or screen slot sizes to be used for each commodity are listed in each applicable Standard. Retention is to be reported to the nearest 1%.

Ryegrass Ergot

Ryegrass ergot is *Claviceps purpurea* infection of ryegrass kernels. Ergot produces elongated fungus bodies with a purplish-black exterior, a purplish-white to off white interior and a relatively smooth surface texture.

Tolerances are defined in terms of the overall length in cm when pieces found in the sample are aligned end on end.

Ryegrass Ergot for all commodities is included in Impurities.

Sand and Soil

Sand or Soil is generally regarded as unconsolidated mineral or organic material and may also consist of clumps of earth and grains of sand. For all commodities Sand and Soil are included in Impurities.

Sand

A grain of Sand is defined as a particle of unconsolidated (loose), rounded to angular rock fragment or mineral grain between 0.06mm and 2.00mm in diameter. Smaller material is classified as Soil.

Soil

Soil is defined as unconsolidated minerals (i.e. sand, silt and clay) mixed with organic matter. The definition of Soil also includes clods of dirt. There is no size limit for Soil.

Sand and Soil is to be determined as a % by weight in the entire half litre sample.

Refer also to Stones.

Saponification Value

The Saponification value (or "Saponification number") is the number of milligrams of potassium hydroxide required to saponify 1g of fat under the conditions specified. It is a measure of the average molecular weight of all the fatty acids present. The Saponification value is reported to the nearest whole number.

Sclerotes

Sclerotes is a disease caused by the fungus, *Sclerotinia sclerotiorum.* For all commodities Sclerotes are included in Impurities.

Canola and Rapeseed (CSO1, CSO1a, CSJ1a, CSO2)

In relation to canola and rapeseed, the Sclerotes are initially white but harden to form small black structures which vary in size and shape. They may be small and round like a canola seed or up to 2 cm long and cylindrical, ovoid or irregular in shape.

For canola and rapeseed, Sclerotes are to be determined as a percentage by weight of the entire half litre sample and expressed to the nearest 0.1%.

Edible Soybeans

For Edible Soybeans, a nil tolerance in the entire load applies to all Sclerotes on any commodity.

Seed

Seed refers to whole or pieces of seed coats and kernels of the oilseed being assessed.

Seed Contaminants

Seed Contaminants are weed seeds listed in the Weed Seeds definition, except for Edible Milling and Manufacturing Grade Soybeans which are listed in the respective grade trading standards (CSO 6 & CSO 7).

Small Foreign Seeds

Small Foreign Seeds only applies to edible soybeans. They are those weed seeds that fall through the screen and into the catch pan during the sieving process and do not have a specific tolerance nominated in the list of Weed Seeds in the Seed Contaminants section of each Standard. When soybeans are being assessed, if small soybeans fall through a 4.75mm screen they are not included as a Small Foreign Seed.

Table 4: Common Small Foreign Seeds

Common Name	Botanical Name	Common Name	Botanical Name
Amsinckia	***Amsinckia spp***	Milk Thistle (Seeds)	***Sonchus oleraceus***
Australian Phalaris	***Phalaris aquatica***	Mustard	***Sisymbrium spp***
Bladder Soapwort	***Vaccaria hispanica***	Mustard (Indian Hedge)	***Sisymbrium orientale***
Burrweed (Yellow)	***Amsinckia spp***	Paradoxa Grass (Seed)	***Phalaris paradoxa***
Canary Grass (Wild)	***Phalaris canariensis***	Peppercress	***Lepidium spp***
Canola	***Brassica rapa***	Phalaris (Australian)	***Phalaris aquatica***
Celery (Slender)	***Apium leptophyllum***	Rapeseed	***Brassica rapa***
Charlock	***Sinapis arvensis***	Ryegrass	***Lolium spp***
Clover (Ball, Ball Clover)	***Trifolium glomeratum***	Sage (Wild)	***Salvia verbenaca***
Cockspur (Maltese)	***Centaurea melitensis***	Salt Bush	***Atriplex muelleri***
Dock	***Rumex spp***	Slender Celery	***Apium leptophyllum***
Fat Hen	***Chenopodium album***	Sorrel	***Rumex acetosella***
Fescue	***Festuca spp***	Sowthistle	***Sonchus spp***
Hares Ear	***Conringia orientalis***	Thistle Milk (seeds)	***Sonchus oleraceus***
Hedge Mustard	***Sisymbrium officinale***	Turnip (Mediterranean)	***Brassica tournefortii***
Horehound	***Marrumbium vulgare***	Turnip (Wild)	***Brassica tournefortii***
Knotweed	***Polygonum aviculare***	Urochloa Grass	***Urochloa panicoides***
Lesser Canary Grass	***Phalaris minor***	Verbena	***Verbena spp***
Lettuce	***Lactuca spp***	Wild Canary Grass	***Phalaris canariensis***
Lucerne (Seeds)	***Medicago sativa***	Wild Radish (Seeds)	***Raphanus raphanistrum***
Maltese Cockspur	***Centaurea melitensis***	Wild Sage	***Salvia verbenaca***
Marshmallow (Seeds)	***Malva palviflora***	Wild Turnip	***Brassica tournefortii***
Medics (Seeds)	***Medicago spp***	Wireweed	***Polygonum aviculare***
Muskweed (Seeds)	***Myagrum perfoliatum***	Yellow Burrweed	***Amsinckia spp***

Other seeds not listed may also fall into the Small Foreign Seeds category.

Small Foreign Seeds are to be reported to the nearest whole number and are to be determined based on their number in the entire sample received.

Snails

Snails refer to whole or substantially whole (more than half) Snail shells irrespective of size. It includes bodies without shells of snails listed in Table 5 below.

Table 5: Snails

Common Name	Scientific Name
Common White Snail	*Cernuella virgata*
White Italian Snail	*Theba pisana*
Pointed Snail	*Cochlicella actua*
Small Pointed Snail	*Cochlicella Barbara*
Any other snail species	Various

All Snails and pieces of Snail Shell that are equal to or less than half an entire shell is classified under Impurities. Different tolerances may apply depending on the commodity and whether the Snail is above or below 3mm in size.

Snails are to be reported to the nearest whole number based on their presence in the entire sample.

Solvent Extraction

The main method used to remove oil from vegetable oilseeds and involves the use of a solvent such as hexane.

Sprouted Seed

Sprouted seeds are those in which the seed coat has split and the primary root has emerged. This includes early and any further advanced stage of growth of the primary root. Includes grains where the primary root has been knocked off during the harvesting or handling process.

Sprouted seed is not included in Damaged but is in the Defective category with a separate tolerance applying for most commodities.

Sprouted seed is to be determined as a percentage of the clean seed retained above the screen expressed to the nearest 0.1%.

Canola (CSO1, CSO1a)

For canola, this definition is to be read in conjunction with the photo in the Visual Recognition Standards Guide which depicts the minimum affected standard for canola to be classified as Sprouted.

Standards

Standards means all the test parameters listed in this Manual. Loads presented for delivery or samples to be assessed under these Standards must be analysed for all the parameters listed in the Standards, unless otherwise specified in individual Storage and Handling Agreements.

Sticky Exudate – Sunflowers

Honeydew or other sticky exudates are produced by the sunflower plant in response to any predator attack, mainly insects. The exudate oozes out of the flowers and drips onto leaves of the sunflower plant. It causes seeds to stick together making the crop difficult to harvest and preventing harvested grain from running freely through equipment.

This sticky exudate is acceptable if the grain is able to flow freely. If the grain does not flow freely, the affected grains are classified as Damaged.

Stones

A Stone or gravel is defined as a lump or mass of hard consolidated mineral matter being greater than 2mm in length or diameter. Smaller material is defined as Sand.

For some commodities, a nil tolerance applies.

For other commodities, a maximum weight of 4.0g applies to the Stone above the screen or above 3mm in diameter, whichever is applicable for the particular commodity. Larger and/or heavier material is rejectable under Objectionable Material.

The number of stones in the entire sample is to be reported to the nearest whole number.

Refer also to Sand and Soil.

Stored Product Insects

These are insects which cause damage to stored oilseeds. The definition and tolerance applies to all life stages of the insect.

Table 6: Stored Product Insects

Common Name	Scientific Name
Bean Weevil	*Acanthoscelides obtectus*
Flour mite	*Acarus siro*
Murky meal caterpillar	*Aglossa caprealis*
Foreign grain beetle	*Ahasverus advena*
Lesser mealworm	*Alphitobius diaperinus*
Pea and bean beetle – Southern cowpea weevil	*Callosobruchus chinensis*
Pea and Bean Weevil – Cowpea weevil	*Callosobruchus maculatus*
Cowpea weevil	*Callosobruchus phaseoli*
Dried fruit beetle	*Carpophilus dimidiatus*
Dried fruit beetle	*Carpophilus hemipterus*
Dried fruit beetle	*Carpophilus ligneus*
Dried fruit beetle	*Carpophilus obsoletus*
Rice Moth	*Corcyra cephalonica*
Flat Grain Beetle	*Cryptolestes spp*
White-shouldered house moth	*Endrosis sarcitrella*
Tropical Warehouse Moth	*Ephestia cautella*
Cacao moth/warehouse moth	*Ephestia elutella*
Mediterranean flour moth	*Ephestia kuehniella*
Broad-horned flour beetle	*Gnatocerus cornutus*
Tobacco beetle/cigarette beetle	*Lasioderma serricorne*
Long-headed flour beetle	*Latheticus oryzae*
Spider beetle black	*Mezium affine*
Spider beetle	*Mezium americanum*
Mottled grain moth	*Nemapogon granella*
Merchant grain beetle	*Oryzaephilus mercator*
Saw Tooth Grain Beetle	*Oryzaephilus surinamensis*
Small-eyed flour beetle	*Palorus ratzeburgi*
Depressed flour beetle	*Palorus subdepressus*
Indian Meal Moth	*Plodia interpunctella*
Psocids/Book lice	*Psocoptera sp*
White-marked spider beetle	*Ptinus fur*
Australian spider beetle	*Ptinus tectus*
Meal moth	*Pyralis farinalis*
Lesser Grain Borer	*Rhyzopertha dominica*
Granary Weevil	*Sitophilus granarius*
Rice Weevil	*Sitophilus oryzae*
Maize Weevil	*Sitophilus zeamais*
Angoumois Grain Moth	*Sitrotroga cerealella*
Yellow mealworm	*Tenebrio molitor*

Common Name	Scientific Name
Dark mealworm	*Tenebrio obscurus*
Cadelle	*Tenebroides mauritanicus*
Rust-red Flour Beetle	*Tribolium castaneum*
Confused Flour Beetle	*Tribolium confusum*
Warehouse Beetle	*Trogoderma variable*
Hairy fungus beetle	*Typhaea stercorea*

Note that a separate tolerance may exist in individual quality standards for dead and live Stored Grain Insects.

Live

A nil tolerance applies to all live Stored Grain Insects in all commodities. This includes live Pea Weevil.

Dead

Dead Stored Grain Insects are included in the definition for Insects – Small for all commodities except edible soybeans. Note that Dead Pea Weevil is included in the category of Insects – Large.

Dead and pieces of Stored Grain Insects are classified as Impurities.

Insects are to be reported to the nearest whole number in the entire half litre sample.

Subjective Test

A subjective test is where the analysis result is determined using visual analysis and includes all Defective Seed tests (diseased, frost damaged, heat damaged, insect damaged, weather damaged, weather stained and immature), Broken and Split seed, Sprouted, Green seed and Chlorophyll (ruler method).

Temperature

For all commodities, the maximum temperature of the oilseed tendered for delivery is 50°C.

Test Weight

Test weight is a measure of the bulk density or volume of the oilseed based on the entire sample as received, measured in kilograms per hectolitre.

Test weight is to be reported to the nearest 0.1kg/hl.

Trade Certified

Trade Certified refers to equipment whose model has a Certificate of Approval issued by the National Measurement Institute and which is monitored for use under an approved program by the user of that equipment.

Unlimited

In these Standards means no limit applies and the parameter does not need to be assessed. That is, no minimum or maximum tolerance exists. The quality parameter may exist at unlimited levels in the sample being assessed as per these Standards or the test is not required to be conducted for that quality parameter.

Unsaponifiable Matter

Unsaponifiable matter includes those substances frequently found dissolved in fatty acids and drying oils which cannot be saponified by caustic treatment, but which are soluble in the normal fat solvents. Included are the higher aliphatic alcohols, sterols, pigments, and hydrocarbons. Unsaponifiable matter is to be reported to the nearest 0.1%.

Varietal Restrictions

For particular commodities only certain approved varieties are able to be received into a particular grade. This is termed Varietal Restrictions. Refer to the Varietal Master List for each commodity which lists the classification of each variety.

Variety

This is the next lowest level taxonomic rank of a plant below that of the term "species". Oilseeds of differing varieties have differing genetic compositions which may endow them with differing agronomic characteristics, and/or differing end product quality characteristics.

Varietal Master List

The Varietal Master List for each commodity all varieties approved for classification into a particular commodity and grade.

Visual Recognition Standards Guide

The Visual Recognition Standards Guide (VRSG) for various commodities contains a range of photographs and illustrations to supplement the oilseed Standards as outlined in this Manual. The definitions in this Manual are to be read in conjunction with the photo in the VRSG where shown which depicts the minimum affected standard for a seed to be classified as the respective defect shown. Refer Section 1 General Procedures for details on the latest version of the VRSG.

Weather Damaged – Canola and Rapeseed (CSO1, CSO1a, CSJ1a, CSO2)

Weather Damaged seeds are classified under Damaged Seeds. Weather damaged seeds are those that have been subjected to rain during the maturation phase to the extent that they have become Weather damaged. When seeds are crushed, they may have a grey washed out appearance and a chalky texture.

Weather damaged seed is to be determined as a percentage of the clean seed retained above the screen expressed to the nearest 0.1%.

For canola, this definition is to be read in conjunction with the photo in the Visual Recognition Standards Guide which depicts the minimum affected standard for canola to be classified as Weather Damaged.

Weather-stained

Weather-stained seeds are classified under Damaged Seeds. Weather-stained seed is to be determined as a percentage of the clean seed retained above the screen expressed to the nearest 0.1% except for Edible Soybeans.

Canola and Rapeseed (CSO1, CSO1a, CSJ1a, CSO2)

Refer to Weather Damaged.

Peanuts

Weather Stained does not apply.

Edible Soybeans

Weather Stained refers to discolouration of the seed coat that may be visible in various shapes and shades outside of the normal colour for that variety. It includes:

- Seed coats that have a colour that is distinctly different to that of the predominant variety in the sample.
- Excessive seed coat staining such as purple staining.
- Discolouration caused by any means which may or may not be able to be determined.

For Edible Soybeans, Weather Stained is to be determined as the number of grains per half litre retained above the screen.

All other Commodities except canola, rapeseed, edible soybeans and peanuts

A general term used to describe visible discolouration to the seed coat by any means that may or may not otherwise be defined or be distinguishable from other defects in these Standards. Discolouration of the seed coat may be visible in various shapes and shades outside of the normal colour for that variety.

Weed Seeds

The total weed seed content is to be included in the assessment of Impurities. There are specific tolerances for various weed seeds for each commodity. In addition, there are separate tolerances for specific weed seeds that are common to all commodities as outlined in Table 7 below except for edible soybeans which have a separate list of weed seeds. Refer also to the definition of Small Foreign Seeds.

Table 7: Weed Seed Limits by Species (maximum seeds per half litre)

Common Name	Scientific Name	Tolerance per half litre
Type A (entire load)		
Alligator weed	*Alteranthera philoxeroides*	Nil
Cape Tulips	*Homeria spp.*	Nil
Castor Oil Plant	*Ricinus communis.*	Nil
Coriander	*Coriandrum sativum*	Nil
Creeping Knapweed	*Acroptilon repens*	Nil
Darling pea	*Swansonia spp.*	Nil
Dodder	*Cuscuta spp.*	Nil
Giant Sensitive plant	*Mimosa invisa*	Nil
Opium Poppy	*Papaver somniferum*	Nil
Parthenium weed	*Parthenium hysterophorus*	Nil
Ragweed	*Ambrosia spp.*	Nil
Rattlepod	*Crotalaria spp.*	Nil
St. Johns Wort	*Hypericum perforatum*	Nil
Star Burr	*Acanthospermum hispidum*	Nil
Stinkwort	*Inula graveolens*	Nil
Type B		
Burrs – all, except where listed in this table	*Xanthium spp.*	1
Saffron Thistle	*Carthamus lanatus*	1
Wild mignonette	*Reseda lutea*	1
Type C		
Crow Garlic	*Allium vineale*	2
Skeleton weed	*Chondrilla juncea*	2
Thornapple	*Datura spp.*	2
Type D		
Common Heliotrope	*Heliotropium europeaum*	3
Darnel	*Lolium temulentum*	3
Hexham scent	*Melilotus indicus*	3
Jute	*Corchorus olitorius*	3
Mexican poppy	*Argemone mexicana*	3
Mintweed	*Salvia reflexa*	3
Nightshade	*Solanum spp.*	3
Type E		
Sesbania pea	*Sesbania cannibina*	65

Where a weed seed or plant part imparts an odour to the commodity, there is a nil tolerance for that weed seed or plant part and the load is to be rejected.

For those Foreign Seeds in Pods as listed in Table 7 above:

- The pods are to be broken open and the individual weed seeds counted.
- The whole pods or pieces of pods remaining after seeds have been removed and counted are to be included as Impurities.

For those Foreign Seeds in Pods not listed in Table 7 above:

- The pods (and any pieces of pods) are included as Impurities.

Weed seeds are to be reported to the nearest whole number and are to be determined based on their number in the entire sample received.

Note: refer to the definition of Nil where a weed seed is listed as Nil.

Weed Stained – Edible Soybeans

Weed Stained grains refer to those edible soybean seeds that are stained due to the presence of an exudates from a weed. The exudate adheres to the edible soybean seed or causes adhesion of other Impurities such as earth. A common weed seed causing purple staining is Nightshade.

Weed Stained is included as a part of Damaged for Edible Soybeans only.

Weed Stained seed is to be taken as a percentage of the clean seed retained above the screen expressed to the nearest 0.1%.

Australian Oilseeds Federation Ltd

Classification Dispute Settlement

1.0 Harvest Deliveries

1.1 If in place, a Storage and Handling Agreement may over-ride the terms and conditions outlined in the following procedure.

1.2 Retesting and dispute settlement can be carried out on Objective and Subjective test methods.

1.3 Retesting and dispute settlement can only be carried out if the load can be accepted. Where Objectionable Material is found, or the load cannot be accepted due to issues such as high moisture content, the load will be rejected without appeal.

1.4 If the classification of a load tested on receival is disputed by the owner or their representative, the classifier shall retest another sample drawn from the original speared sample bucket for that load. The second test results will override the initial test results. A full objective classification as per the Standards for that commodity of the second sample shall occur.

1.5 Should the owner or representative continue to dispute the second sample, the load may be re-sampled and fully classified once. These results override all previous results. (Note: re-sampling may not be possible if the load has moved from the sampling platform, in which case the load must rejoin the end of queue and re-present as a new load). If the receival testing equipment is Trade Certified, any further clauses under this section do not apply.

1.6 If the owner or representative continues to dispute the test result(s) and if the load has not been rejected then it will only be received and binned as per the site classification.

1.7 Duplicate one (1) litre samples will be taken and placed into appropriately marked sample bags, which are then to be sealed. One sample is to be retained on site for a period of 2 months and one is to be forwarded to an Appropriately Certified Laboratory for a full classification as per the Standards for that commodity.

1.8 The costs of laboratory testing, including sample freight and other related external costs will be borne by the person originating the dispute, unless the results of the laboratory testing result in the load being classified into a higher grade or at least a 1% increase in oil content or a 30% relative reduction in impurities. In this case the receiver of the load shall pay the testing costs. All internal costs shall be borne by each party.

1.9 Where laboratory facilities are available, testing in these premises using reference methods shall take precedence for rejection over in-field assessment using rapid assessment methods.

1.10 For the determination of Oil Content, in cases of dispute, the prescribed solvent extraction method shall be the basis for decision unless otherwise agreed to by mutual decision. The results of oil content re-tests shall be adjusted to the basis of the moisture content at the time of delivery but only where oven moisture is available on the original test otherwise the original moisture result is to apply.

2.0 Consignment Deliveries

2.1 If in place, a Storage and Handling Agreement may over-ride the terms and conditions outlined in the following procedure.

2.2 All loads being delivered must be sampled in accordance with AOF approved sampling methods.

2.3 Trade disputes, unless otherwise agreed will be settled on a load by load basis. Contracts for the delivery of oilseeds should nominate and agree an Appropriately Certified laboratory to resolve disputes prior to the commencement of delivery. The contract should also nominate and agree if "quality is final on outturn" or "quality is final on delivery". If the testing equipment is trade certified, any further clauses under this section do not apply.

2.4 For each load received, two clearly identified, sealed 1/2 litre samples shall be retained for a period of 2 months. The name of the person responsible for collecting the sample shall be clearly identifiable. If no dispute is lodged within this period, the samples may be disposed of and no further quality disputes will be accepted on the loads represented by these samples.

2.5 For each load disputed, one of the load samples shall be sent to the agreed laboratory for analysis. The laboratory shall be made aware that the samples are to settle a trade dispute under these rules and the AOF reference methods shall be used to settle the dispute. A full classification must be undertaken for each load.

2.6 The costs of laboratory testing, including sample freight and other related external costs will be borne by the person originating the dispute, unless the results of the laboratory testing improve the payment value of the load. In this case the receiver of the load shall pay the testing costs. All internal costs shall be borne by each party.

Australian Oilseeds Federation Ltd

Section 1: AOF 1-1 – Oilseed Quality Standards

1.0 SCOPE

1.1 This document outlines the Quality Specifications for the various oilseeds as listed in these Standards. The Standards apply to all oilseeds and are to apply at Receival and / or on outturn, whichever is applicable.

1.2 Notwithstanding the specifications outlined in this document, all oilseeds and oilseed products (i.e. oil, meal and hulls) must comply with the relevant Federal and / or State stockfeed or agricultural regulations.

1.3 In particular oilseeds and oilseeds products must comply with the maximum residue levels (MRLs) listed in both the FSANZ Food Standards Code and the APVMA MRL Standard (maximum residue limits in food and animal feedstuffs).

1.4 Sampling procedures as outlined in Section Two must be followed to ensure that the Official Sample used for analysis is representative of the consignment.

1.5 For domestic trading, the Official Sample shall be taken by the buyer or their appointed agent at the receival point at the time of receipt of the lot, or as otherwise agreed to. Samples shall be retained by the buyer for at least two months after receival.

1.6 The following Quality Standards and price adjustments are applicable to the results of the analysis of Official Samples tested according to the prescribed methods outlined in Section Two.

2.0 GENERAL PROCEDURES

2.1 The Standards listed in the following tables and all other information detailed in this section applicable to these Standards, are to be applied to each individual load of the respective oilseed commodity.

2.2 With the exception of Impurities, Test Weight and Moisture, all analyses shall be conducted and reported on a clean seed basis.

2.3 A consignment containing Objectionable Material that is detected at any stage of the receival process shall be rejectable.

2.4 Protein (dry matter basis) = protein 'as is' x 100 / (100 – 'as is' moisture).

2.5 Where a commodity does not have a minimum or maximum tolerance for that particular quality parameter as indicated by "Unlimited", a test for that quality parameter is not required.

2.6 A strictly nil tolerance applies where a commodity has a tolerance of "nil" listed.

2.7 For commodities that have a tolerance listed at a "base level", receival of a commodity with a quality parameter above or below that base level may occur with consent between the two parties and with the application of appropriate discounts.

2.8 Where the Standards states "rejectable over a specified limit" or "rejectable under" or similar wording, the commodity may either be accepted or rejected depending on agreement between the relevant parties.

3.0 REFERENCE MATERIALS

3.1 A range of Reference Material may need to be referred to when applying these Standards.

3.2 At the time of publishing this Manual, the following photographic Reference Material referred to in this Manual is considered by AOF to be suitable as an aid to the classification of oilseeds.

3.3 Industry should be aware that all such material is controlled by the author of that material and appropriate copies of that material can be obtained from the author.

3.4 The method of printing, copying, storing, using or otherwise obtaining such Reference Material may impact on the appearance of its content. This may impact on the classification of oilseeds. Industry should note the method of publication of the material by the author and other relevant information such as version number to ensure they have the appropriate version.

Name of Material	Material Type	Author	Version Number	Applicable Dates
Defective Seeds				
Visual Recognition Standards Guide for Grain Commodity Sampling and Assessment	Hardcopy booklet	GTA https://www.graintrade.org.au/	n/a	as per current digital copy on GTA website
Contaminants				
Insects of Stored Grain, A Pocket Reference	Hardcopy booklet	CSIRO https://www.publish.csiro.au/book/5479/	2nd Edition	2007
Seed Impurities of Grain Identification Guide	Hardcopy booklet	GTA https://www.graintrade.org.au/	as per current digital copy on GTA website	N/A

Australian Oilseeds Federation Ltd

4.0 COMMODITY STANDARDS

Table 1: Canola Standard

Commodity: CANOLA		Standard Reference No: CSO 1
Parameter	**Specification**	**Comment**
Physical & Chemical Parameters		
Description		Canola is defined as seed of the species *Brassica napus or Brassica rapa* but containing less than 30 micromoles of specified glucosinolates per g of oil-free air-dry solids and not more than 2% erucic acid in the oil component, as a proportion of the total fatty acids content. The specified glucosinolates are any one or a mixture of 3-butenyl, 4-pentenyl, 2-hydroxy-3-butenyl and 2-hydroxy-4-pentenyl glucosinolates.
Accepted Varieties	As per Masterlist	Approved canola varieties as listed in these Standards or on the AOF website.
Oil (%)	42.0 base level	Refer Section 5 for Price Adjustments
Free Fatty Acid (%)	1.0 base level	, Rejectable over 2.5%Refer Section 5 for Price Adjustments
Moisture Max (%)	8.0	Refer Section 5 for Price Adjustments
Test Weight Min (kg/hl)	62.0	Rejectable under this limit
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Canola (Maximum % count unless otherwise stated based on a 1,000 seed sample retained above 1.0mm round hole screen)		
Broken or Split (%)	7.0	Includes Insect Damaged. Refer Section 5 for Price Adjustments
Heat Damaged (per 1,000 seeds)	1	Assessed on crushed seeds
Discoloured Seed Coat (%)	3.0	Assessed on whole seeds before crushing. including, but not limited to seeds affected by mould and field fungi
Damaged (%)	3.0	Includes Diseased, Weather Damaged and Otherwise Materially Damaged. Frost Damaged seeds are not included in Damaged (refer Impurities). Rejectable over 10%. Refer Section 5 for Price Adjustments
Sprouted (%)	5.0	Refer Section 5 for Price Adjustments
Green (%)	2.0	No penalty up to a maximum of 2%, rejectable over 2% using the ruler method. Alternatively, determine as Chlorophyll, with a maximum of 12ppm and rejectable over.
Contaminants (Maximum count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (% wt/wt)	3.0	All foreign material. This includes canola and all other material falling through the 1.0mm round hole screen and Frost Damaged canola seeds Refer Section 5 for Price Adjustments
Snails/Stones	1 Snail/Stone above 3.0mm screen / 2.5L	Tolerance of 1 per 2.5 litre sample for any Snails/Stones remaining above a 3.0 mm round hole screen. If one Snail/Stone is found above the screen in the ½ litre sample, then a further four ½ litre samples should be taken. If a Snail/Stone is found in any one of the subsequent samples, the load is to be rejected. For stones a maximum weight of 4.0g applies.
	1 Snail/Stone below 3.0mm screen / 0.5L	Tolerance of 1 Snail/Stone per ½ litre sample, passing through a 3.0 mm round hole screen.
Gum Nuts (per 2.5Ltr)	1	Whole or pieces of any size
Insects – Large (Live and/or Dead)	10	Includes Rutherglen bugs, ladybirds, grasshoppers, wood bugs, sitona weevils, earwigs, millipedes, vegetable bugs and pea weevil (dead only).
Insects – Small (Live and/or Dead)	100	Includes all species of aphid, all species of mites and stored product insects (dead only).
Ryegrass Ergot (length in cm)	0.5	Maximum length of all pieces aligned end on end.
Sclerotes (% by wt)	0.5	Canola Sclerotes.
Sand/Soil (% by wt)	0.1	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to, harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not approved for canola, musty seed and other material imparting an odour to the canola, tainting agents, animal material, fertiliser, sticks/stubble and pickled seed.
Seed Contaminants (maximum tolerance by count per half litre to apply to individual seeds)		
Type A (entire load)	Nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, Saffron Thistle, Wild Mignonette
Type C	2	Crow Garlic, Skeleton Weed, Thornapple
Type D	3	Common Heliotrope, Darnel, Hexham Scent, Jute, Mexican Poppy, Mintweed, Nightshade
Type E	65	Sesbania Pea

Table 2: Non-GM Canola Standard

Commodity: CANOLA		Standard Reference No: CSO 1-a
Parameter	**Specification**	**Comment**
Physical & Chemical Parameters		
Description		Canola is defined as seed of the species *Brassica napus or Brassica rapa* but containing less than 30 micromoles of specified glucosinolates per g of oil-free air-dry solids and not more than 2% erucic acid in the oil component, as a proportion of the total fatty acids content. The specified glucosinolates are any one or a mixture of 3-butenyl, 4-pentenyl, 2-hydroxy-3-butenyl and 2-hydroxy-4-pentenyl glucosinolates. The low-level presence of up to 0.9% of GM events approved by the Australian Government Office of the Gene Technology Regulator is permitted.
Accepted Varieties	As per Masterlist	Approved canola varieties as listed in these Standards or on the AOF website.
Oil (%)	42.0 base level	Refer Section 5 for Price Adjustments
Free Fatty Acid (%)	1.0 base level	Refer Section 5 for Price Adjustments
Moisture Max (%)	8.0	Refer Section 5 for Price Adjustments
Test Weight Min (kg/hl)	62.0	Rejectable under this limit
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Canola (Maximum % count unless otherwise stated based on a 1,000 seed sample retained above 1.0mm round hole screen)		
Broken or Split (%)	7.0	Includes Insect Damaged. Refer Section 5 for Price Adjustments
Heat Damaged (per 1,000 seeds)	1	Assessed on crushed seeds
Discoloured Seed Coat (%)	3.0	Assessed on whole seeds before crushing. including, but not limited to seeds affected by mould and field fungi
Damaged (%)	3.0	Includes Diseased, Weather Damaged and Otherwise Materially Damaged. Frost Damaged seeds are not included in Damaged (refer Impurities). Refer Section 5 for Price Adjustments
Sprouted (%)	5.0	Refer Section 5 for Price Adjustments
Green (%)	2.0	No penalty up to a maximum of 2%, rejectable over 2% using the ruler method. Alternatively, determine as Chlorophyll, with a maximum of 12ppm and rejectable over.
Contaminants (Maximum count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (% wt/wt)	3.0	All foreign material. This includes canola and all other material falling through the 1.0mm round hole screen and Frost Damaged canola seeds. Refer Section 5 for Price Adjustments
Snails/Stones	1 Snail/Stone above 3.0mm screen/2.5L	Tolerance of 1 per 2.5 litre sample for any Snails/Stones remaining above a 3.0 mm round hole screen. If one Snail/Stone is found above the screen in the ½ litre sample, then a further four ½ litre samples should be taken. If a Snail/Stone is found in any one of the subsequent samples, the load is to be rejected. For stones a maximum weight of 4.0g applies.
	1 Snail/Stone below 3.0mm screen/0.5L	Tolerance of 1 Snail/Stone per ½ litre sample, passing through a 3.0 mm round hole screen.
Gum Nuts (per 2.5Ltr)	1	Whole or pieces of any size
Insects – Large (Live and/or Dead)	10	Includes Rutherglen bugs, ladybirds, grasshoppers, wood bugs, sitona weevils, earwigs, millipedes, vegetable bugs and pea weevil (dead only).
Insects – Small (Live and/or Dead)	100	Includes all species of aphid, all species of mites and stored product insects (dead only).
Ryegrass Ergot (length in cm)	0.5	Maximum length of all pieces aligned end on end.
Sclerotes (% by wt)	0.5	Canola Sclerotes.
Sand/Soil (% by wt)	0.1	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to, harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not approved for canola, musty seed and other material imparting an odour to the canola, tainting agents, animal material, fertiliser, sticks/stubble and pickled seed.
Seed Contaminants (maximum tolerance by count per half litre to apply to individual seeds)		
Type A (entire load)	Nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, Saffron Thistle, Wild Mignonette
Type C	2	Crow Garlic, Skeleton Weed, Thornapple
Type D	3	Common Heliotrope, Darnel, Hexham Scent, Jute, Mexican Poppy, Mintweed, Nightshade
Type E	65	Sesbania Pea

Table 3: Canola Quality Juncea Standard

Commodity: CANOLA QUALITY JUNCEA		Standard Reference No: CSJ 1-a
Parameter	**Specification**	**Comment**
Physical & Chemical Parameters		
Description		Canola quality juncea is defined as seed of the species *Brassica juncea* but containing less than 30 micromoles of specified glucosinolates per g of oil-free air-dry solids and not more than 2% erucic acid in the oil component, as a proportion of the total fatty acids content. The specified glucosinolates are any one or a mixture of 3-butenyl, 4-pentenyl, 2-hydroxy-3-butenyl and 2-hydroxy-4-pentenyl glucosinolates. In addition, a maximum of less than 2 micromoles of allyl per g of oil-free air-dry solids must be present. The low-level presence of up to 0.9% of GM events approved by the Australian Government Office of the Gene Technology Regulator is permitted.
Accepted Varieties	As per Masterlist	Approved canola varieties as listed in these Standards or on the AOF website.
Oil (%)	42.0 base level	Refer Section 5 for Price Adjustments
Free Fatty Acid (%)	1.0 base level	Refer Section 5 for Price Adjustments
Moisture Max (%)	8.0	Refer Section 5 for Price Adjustments
Test Weight Min (kg/hl)	62.0	Rejectable under this limit
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Canola (Maximum % count unless otherwise stated based on a 1,000 seed sample retained above 1.0mm round hole screen)		
Broken or Split (%)	7.0	Includes Insect Damaged. Refer Section 5 for Price Adjustments
Heat Damaged (per 1,000 seeds)	1	Assessed on crushed seeds
Discoloured Seed Coat (%)	3.0	Assessed on whole seeds before crushing, including, but not limited to seeds affected by mould and field fungi
Damaged (%)	3.0	Includes Diseased, Weather Damaged and Otherwise Materially Damaged. Frost Damaged seeds are not included in Damaged (refer Impurities). Refer Section 5 for Price Adjustments
Sprouted (%)	5.0	0.5% deduction for each 1% over the maximum
Green (%)	2.0	No penalty up to a maximum of 2%, rejectable over 2% using the ruler method. Alternatively, determine as Chlorophyll, with a maximum of 12ppm and rejectable over.
Contaminants (Maximum count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (% wt/wt)	3.0	All foreign material. This includes canola juncea and all other material falling through the 1.0mm round hole screen and Frost Damaged canola juncea seeds. Refer Section 5 for Price Adjustments
Snails/Stones	1 Snail/Stone above 3.0mm screen/2.5L	Tolerance of 1 per 2.5 litre sample for any Snails/Stones remaining above a 3.0 mm round hole screen. If one Snail/Stone is found above the screen in the ½ litre sample, then a further four ½ litre samples should be taken. If a Snail/Stone is found in any one of the subsequent samples, the load is to be rejected. For stones a maximum weight of 4.0g applies.
	1 Snail/Stone below 3.0mm screen/0.5L	Tolerance of 1 Snail/Stone per ½ litre sample, passing through a 3.0 mm round hole screen.
Gum Nuts (per 2.5Ltr)	1	Whole or pieces of any size
Insects – Large (Live and/or Dead)	10	Includes Rutherglen bugs, ladybirds, grasshoppers, wood bugs, sitona weevils, earwigs, millipedes, vegetable bugs and pea weevils (dead only).
Insects – Small (Live and/or Dead)	100	Includes all species of aphid, all species of mites and stored product insects (dead only).
Ryegrass Ergot (length in cm)	0.5	Maximum length of all pieces aligned end on end.
Sclerotes (% by wt)	0.5	Canola Sclerotes.
Sand/Soil (% by wt)	0.1	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to, harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not approved for canola, musty seed and other material imparting an odour to the canola, tainting agents, animal material, fertiliser, sticks/stubble and pickled seed.
Seed Contaminants (maximum tolerance by count per half litre to apply to individual seeds)		
Type A (entire load)	Nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, Saffron Thistle, Wild Mignonette
Type C	2	Crow Garlic, Skeleton Weed, Thornapple
Type D	3	Common Heliotrope, Darnel, Hexham Scent, Jute, Mexican Poppy, Mintweed, Nightshade
Type E	65	Sesbania Pea

Table 4: Rapeseed Standard

Commodity: RAPESEED		Standard Reference No: CSO 2
Parameter	**Specification**	**Comment**
Physical & Chemical Parameters		
General		
Accepted Varieties	As per Masterlist	Approved rapeseed varieties as listed in these Standards or on the AOF website.
Oil (%)	42.0 base level	Refer Section 5 for Price Adjustments
Free Fatty Acid (%)	2.0 base level	Refer Section 5 for Price Adjustments
Moisture (Max) (%)	8.0	Refer Section 5 for Price Adjustments
Test Weight	Unlimited	
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Rapeseed (Maximum % count unless otherwise stated, based on a 1,000 seed sample retained above 1.0mm round hole screen)		
Broken or Split (%)	7.0	Includes Insect Damaged. 0.5% deduction for each 1% over the maximum Assessed on crushed seeds
Heat Damaged (per 1,000 seeds)	1	
Discoloured Seed Coat (%)	3.0	Assessed on whole seeds before crushing, including, but not limited to seeds affected by mould and field fungi
Damaged (%)	3.0	Includes Diseased, Weather Damaged and Otherwise Materially Damaged. Frost Damaged seeds are not included in Damaged (refer Impurities). Refer Section 5 for Price Adjustments
Sprouted (%)	5.0	Refer Section 5 for Price Adjustments
Green (%)	2.0	No penalty up to a maximum of 2%, rejectable over 2% using the ruler method. Alternatively, determine as Chlorophyll, with a maximum of 12ppm and rejectable over.
Contaminants (Maximum count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (% wt/wt)	3.0	All foreign material. This includes rapeseed and all other material falling through the 1.0mm round hole screen and Frost Damaged Rapeseed. Refer Section 5 for Price Adjustments
Snails/Stones	1 Snail/Stone above 3.00mm screen/2.5L	Tolerance of 1 per 2.5 litre sample for any Snails/Stones remaining above a 3.0 mm round hole screen. If one Snail/Stone is found above the screen in the ½ litre sample, then a further four ½ litre samples should be taken. If a Snail/Stone is found in any one of the subsequent samples, the load is to be rejected. For stones a maximum weight of 4.0g applies.
	1 Snail/Stone below 3.00mm screen/0.5L	Tolerance of 1 Snail/Stone per ½ litre sample, passing through a 3.0 mm round hole screen
Gum Nuts (per 2.5Ltr)	1	Whole or pieces of any size
Insects – Large (Live and/or Dead)	10	Includes Rutherglen bugs, ladybirds, grasshoppers, wood bugs, sitona weevils, earwigs, millipedes, vegetable bugs and pea weevils (dead only)
Insects – Small (Live and/or Dead)	100	Includes all species of aphid, all species of mites and stored product insects (dead only)
Ryegrass Ergot (length in cm)	0.5	Maximum length of all pieces aligned end on end
Sclerotes (% by wt)	0.5	Canola Sclerotes.
Sand/Soil (% by wt)	0.1	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to, harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not approved for rapeseed musty seed and other material imparting an odour to the rapeseed, tainting agents, animal material, fertiliser, sticks/stubble and pickled seed.
Seed Contaminants (maximum tolerance by count per half litre to apply to individual seeds)		
Type A (entire load)	Nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, Saffron Thistle, Wild Mignonette
Type C	2	Crow Garlic, Skeleton Weed, Thornapple
Type D	3	Common Heliotrope, Darnel, Hexham Scent, Jute, Mexican Poppy, Mintweed, Nightshade
Type E	65	Sesbania Pea

Table 5: Polyunsaturated Sunflower Standard

Commodity: SUNFLOWER Polyunsaturated		**Standard Reference No: CSO 3**
Parameter	**Specification**	**Comment**
Physical & Chemical Parameters		
General		Polyunsaturated Sunflowers are sunflowers of the species *Helianthus annuus* with polyunsaturated oil which has a minimum of 62% Linoleic Acid and maximum 1% Linolenic Acid.
Accepted Varieties	As per Masterlist	Approved Polyunsaturated sunflower varieties as listed in these Standards or on the AOF website.
Oil (%)	40.0 base level	Refer Section 5 for Price Adjustments
Linoleic Acid (%) Min	62.0	
Free Fatty Acid (%)	2.0 base level	Refer Section 5 for Price Adjustments
Refractive Index	1.472 – 1.474	A Fatty Acid Profile test overrides the results from a Refractive Index test.
Moisture Max (%)	9.0	Refer Section 5 for Price Adjustments
Test Weight Min (kg/hl)	32.0	
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Sunflower (Maximum % wt/wt unless otherwise stated based on cleaned half litre sample retained above 2.0mm round hole screen)		
Broken or Split (%)	7.0	0.5% deduction for each 1% over the maximum
Heat Damaged (per 1,000 seeds)	1	
Mould (count per half litre)	1	
Damaged (%)	3.0	Includes Diseased, Frost Damaged, Green, Insect Damaged, Weather Stained and Otherwise Materially Damaged. Includes Sticky Exudate if the grain does not flow freely. Refer Section 5 for Price Adjustments
Sprouted (%)	5.0	Refer Section 5 for Price Adjustments
Contaminants (Maximum count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (% wt/wt), 80g sample	4.0	All foreign material. This includes sunflower seed material and all other material falling through the 2.0mm round hole screen. Refer Section 5 for Price Adjustments
Snails/Stones	1 Snail/Stone over 3.0mm in diameter/2.5L	Tolerance of 1 per 2.5 litre sample for any Snails/Stones over 3.0 mm in diameter. If one Snail/Stone is found over 3.0mm in diameter in the ½ litre sample, then a further four ½ litre samples should be taken. If a Snail/Stone is found in any one of the subsequent samples, the load is to be rejected. For stones a maximum weight of 4.0g applies.
	1 Snail/Stone less than 3.0mm in diameter/0.5L	Tolerance of 1 Snail/Stone per ½ litre sample less than 3.0 mm in diameter
Insects – Large (Live and/or Dead)	10	Includes Rutherglen bugs, ladybirds, grasshoppers, wood bugs, sitona weevil, earwigs, millipedes vegetable bugs and pea weevils (dead only)
Insects – Small (Live and/or Dead)	100	Includes all species of aphid, all species of mites and stored product insects (dead only)
Ryegrass Ergot (length in cm)	0.5	Maximum length of all pieces aligned end on end
Sand/Soil (% by wt)	0.06	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not approved for sunflowers, musty seed and other material imparting an odour to the sunflowers, tainting agents, animal material, fertiliser, sticks/stubble and pickled seed.
Seed Contaminants (maximum tolerance by count per half litre to apply to individual seeds)		
Type A (entire load)	Nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, Saffron Thistle, Wild Mignonette
Type C	2	Crow Garlic, Skeleton Weed, Thornapple
Type D	3	Common Heliotrope, Darnel, Hexham Scent, Jute, Mexican Poppy, Mintweed, Nightshade
Type E	65	Sesbania Pea

Table 6: Monounsaturated Sunflower Standard

Commodity: SUNFLOWER Monounsaturated		**Standard Reference No: CSO 4**
Parameter	**Specification**	**Comment**
Physical & Chemical Parameters		
General		Monounsaturated Sunflowers are sunflowers of the species *Helianthus annuus* with monounsaturated oil which has minimum 80% Oleic Acid and maximum 1% Linolenic Acid.
Accepted Varieties	As per Masterlist	Approved Monounsaturated sunflower varieties as listed in these Standards or on the AOF website.
Oil (%)	40.0 base level	Refer Section 5 for Price Adjustments
Oleic Acid Min (%)	80.0	
Free Fatty Acid (%)	2.0 base level	Refer Section 5 for Price Adjustments
Refractive Index	1.467 – 1.470	A Fatty Acid Profile test overrides the results from a Refractive Index test.
Moisture Max (%)	9.0	Refer Section 5 for Price Adjustments
Test Weight Min (kg/hl)	32.0	
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Sunflower (Maximum % wt/wt unless otherwise stated based on cleaned half litre sample retained above 2.0mm round hole screen)		
Broken or Split (%)	7.0	0.5% deduction for each 1% over the maximum
Heat Damaged (per 1,000 seeds)	1	
Mould (count per half litre)	1	
Damaged (%)	3.0	Includes Diseased, Frost Damaged, Green, Insect Damaged, Weather Stained and Otherwise Materially Damaged. Includes Sticky Exudate if the grain does not flow freely. Refer Section 5 for Price Adjustments
Sprouted (%)	5.0	Refer Section 5 for Price Adjustments
Contaminants (Maximum count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (% wt/wt), 80g sample	4.0	All foreign material. This includes sunflower seed material and all other material falling through the 2.0mm round hole screen. Refer Section 5 for Price Adjustments
Snails/Stones	1 Snail/Stone over 3.0mm in diameter/2.5L	Tolerance of 1 per 2.5 litre sample for any Snails/Stones over 3.0 mm in diameter. If one Snail/Stone is found over 3.0mm in diameter in the ½ litre sample, then a further four ½ litre samples should be taken. If a Snail/Stone is found in any one of the subsequent samples, the load is to be rejected. For stones a maximum weight of 4.0g applies.
	1 Snail/Stone less than 3.0mm in diameter/0.5L	Tolerance of 1 Snail/Stone per ½ litre sample less than 3.0 mm in diameter.
Insects – Large (Live and/or Dead)	10	Includes Rutherglen bugs, ladybirds, grasshoppers, wood bugs, sitona weevils, earwigs, millipedes, vegetable bugs and pea weevil (dead only).
Insects – Small (Live and/or Dead)	100	Includes all species of aphid, all species of mites and stored product insects (dead only).
Ryegrass Ergot (length in cm)	0.5	Maximum length of all pieces aligned end on end.
Sand/Soil (% by wt)	0.06	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not approved for sunflowers, musty seed and other material imparting an odour to the sunflowers, tainting agents, animal material, fertiliser, sticks/stubble and pickled seed.
Seed Contaminants (maximum tolerance by count per half litre to apply to individual seeds)		
Type A (entire load)	Nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, Saffron Thistle, Wild Mignonette
Type C	2	Crow Garlic, Skeleton Weed, Thornapple
Type D	3	Common Heliotrope, Darnel, Hexham Scent, Jute, Mexican Poppy, Mintweed, Nightshade
Type E	65	Sesbania Pea

Table 7: Edible Milling Grade Soybean Commodity Standard

Commodity: SOYBEAN Edible Milling Grade		**Standard Reference No: CSO 6**
Parameter	**Specification**	**Comment**
Description		Edible soybeans of light hilum varieties for milling
Accepted Varieties	As per Masterlist	Approved soybean varieties as listed in these Standards or on the AOF website.
Genetic Modification (entire load)	n/a	The low-level presence of up to 0.9% of GM events approved by the Australian Government Office of the Gene Technology Regulator is permitted.
Moisture Max (%)	12.0	Refer Section 5 for Price Adjustments
Test Weight Min (kg/hl)	70.0	
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Soybeans (Maximum % wt/wt based on cleaned half litre sample retained above 4.75mm round hole screen, unless otherwise stated)		
Broken or Split (%)	10.0	Defined as half soybean or greater parts thereof (with or without hull) that do not come within the definition of Damaged soybeans or Impurities.
Heat Damaged (per 1,000 seeds)	1	
Mould (count per half litre)	1	
Damaged (%)	3.0	Includes soybeans and pieces of soybean which are diseased, frost damaged, insect damaged, weed stained (including nightshade purple stain), weather stained or otherwise materially damaged.
Of which		
Weather Stained Max (per half litre)	1	Discolouration of the soybean due to any reason that is not indicative of the variety. Includes field fungi discoloured (including purple stain).
Sprouted (entire load)	Nil	Sprouted seeds are those in which the seed coat has split and the primary root has emerged.
Green (%)	2.0	Are soybeans that are green in colour and of a chalky consistency.
Contaminants (Maximum count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (%, wt/wt)	3.0	All foreign material. This includes soybean seed material and all other material falling through the 4.75mm round hole screen. Refer Section 5 for Price Adjustments
Seed Contaminants (Maximum tolerance by count per half litre)		
Type 1 * individual seed basis	5	Colocynth, Double Gee or Spiny Emex or Three Corner Jack, Long Headed Poppy, Mexican Poppy, Field Poppy, Horned Poppy, Wild Poppy, New Zealand Spinach, Parthenium Weed (Qld only)
Type 2 (entire load)	Nil	Castor Oil plant (Ricinus communis), Coriander, Crow Garlic or Wild Garlic, Darling Pea, Opium poppy, Ragweed, Rattlepods, Common Broomrape, Star Burr, St John's Wort
Type 3 (a)	2	Bathurst burr, Bulls Head or Caltrop or Cats Head, Cape Tulip, Cottonseed, Dodder, Noogoora Burr, Thornapple – (Datura spp or False Castor Oil), Bellvine
Type 3 (b)	4	Vetch (Blue) and Vetch (Commercial)
Type 3 (c)	8	Heliotrope (Blue) and Heliotrope (Common)
Type 4 (a)	5	Bindweed (Field), Cutleaf Mignonette, Darnel, Hexham Scent (Hexham Scent is only acceptable if no tainting odour is present) or King Island Melilot, Hoary Cress, Mintweed, Nightshades, Paddy Melon, Skeleton Weed, Variegated Thistle
Type 5	10	Creeping Knapweed or Russian Knapweed, Paterson's Curse or Salvation Jane, Sesbania Pea.
Type 6	10	Saffron Thistle
Type 7 (a)	1	Chickpeas, Corn (Maize) Cowpea, Faba Beans, Lentils, Lupin, Field Peas, Safflower, Sunflower, Mung Beans, Adzuki Beans
Type 7 (b)	5	Barley, Australian Bindweed, Black Bindweed, Wheat, durum, Black Oats, Sand Oats, Wild Oats, Common Oats, Rice, Rye (Cereal) Triticale, Turnip Weed, Forage Sorghum, any other weed seeds not specified in Types 1 – 7(a) or SFS
Small Foreign Seeds	5	SFS – Small Foreign Seeds

Table 7: Edible Milling Grade Soybean Commodity Standard (Cont.)

Commodity: SOYBEAN **Edible Milling Grade**		**CSO 6 (Continued)**
Parameter	**Specification**	**Comment**
Other Contaminants (Maximum count per half litre unless otherwise stated)		
Specific Allergens (entire load)	Nil	Nil presence of peanuts in the form of kernel or peanut shell in any of the soybeans tendered for delivery. Additionally, should any form of peanut trash (including any form of vegetative matter) be found in the delivery, the receival agent should be made aware of the heightened risk of peanut allergen and records of the observation retained and the buyer of the oilseed should be alerted. Should this instance arise, the truck should be re-sampled and reassessed to confirm the absence of peanut shell or kernel.
Ergot/Sclerotinia (entire load)	Nil	Pieces of Ergot and / or Sclerotinia of any plant species
Stored Grain Insects – Live (entire load)	Nil	Includes live Pea Weevil
Stored Grain Insects – Dead	5	Includes dead Pea Weevil
Field Insects (Live and/or Dead)	3 3	*Nezara viridula* (Vegetable Bugs) Field Insects – All others
Snails (entire load)	Nil	Live or Dead
Sand/Soil (% by wt)	0.06	Above and/or below the screen
Stones (entire load)	Nil	Stones greater than 2mm in diameter. Smaller material defined as Sand/Soil.
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to, harmful substances including glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not approved for soybeans, smut, material imparting an odour to the soybeans, tainting agents, animal material, fertiliser, sticks/stubble, artificial colouring including marker dye and pickled seed. Includes Fusarium (pink) fungal stained.

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Table 8: Edible Manufacturing Grade Soybean Commodity Standard

Commodity: SOYBEAN **Edible Manufacturing Grade**		**Standard Reference No: CSO 7**
Parameter	**Specification**	**Comment**
Description		Edible soybeans of light hilum varieties for manufacturing
Accepted Varieties	As per Masterlist	Approved soybean varieties as listed in these Standards or on the AOF website.
Genetic Modification (entire load)	n/a	The low level presence of up to 0.9% of GM events approved by the Australian Government Office of the Gene Technology Regulator is permitted.
Moisture Max (%)	12.0	Refer Section 5 for Price Adjustments
Test Weight Min (kg/hl)	70.0	
Protein Min (%) DMB	40.0	Measured on a dry matter basis
Seed Retention Min (%)	90.0	Retained on a 6.00mm round hole screen during the process of shaking the 4.75 mm round hole screen to determine Impurities.
Germination Min (%)	85.0	IOB 4ml Germinative Energy test for Sprouts only.
Defective Soybeans (Maximum % wt/wt based on a cleaned half litre sample retained above a 4.75mm round screen unless otherwise stated)		
Broken or Split (%)	5.0	Defined as half soybean or greater parts thereof (with or without hull) that do not come within the definition of Damaged soybeans or Impurities.
Heat Damaged (per 1,000 seeds)	1	
Mould (count per half litre)	1	
Damaged (%) Of which	3.0	Includes soybeans and pieces of soybean which are, diseased, frost damaged, insect damaged, weed stained (including nightshade purple stain), weather stained or otherwise materially damaged.
Weather Stained Max (per half litre)	1	Discolouration of the soybean due to any reason that is not indicative of the variety. Includes field fungi discoloured (including purple stain).
Sprouted (entire load)	Nil	Sprouted seeds are those in which the seed coat has split and the primary root has emerged
Green (%)	2.0	Are soybeans that are green in colour and of a chalky consistency
Contaminants (Maximum per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (%, wt/wt)	3.0	All foreign material. This includes soybean seed material and all other material falling through the 4.75mm round hole screen. Refer Section 5 for Price Adjustments
Seed Contaminants (Maximum tolerance by count per half litre)		
Type 1 * individual seed basis	5	Colocynth, Double Gee or Spiny Emex or Three Corner Jack, Long Headed Poppy, Mexican Poppy, Field Poppy, Horned Poppy, Wild Poppy, New Zealand Spinach, Parthenium Weed (Qld only)
Type 2 (entire load)	Nil	Castor Oil plant (Ricinus communis), Coriander, Crow Garlic or Wild Garlic, Darling Pea, Opium poppy, Ragweed, Rattlepods, Common Broomrape, Star Burr, St John's Wort
Type 3 (a)	2	Bathurst burr, Bulls Head or Caltrop or Cats Head, Cape Tulip, Cottonseed, Dodder, Noogoora Burr, Thornapple – (Datura spp or False Castor Oil), Bellvine
Type 3 (b)	4	Vetch (Blue) and Vetch (Commercial)
Type 3 (c)	8	Heliotrope (Blue) and Heliotrope (Common)
Type 4 (a)	5	Bindweed (Field), Cutleaf Mignonette, Darnel, Hexham Scent (Hexham Scent is only acceptable if no tainting odour is present) or King Island Melilot, Hoary Cress, Mintweed, Nightshades, Paddy Melon, Skeleton Weed, Variegated Thistle
Type 5	10	Creeping Knapweed or Russian Knapweed, Paterson's Curse or Salvation Jane, Sesbania Pea.
Type 6	10	Saffron Thistle
Type 7 (a)	1	Chickpeas, Corn (Maize) Cowpea, Faba Beans, Lentils, Lupin, Field Peas, Safflower, Sunflower, Mung Beans, Adzuki Beans
Type 7 (b)	5	Barley, Australian Bindweed, Black Bindweed, Wheat, durum, Black Oats, Sand Oats, Wild Oats, Common Oats, Rice, Rye (Cereal) Triticale, Turnip Weed, Forage Sorghum, any other weed seeds not specified in Types 1 – 7(a) or SFS
Small Foreign Seeds	5	SFS – Small Foreign Seeds

Table 8: Edible Manufacturing Grade Soybean Commodity Standard (Cont.)

Commodity: SOYBEAN **Edible Manufacturing Grade**		**CSO 7 (Continued)**
Parameter	**Specification**	**Comment**
OTHER CONTAMINANTS (Maximum count per half litre unless otherwise stated)		
Specific Allergens (entire load)	Nil	Nil presence of peanuts in the form of kernel or peanut shell in any of the soybeans tendered for delivery. Additionally, should any form of peanut trash (including any form of vegetative matter) be found in the delivery, the receival agent should be made aware of the heightened risk of peanut allergen and records of the observation retained and the buyer of the seed should be alerted. Should this instance arise, the truck should be re-sampled and reassessed to confirm the absence of peanut shell or kernel.
Ergot/Sclerotinia (entire load)	Nil	Pieces of Ergot and / or Sclerotinia of any plant species
Stored Grain Insects – Live (entire load)	Nil	Includes live Pea Weevil
Stored Grain Insects – Dead	5	Includes dead Pea Weevil
Field Insects (Live and/or Dead)	3 3	Nezara viridula (Vegetable Bugs) Field insects – All others
Snails (entire load)	Nil	Live or Dead
Sand/Soil (% by wt)	0.06	Above and/or below the screen
Stones (entire load)	Nil	Stones greater than 2mm in diameter. Smaller material defined as Sand/Soil.
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to, harmful substances including glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not approved for soybeans, smut, material imparting an odour to the soybeans, tainting agents, animal material, fertiliser, sticks/stubble, artificial colouring including marker dye and pickled seed. Includes Fusarium (pink) fungal stained.

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Table 9: Crushing Soybean Standard

Commodity: CRUSHING SOYBEAN		Standard Reference No: CSO 8
Parameter	**Specification**	**Comment/Price Adjustment**
Physical & Chemical Parameters		
General		Soybeans that may be used for crushing.
Accepted Varieties	As per Masterlist	Approved soybean varieties as listed in these Standards or on the AOF website.
Oil	Unlimited	
Linoleic Acid	Unlimited	
Oleic Acid	Unlimited	
Moisture Max (%)	13.0	Refer Section 5 for Price Adjustments
Test Weight	Unlimited	
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Soybeans (Maximum % wt/wt unless otherwise specified based on cleaned half litre sample retained above 3.175mm round hole screen)		
Broken or Split (%)	20.0	Soybeans not otherwise damaged that are ¾ of a soybean or less in size retained above the screen. Includes separated hulls. 0.5% deduction for each 1% over the maximum.
Heat Damaged (per 1,000 seeds)	1	
Mould (count per half litre)	1	
Damaged (%)	3.0	Includes Diseased, Frost Damaged, Green, Insect Damaged, Weather Stained and Otherwise Materially Damaged. 0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted (%)	5.0	Refer Section 5 for Price Adjustments
Contaminants (Maximum count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (% wt/wt)	4.0	All foreign material. This includes soybean and all other material falling through the 3.175mm round hole screen. Refer Section 5 for Price Adjustments
Snails/Stones	1 Snail/Stone over 3.0mm in diameter/2.5L	Tolerance of 1 per 2.5 litre sample for any Snails/Stones over 3.0 mm in diameter. If one Snail/Stone is found over 3.0mm in diameter in the ½ litre sample, then a further four ½ litre samples should be taken. If a Snail/Stone is found in any one of the subsequent samples, the load is to be rejected. For stones a maximum weight of 4.0g applies.
	1 Snail/Stone less than 3.0mm in diameter/0.5L	Tolerance of 1 Snail/Stone per ½ litre sample less than 3.0 mm in diameter
Insects – Large (Live and/or Dead)	10	Includes Rutherglen bugs, ladybirds, grasshoppers, wood bugs, sitona weevil, earwigs, millipedes, vegetable bugs and pea weevil (dead only)
Insects – Small (Live and/or Dead)	100	Includes all species of aphid, all species of mites and stored product insects (dead only)
Ryegrass Ergot (length in cm)	0.5	Maximum length of all pieces aligned end on end
Sand/Soil (% by wt)	0.06	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds chemicals not permitted on soybeans, musty seed and other material imparting an odour to the soybeans, tainting agents, animal material, fertiliser, sticks/stubble and pickled seeds.
Seed Contaminants (maximum tolerance by count per half litre to apply to individual seeds		
Type A (entire load)	Nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, Saffron Thistle, Wild Mignonette
Type C	2	Crow Garlic, Skeleton Weed, Thornapple
Type D	3	Common Heliotrope, Darnel, Hexham Scent, Jute, Mexican Poppy, Mintweed, Nightshade
Type E	65	Sesbania Pea

Table 10: Cottonseed Standard

Commodity: COTTONSEED		Standard Reference No: CSO 9
Parameter	**Specification**	**Comment/Price Adjustment**
Physical & Chemical Parameters		
General		Cottonseed tended for delivery should predominantly be of a white colour (i.e. not delinted).
Accepted Varieties	As per Masterlist	Approved cottonseed varieties as listed in these Standards or on the AOF website.
Oil	Unlimited	
Linoleic Acid	Unlimited	
Oleic Acid	Unlimited	
Moisture Max (%)	11.0	AOCS Aa 3-38. May be rejectable over 11%
Test Weight	Unlimited	
Protein Min (%)	15.0	N x 6.25% @ 0% Moisture basis
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Cottonseed (Maximum count per half kilogram sample). May be rejectable over.		
Mould (count per half kilogram)	1	
Contaminants (Maximum count per half kilogram unless otherwise stated)		
Impurities (% wt/wt)	2.0	All material other than cottonseed material, where cottonseed material includes cotton fibre attached to the seed coat. Unless tighter limits apply as per State Stockfeed legislation
Stones (entire load)	Nil	Stones greater than 2mm in diameter. Smaller material defined as Sand/Soil.
Insects – Large (Live and/or Dead)	10	Sitona weevil
	3	All other Field Insects. Includes Pea Weevil (dead only)
Insects – Small (Live and/or Dead)(250g)	100	Includes all species of aphid, all species of mites and stored product insects (dead only). Tolerance based on a 250g sample.
Ryegrass Ergot Max (length in cm)	0.5	Maximum length of all pieces aligned end on end
Sand/Soil (% by wt)	0.06	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds chemicals not permitted on cottonseed, musty seed and other material imparting an odour to the cottonseed, tainting agents, animal material, fertiliser, rotted seed, sticks/stubble and pickled seeds.

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Table 11: Non-GM Polyunsaturated Safflower Standard

Commodity: SAFFLOWER Polyunsaturated – Non-GM		**Standard Reference No: CSO 10 - a**
Parameter	**Specification**	**Comment**
Physical & Chemical Parameters		
General		Safflower of the species *Carthamus tinctorius*. The low level presence of up to 0.9% of GM events approved by the Australian Government Office of the Gene Technology Regulator is permitted.
Accepted Varieties	As per Masterlist	Approved safflower varieties as listed in these Standards or on the AOF website.
Oil (%)	38.0 base level	Refer Section 5 for Price Adjustments
Linoleic Acid Min (%)	75.0	
Free Fatty Acid (%)	2.0 base level	Refer Section 5 for Price Adjustments
Moisture Max (%)	8.0	Refer Section 5 for Price Adjustments
Test Weight	Unlimited	
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Safflower (Maximum % wt/wt unless otherwise stated, based on cleaned half litre sample retained above 2.0mm round hole screen)		
Broken or Split (%)	7.0	0.5% deduction for each 1% over the maximum
Heat Damaged (per 1,000 seeds)	1	
Mould (count per half litre)	1	
Damaged (%)	3.0	Includes Diseased, Frost Damaged, Green, Insect Damaged, Weather Stained and Otherwise Materially Damaged.
Sprouted (%)	5.0	Refer Section 5 for Price Adjustments
Contaminants (Maximum count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (% wt/wt)	4.0	All foreign material. This includes safflower and other material falling through the 2.0mm round hole screen. Refer Section 5 for Price Adjustments
Snails/Stones	1 Snail/Stone over 3.0mm in diameter/2.5L	Tolerance of 1 per 2.5 litre sample for any Snails/Stones over 3.0 mm in diameter. If one Snail/Stone is found over 3.0mm in diameter in the ½ litre sample, then a further four ½ litre samples should be taken. If a Snail/Stone is found in any one of the subsequent samples, the load is to be rejected. For stones a maximum weight of 4.0g applies.
	1 Snail/Stone less than 3.0mm in diameter/0.5L	Tolerance of 1 Snail/Stone per ½ litre sample less than 3.0 mm in diameter
Insects – Large (Live and/or Dead)	10	Includes Rutherglen bugs, ladybirds, grasshoppers, wood bugs, sitona weevil, earwigs, millipedes, vegetable bugs and pea weevil (dead only)
Insects – Small (Live and/or Dead)	100	Includes all species of aphid, all species of mites and stored product insects (dead only)
Ryegrass Ergot (length in cm)	0.5	Maximum length of all pieces aligned end on end
Sand/Soil (% by wt)	0.06	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not approved for safflower, musty seed and other material imparting an odour to the safflower, tainting agents, animal material, fertiliser, sticks/stubble and pickled seed.
Seed Contaminants (maximum tolerance by count per half litre to apply to individual seeds)		
Type A (entire load)	Nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, Saffron Thistle, Wild Mignonette
Type C	2	Crow Garlic, Skeleton Weed, Thornapple
Type D	3	Common Heliotrope, Darnel, Hexham Scent, Jute, Mexican Poppy, Mintweed, Nightshade
Type E	65	Sesbania Pea

Table 12: Non-GM Monounsaturated Safflower Standard

Commodity: SAFFLOWER Monounsaturated – Non-GM		**Standard Reference No: CSO 11 – a**
Parameter	**Specification**	**Comment**
Physical & Chemical Parameters		
General		Safflower of the species *Carthamus tinctorius*. The low level presence of up to 0.9% of GM events approved by the Australian Government Office of the Gene Technology Regulator is permitted.
Accepted Varieties	As per Masterlist	Approved safflower varieties as listed in these Standards or on the AOF website.
Oil (%)	38.0 base level	Refer Section 5 for Price Adjustments
Oleic Acid Min (%)	75.0	
Free Fatty Acid (%)	2.0 base level	Refer Section 5 for Price Adjustments
Moisture Max (%)	8.0	Refer Section 5 for Price Adjustments
Test Weight	Unlimited	
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Safflower (Maximum % wt/wt unless otherwise stated, based on cleaned half litre sample retained above 2.0mm round hole screen)		
Broken or Split (%)	7.0	
Heat Damaged (per 1,000 seeds)	1	
Mould (count per half litre)	1	
Damaged (%)	3.0	Includes Diseased, Frost Damaged, Green, Insect Damaged, Weather Stained and Otherwise Materially Damaged.
Sprouted (%)	5.0	Refer Section 5 for Price Adjustments
Contaminants (Maximum count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (% wt/wt)	4.0	All foreign material. This includes safflower and all other material falling through the 2.0mm round hole screen Refer Section 5 for Price Adjustments
Snails/Stones	1 Snail/Stone over 3.0mm in diameter/2.5L	Tolerance of 1 per 2.5 litre sample for any Snails/Stones over 3.0 mm in diameter. If one Snail/Stone is found over3.0mm in diameter in the ½ litre sample, then a further four ½ litre samples should be taken. If a Snail/Stone is found in any one of the subsequent samples, the load is to be rejected. For stones a maximum weight of 4.0g applies.
	1 Snail/Stone less than 3.0mm in diameter/0.5L	Tolerance of 1 Snail/Stone per ½ litre sample less than 3.0 mm in diameter
Insects – Large (Live and/or Dead)	10	Includes Rutherglen bugs, ladybirds, grasshoppers, wood bugs, sitona weevil, earwigs, millipedes, vegetable bugs and pea weevils (dead only)
Insects – Small (Live and/or Dead)	100	Includes all species of aphid, all species of mites and stored product insects (dead only)
Ryegrass Ergot (length in cm)	0.5	Maximum length of all pieces aligned end on end
Sand/Soil (% by wt)	0.06	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not permitted for safflower, musty seed and other material imparting an odour to the safflower, tainting agents, animal material, fertiliser, sticks/stubble and pickled seed.
Seed Contaminants (maximum tolerance by count per half litre to apply to individual seeds)		
Type A (entire load)	Nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, Saffron Thistle, Wild Mignonette
Type C	2	Crow Garlic, Skeleton Weed, Thornapple
Type D	3	Common Heliotrope, Darnel, Hexham Scent, Jute, Mexican Poppy, Mintweed, Nightshade
Type E	65	Sesbania Pea

Table 13: Linseed Standard

Commodity: LINSEED		Standard Reference No: CSO 12
Parameter	**Specification**	**Comment**
Physical & Chemical Parameters		
General		Linseed of the species *Linum usitatissimum* with brown or golden yellow seeds typical of the variety.
Accepted Varieties	As per Masterlist	Approved linseed varieties as listed in these Standards or on the AOF website.
Oil (%)	39.0 base level	Refer Section 5 for Price Adjustments
Moisture Max (%)	10.0	Refer Section 5 for Price Adjustments
Test Weight	Unlimited	
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Linseed (Maximum % wt/wt unless otherwise stated, based on cleaned half litre sample retained above 1.0mm round hole screen)		
Broken or Split (%)	7.0	Refer Section 5 for Price Adjustments
Heat Damaged (per 1,000 seeds)	1	
Mould (count per half litre)	1	
Damaged (%)	3.0	Includes Diseased, Frost Damaged, Green, Insect Damaged, Weather Stained and Otherwise Materially Damaged.
Sprouted (%)	5.0	Refer Section 5 for Price Adjustments
Contaminants (Maximum count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (% wt/wt)	4.0	All foreign material. This includes linseed and all other material falling through the 1.0mm round hole screen. Refer Section 5 for Price Adjustments
Snails/Stones	1 Snail/Stone over 3.0mm in diameter/2.5L	Tolerance of 1 per 2.5 litre sample for any Snails/Stones over3.0 mm in diameter. If one Snail/Stone is found over 3.0mm in diameter in the ½ litre sample, then a further four ½ litre samples should be taken. If a Snail/Stone is found in any one of the subsequent samples, the load is to be rejected. For stones a maximum weight of 4.0g applies.
	1 Snail/Stone less than 3.0mm in diameter/0.5L	Tolerance of 1 Snail/Stone per ½ litre sample less than 3.0 mm in diameter
Insects – Large (Live and/or Dead)	10	Includes Rutherglen bugs, ladybirds, grasshoppers, wood bugs, sitona weevil, earwigs, millipedes, vegetable bugs and pea weevil (dead only)
Insects – Small (Live and/or Dead)	100	Includes all species of aphid, all species of mites and stored product insects (dead only)
Ryegrass Ergot (length in cm)	0.5	Maximum length of all pieces aligned end on end
Sand/Soil (% by wt)	0.06	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not approved for linseed, musty seed and other material imparting an odour to the linseed, tainting agents, animal material, fertiliser, sticks/stubble and pickled seed.
Seed Contaminants (maximum tolerance by count per half litre to apply to individual seeds)		
Type A (entire load)	Nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, Saffron Thistle, Wild Mignonette
Type C	2	Crow Garlic, Skeleton Weed, Thornapple
Type D	3	Common Heliotrope, Darnel, Hexham Scent, Jute, Mexican Poppy, Mintweed, Nightshade
Type E	65	Sesbania Pea

Table 14: Linola Standard

Commodity: LINOLA		Standard Reference No: CSO 13
Parameter	**Specification**	**Comment**
Physical & Chemical Parameters		
General		Linola of the species *Linum usitatissimum* with golden yellow seeds typical of the variety.
Accepted Varieties	As per Masterlist	Approved linola varieties as listed in these Standards or on the AOF website.
Oil (%)	40.0 base level	Refer Section 5 for Price Adjustments
Linoleic Acid Min (%)	66.0	
Linolenic Acid Max (%)	3.0	
Free Fatty Acid (%)	2.0 base level	Refer Section 5 for Price Adjustments Refer Section 5 for Price Adjustments
Moisture Max (%)	9.0	Refer Section 5 for Price Adjustments
Test Weight	Unlimited	
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Linola (Maximum % wt/wt unless otherwise stated, based on cleaned half litre sample retained above 1.0mm round hole screen)		
Broken or Split (%)	7.0	Refer Section 5 for Price Adjustments
Heat Damaged (per 1,000 seeds)	1	
Mould (count per half litre)	1	
Damaged (%)	3.0	Includes Diseased, Frost Damaged, Green, Insect Damaged, Weather Stained and Otherwise Materially Damaged. 0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted (%)	5.0	Refer Section 5 for Price Adjustments
Contaminants (Maximum by count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (% wt/wt)	3.0	All foreign material. This includes including linola and other material falling through the 1.0mm round hole screen. 1% deduction for each 1% of impurities up to 4%, 2% deduction for each 1% of impurities over 4%.
Cruciferous seeds (% wt/wt)	1.0	Maximum of Cruciferous seeds
Snails/Stones	1 Snail/Stone over 3.0mm in diameter/2.5L	Tolerance of1 per 2.5 litre sample for any Snails/Stones over 3.0 mm in diameter. If one Snail/Stone is found over 3.0mm in diameter in the ½ litre sample, then a further four ½ litre samples should be taken. If a Snail/Stone is found in any one of the subsequent samples, the load is to be rejected. For stones a maximum weight of 4.0g applies.
	1 Snail/Stone less than 3.0mm in diameter/0.5L	Tolerance of 1 Snail/Stone per ½ litre sample less than 3.0 mm in diameter
Insects – Large (Live and/or Dead)	10	Includes Rutherglen bugs, ladybirds, grasshoppers, wood bugs, sitona weevil, earwigs, millipedes, vegetable bugs and pea weevil (dead only)
Insects – Small (Live and/or Dead)	100	Includes all species of aphid, all species of mites and stored product insects (dead only)
Ryegrass Ergot (length in cm)	0.5	Maximum length of all pieces aligned end on end
Sand/Soil (% by wt)	0.06	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not approved for linola, musty seed and other material imparting an odour to the linola, tainting agents, animal material, fertiliser, sticks/stubble and pickled seed.
Seed Contaminants (maximum tolerance by count per half litre to apply to individual seeds)		
Type A (entire load)	Nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, Saffron Thistle, Wild Mignonette
Type C	2	Crow Garlic, Skeleton Weed, Thornapple
Type D	3	Common Heliotrope, Darnel, Hexham Scent, Jute, Mexican Poppy, Mintweed, Nightshade
Type E	65	Sesbania Pea

Table 15: Peanut Standard

Commodity: PEANUT		Standard Reference No: CSO 14
Parameter	**Specification**	**Comment**
Physical & Chemical Parameters		
General		Peanuts of the species *Arachis hypogaea.*
Accepted Varieties	As per Masterlist	Approved peanut varieties as listed in these Standards or on the AOF website.
Oil (%)	41.0 base level	Refer Section 5 for Price Adjustments
Free Fatty Acid (%)	2.0 base level	Rejectable over 5%. Applied on clean seed Refer Section 5 for Price Adjustments.
Moisture Max (%)	9.0	Refer Section 5 for Price Adjustments
Test Weight	Unlimited	
Protein	Unlimited	
Seed Retention	Unlimited	
Germination	Unlimited	
Defective Peanuts (Maximum % wt/wt)		
Broken or Split	Unlimited	
Damaged	Unlimited	
Sprouted	Unlimited	
Degraded (entire load)	Nil	Includes smutty seed, hot seed, musty seed, sour seed, rotted seed and mould seed.
Contaminants (Maximum count per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities (% wt/wt)	4.0	Refer Section 5 for Price Adjustments
Snails/Stones	1 Snail/Stone over 3.0mm in diameter/2.5L	Tolerance of 1 per 2.5 litre sample for any Snails/Stones over 3.0 mm in diameter. If one Snail/Stone is found over 3.0mm in diameter in the ½ litre sample, then a further four ½ litre samples should be taken. If a Snail/Stone is found in any one of the subsequent samples, the load is to be rejected. For stones a maximum weight of 4.0g applies.
	1 Snail/Stone less than 3.0mm in diameter/0.5L	Tolerance of 1 Snail/Stone per ½ litre sample less than 3.0 mm in diameter
Insects – Large (Live and/or Dead)	10	Includes Rutherglen bugs, ladybirds, grasshoppers, wood bugs, sitona weevil, earwigs, millipedes, vegetable bugs and pea weevil (dead only)
Insects – Small (Live and/or Dead)	100	Includes all species of aphid, all species of mites and stored product insects (dead only)
Ryegrass Ergot (length in cm)	0.5	Maximum length of all pieces aligned end on end
Sand/Soil (% by wt)	0.06	
Objectionable Material (entire load)	Nil	Commercially unacceptable material such as, but not limited to harmful substances including live stored product insects, live pea weevil, glass, metal, specified weed seeds in excess of the limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, chemicals not approved for peanuts, musty seed and other material imparting an odour to the peanuts, tainting agents, animal material, fertiliser, sticks/stubble and pickled seed.
Seed Contaminants (maximum tolerance by count per half litre to apply to individual seeds)		
Type A (entire load)	Nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, Saffron Thistle, Wild Mignonette
Type C	2	Crow Garlic, Skeleton Weed, Thornapple
Type D	3	Common Heliotrope, Darnel, Hexham Scent, Jute, Mexican Poppy, Mintweed, Nightshade
Type E	65	Sesbania Pea

5.0 PRICE ADJUSTMENTS

5.1 General

Where stated in the comment column and agreed by the buyer, several commodities may be accepted at Receival with an impurities level over the tolerance limit. However acceptance of commodities over this limit is not mandatory.

Where a commodity is accepted over the Standard limit for impurities, in addition to the adjusting charge the buyer may also apply a grading charge which is calculated at their own discretion.

For cottonseed, no price adjustments are applicable for impurity content.

For other commodities, namely linseed, polyunsaturated & monounsaturated sunflower, polyunsaturated and monounsaturated safflower, edible and crushing soybean, canola, linola, rapeseed and peanuts, the impurity content or, where over 4%, the corrected impurity content, shall be deducted from the gross weight of seed received to give the Corrected Net Weight from which shall be calculated the Clean Seed Value.

The Clean Seed Value shall be the basis for calculation of all premiums and deductions.

In relation to premium and deduction adjustments, fractions will be in proportion.

Peanuts for oil extraction are generally purchased as a by-product of the preparation of food-grade nuts. In this case rejection clauses may not apply. Price adjustments shall be applied to the Clean Seed Value.

5.2 Corrected Net Weight

For linseed, polyunsaturated & monounsaturated sunflower, polyunsaturated and monounsaturated safflower and crushing soybean the standard impurity limit is 4%, over which the seed is rejectable. If accepted, the gross weight shall be adjusted by a 1% deduction for each 1% of impurity up to 4% and a 2% deduction for each 1% of impurity over 4% (fractions in proportion).

For canola, linola and rapeseed the standard impurity limit is 3%, over which the seed is rejectable. If accepted, the gross weight shall be adjusted by a 1% deduction for each 1% of impurity up to 4% and thereafter a 2% deduction for each 1% of impurity over 4% (fractions in proportion).

For peanuts, the standard impurity limit is 4%, over which the seed is rejectable. If accepted, the gross weight shall be adjusted by a 1% deduction for each 1% of impurity up to 4% and thereafter a 1.5% deduction for each 1% of impurity over 4% (fractions in proportion).

5.3 Clean Seed Value

Clean Seed Value is the price per tonne of a commodity multiplied by the corrected net weight. Adjustments shall then be applied to the Clean Seed Value as follows:

5.3.1 Oil Content

For safflower seed a 2% premium or deduction applies for each 1% of oil content above or below the standard respectively (fractions in proportion).

For ~~a~~ll other commodities where an oil tolerance is stated in the standard, a 1.5% premium or deduction applies for each 1% of oil content above or below the standard respectively (fractions in proportion).

5.3.2 Price Adjustment Table (Excluding Cottonseed)

Acceptance of a delivery not meeting specification as outlined in the commodity table and therefore the price adjustments that apply is at the sole discretion of the receiver.

Parameter	Price Adjustment
Oil (excluding Safflower))	1.5% premium or deduction for each 1% above or below base level
Oil (Safflower-poly or mono)	2% premium or deduction for each 1% above or below base level
Free Fatty Acid (excluding peauts)	2% deduction for each 1% over the base level.
Free Fatty Acid (peanuts only)	2% deduction for each 1% up to 3%, 3% deduction for each 1% of FFA between 3% and 5%.
Moisture	2% deduction for each 1% over maximum
Broken or Split	0.5% deduction for each 1% over the maximum (excludes soybeans for milling or manufacturing grade).
Damaged	0.5% deduction for each 1% over the maximum.
Sprouted	0.5% deduction for each 1% over the maximum.
Impurities (excl soybeans for milling/manufacturing grade and peanuts)	1% deduction for each 1% of impurities up to 4%, 2% deduction for each 1% of impurities over 4%.
Impurities (soybeans for milling/manufacturing grade only)	1% deduction for each 1% of impurities up to 3%, 2% deduction for each 1% of impurities over 3%
Impurities (Peanuts)	1% deduction for each 1% of impurities up to 4%, 1.5% deduction for each 1% of impurities over 4%

6.0 DISPUTED RESULTS

Refer to front of Standards Manual for applicable procedures

Australian Oilseeds Federation Ltd

Section 1: AOF 1-2 – Vegetable Oil Quality Standards

1.0 SCOPE

1.1 This document outlines the Quality Specifications for various vegetable oils obtained from the processing of oilseeds. The Standards listed in this document apply to all vegetable oils and are to apply at receival and / or on outturn, whichever is applicable.

1.2 Notwithstanding the specifications outlined in this document, all vegetable oils must comply with the relevant Federal and / or State stockfeed or agricultural regulations.

1.3 In particular vegetable oils must comply with the maximum residue levels (MRLs) and any other quality specifications listed in both the FSANZ Food Standards Code and the APVMA MRL Standard (maximum residue limits in food and animal feedstuffs). Requirements of State Health Acts and Regulations must be observed where appropriate.

1.4 Sampling procedures must be followed to ensure that the Official Sample used for analysis is representative of the consignment.

1.5 For domestic trading, Official Samples shall be taken by buyer and seller respectively at the time of receival and dispatch of each load. Samples shall be retained for at least two months after dispatch.

1.6 Specifications and price adjustments shown within these standards are applicable to the analysis of Official Samples taken and tested according to the prescribed methods.

1.7 The vegetable oil shall be processed in accordance with good manufacturing practices.

1.8 The vegetable oil shall have a light viscosity and shall not have a heavy oily mouth feel.

1.9 The vegetable oil shall have a clean, fresh flavour and shall be free from rancid, beany, painty, sour or other objectionable flavours or odours.

1.10 The vegetable oil shall be free from foreign material, such as, but not limited to, dirt, insect parts, hair, wood, glass or metal.

2.0 PROCEDURES

2.1 Procedures as per those outlined in Section 1, AOF 1-1 are to be followed unless otherwise stipulated.

2.2 Where applicable, measurements must be carried out in temperature-controlled conditions at the temperature specified for the limits:

Relative Density is to be measured at 20°C.

Refractive Index is to be measured at 40°C or as otherwise shown.

2.3 The Fatty Acid Profile test overrides the results from a Refractive Index test.

2.4 Where a commodity does not have a tolerance for that particular quality parameter as indicated by "n/a" (not applicable), a test for that quality parameter is not required.

3.0 QUALITY SPECIFICATIONS

See Table 1: Vegetable Oil Standards.

Any variations to the specifications for a particular trade are to be stated in the contract between the buyer and the seller.

Table 1: Vegetable Oil Standards

Quality Parameter	CSOF-6	CSOF-21	CSOF-41	CSOF-30	CSOF-24	CSOF-5	CSOF-25	CSOF-26
	Canola Oil (*) Crude Degummed	**Canola Oil (*) Bleached Refined**	**Canola Oil (*) RBD**	**Rapeseed Oil Crude Degummed**	**Cottonseed Oil Bleached Refined**	**Cottonseed Oil Alkali Refined**	**Linseed Oil Crude**	**Linseed Oil Refined**
Free Fatty Acids (%)	max 1	max 0.3	Max 0.1	max 2	max 0.3	max 0.3	max 2%	max 0.3
Palmitic acid (%)	2.5-7.0	2.5-7.0	2.5-7.0	1.5-6.0	18.5-26.4 GM**	18.5-26.4 GM**	?	?
Trans Fatty Acids			Max 1.0					
Oleic Acid (%) Codex	51.0-70.0	51.0-**70.0**	51.0-70.0	8.0-60.0%	14.7-21.7	14.7-21.7	?	?
Linoleic Acid (%)	15.0-30.0	15.0-30.0	15.0-30.0	11.0-23.0	46.7-63.0 GM**	46.7-63.0 GM**	ND	ND
Linolenic Acid (%)	5.0-14.0	5.0-14	5.0-14	5.0-13.0	ND-0.4	ND-0.4	ND	ND
Erucic Acid (%)	max 2	max 2	max 2	>2-60	ND-0.3	ND-0.3	ND	ND
Colour (AOCS - Lovibond units or Gardner, 1933, where indicated)	max 7R 70Y (25.4 mm)	max 7R (133.35 mm)	Max 15Y' Max 1.5R (Lovibond 133.35 cell = 5¼"cell)	max 7R 70Y (25.4 mm)	max 6R (133.35 mm)	max 12R (133.35 mm)	10–12 Gardner	max 5 Gardner
Moisture, Volatiles and Impurities (%)	max 0.3%	max 0.25%	Max 0.10%	max 0.3%	max 0.25%	max 0.25%	max 0.3%	max 0.25%
Iodine Value	105-126	105-126	105-126	94–120	100-123	100-123	min 175 ??	min 175 ??
Refractive Index 20°C Codex 40°C	1.471-1.474** 1.465-1.467	1.471-1.474* 1.465-1.467	1.471-1.474* 1.465-1.467	1.465-1.469	1.472–1.474** 1.458-1.466	1.472–1.474** 1.458-1.466	1.477–482	1.477–482
Relative Density 25°C	0.910–916	0.910–916	0.910–916	0.910–913	0.911–917	0.911–917	0.924–930	0.924–930
Saponification Value	182–193	182–193	182–193	168-181	189–198	189–198	188–195	188–195
Peroxide Value mEq/kg	max 10	max 10	Max 10	max 10	max 10	max 10	?	max 10
Unsaponifiable Matter (g/kg)	≤20	≤20	≤20	≤20	≤15	≤15	≤15	≤15
Phosphorus	max 200ppm	n/a	n/a	max 200ppm	n/a	n/a	n/a	n/a
Sulphur	max 10ppm	max 10ppm	max 10ppm	n/a	n/a	n/a	n/a	n/a
Foots	Clear at 65^{0}C	Clear at 65^{0}C	Clear at 65^{0}C	Clear at 65^{0}C	n/a	n/a	max 1% 96 hours	Clear at 65^{0}C
Heat Test	n/a	n/a	n/a	n/a	n/a	n/a	n/a	no break at 340°C heat bleaches
Flash Point (Closed Cup)	min 150°C	min 150°C	min 150°C	min 150°C	min 150°C	min 150°C	min 150°C	min 150°C
Chlorophyll	30ppm	30ppm	30ppm	n/a	n/a	n/a	n/a	n/a

This table does not include high oleic canola
For "crude" oil the specification is the same as "crude degummed" with the exception that phosphorus and foots specifications do not apply to crude oil.
For "crude super degummed" oil, the specification is the same as "crude degummed" with the exception that phosphorus is maximum 50ppm in super crude degummed
(*) Canola oil is also referred to as **Rapeseed oil - low erucic acid** (low erucic acid turnip rape oil; low erucic acid colza oil; canola oil)
(**) Values provided by Cargill Australia
ND – not detected
n/a – not applicable

Table 1: Vegetable Oil Standards (Cont.)

Quality Parameter	CSOF-28	CSOF-29	CSOF-4	CSOF-32	CSOF-31	CSOF-33	CSOF-34
	Peanut Oil Crude	**Peanut Oil Bleached Refined**	**Safflower Oil Crude Degummed**	**Safflower Oil Bleached Refined**	**Safflower Oil High Oleic Crude Degummed**	**Soybean Oil Crude Degummed**	**Soybean Oil Bleached Refined**
Free Fatty Acids (%)	max 2	max 0.3	max 2	max 0.3	max 2	max 1	max 0.3
Palmitic acid (%)	6	6	5.3-8.0	5.3-8.0	3.6-6.0	8.0-13.5	8.0-13.5
Oleic Acid (%)- Codex	45-55	45-55	8.4-21.3	8.4-21.3	70.0-83.7	17-30	17-30
Linoleic Acid (%)- Codex	26-36	26-36	67.8-83.2	67.8-83.2	9.0-19.9	48-59	48-59
Linolenic Acid (%)- Codex	n/a	n/a	ND – 0.1	ND – 0.1	ND – 1.2	4.5-11.0	4.5-11.0
Erucic Acid (%) -Codex	n/a	n/a	ND-1.8	ND-1.8	ND-0.3	ND-0.3	ND-0.3
Colour (AOCS - Lovibond units or Gardner, 1933, where indicated)	max 4R 35Y (25.4 mm)	max 2.5R (133.35mm)	max 5R 35Y (25.4 mm)	max 4R (133.35mm)	max 5R 35Y (25.4 mm)	max 7R 70Y (25.4mm)	max 5R (133.35mm)
Moisture, Volatiles and Impurities (%)	max 0.5	max 0.25	max 0.3 (Crude grade max 0.5)	max 0.25	max 0.3 (Crude grade max 0.5)	max 0.3	max 0.25
Iodine Value -Codex	85–105	85–105	136-148	136-148	80-100	124-139	124-139
Refractive Index 20°C Refractive Index 25°C Codex 40°C	- 1.466–1.470	- 1.466–1.470	- 1.467-1.470 -	- 1.467-1.470 -	- 1.466-1.470 @ 25°C 1.460-1.464	1.473-1.476** 1.466-1.470 -	1.473-1.476** 1.466-1.470 -
Relative Density 25°C Rel Den 20°C (Codex)	0.907–912	0.907–912	0.922-0.927 @ 20°C	0.922-0.927 @ 20°C	0.910-0.916 @ 25°C 0.913-0.919 @ 20°C	0.919-0.925 @ 20°C	0.919-0.925 @ 20°C
Saponification Value-Codex	188–196	188–196	186-198	186-198	186-194	189-195	189-195
Peroxide Value mEq/kg	max 10	max 10	max 10	max 10	max 10	max 10	max 10
Unsaponifiable Matter (g/kg)	≤10	≤10	≤15	≤15	≤10	≤15	≤15
Phosphorus (ppm)	n/a	n/a	max 200	n/a	max 200	max 200	n/a
Sulphur	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Foots	n/a	Clear at 65°C	Clear at 65°C	Clear at 65°C	Clear at 65°C	Clear at 65°C	Clear at 65°C
Heat Test	n/a	n/a	n/a	no break at 340°C heat bleaches	n/a	n/a	no break at 340°C heat bleaches
Flash Point (Closed Cup)	min 150°C	min 150°C	min 150°C	min 150°C	min 150°C	min 150°C	min 150°C

For "crude" oil the specification is the same as "crude degummed" with the exception that phosphorus and foots specifications do not apply to crude oil.
For "crude super degummed" oil, the specification is the same as "crude degummed" with the exception that phosphorus is maximum 50ppm in super crude degummed
(*) Canola oil is also referred to as **Rapeseed oil - low erucic acid** (low erucic acid turnip rape oil; low erucic acid colza oil; canola oil)
(**) Values provided by Cargill Australia
ND – not detected
n/a – not applicable

Table 1: Vegetable Oil Standards (Cont.)

Quality Parameter	CSOF -35	CSOF -36	CSOF -38	CSOF -39	CSOF -40
	Sunflower Oil Crude Degummed	**Sunflower Oil Bleached Refined**	**Sunflower Oil High Oleic Crude**	**Sunflower Oil High Oleic Refined Bleached**	**Sunflower Oil High Oleic Refined Bleached Deodorized**
Free Fatty Acids (%)	max 2	max 0.3	max 2	max 0.3	max 0.1
Palmitic acid (%)	5.0-7.6	5.0-7.6	2.6-5.0	2.6-5.0	2.6-5.0
Oleic Acid (%)	14.0-39.4	14.0-39.4	min 80%	min 80%	min 80%
Linoleic Acid (%) Codex	min 60%	min 60%	2.1-17.0	2.1-17.0	2.1-17.0
Linolenic Acid (%)	ND – 0.3%	ND – 0.3%	ND – 0.3%	ND – 0.3%	ND – 0.3%
Erucic Acid (%)	ND – 0.3%	ND – 0.3%	ND – 0.3%	ND – 0.3%	ND – 0.3%
Colour (AOCS - Lovibond units or Gardner, 1933, where indicated)	max 6R 70Y (25.4mm)	max 4R (133.35mm)	max 6R 70Y (25.4mm)	max 4R (133.35mm)	max 2R (133.35mm)
Moisture, Volatiles and Impurities (%)	max 0.3% (Crude grade max.0.5%)	max 0.25%	max 0.3%	max 0.25%	max 0.10%
Iodine Value Codex	118-141	118-141	78-90	78-90	78-90
Refractive Index 20°C 25°C Codex 40°C	1.473-1.476** 1.472-1.474 (prev) 1.461-1.468	1.473-1.476** 1.472-1.474 (prev) 1.461-1.468	1.468-1.472** 1.467-1.471 @ 25°C -	1.468-1.472** 1.467-1.471 @ 25°C -	1.468-1.472** 1.467-1.471 @ 25°C -
Relative Density 25°C Rel Den 20°C (Codex)	0.918-0.923	0.918-0.923	0.909-0.915 @ 25°C	0.909-0.915 @ 25°C	0.909-0.915 @ 25°C
Saponification Value Codex	(188-194)	(188-194)	182-194	182-194	182-194
Peroxide Value mEq/kg	max 10	max 10	max 10	max 10	max 10
Unsaponifiable Matter (g/kg)	<15	≤15	≤15	≤15	≤15
Phosphorus (ppm)	max 200	n/a	max 200	n/a	n/a
Sulphur	n/a	n/a	n/a	n/a	n/a
Foots	Clear at 65°C	Clear at 65°C	n/a	n/a	n/a
Heat Test	n/a	no break at 340°C heat bleaches	n/a	n/a	n/a
Flash Point (Closed Cup)	min 150°C	min 150°C	min 150°C	min 150°C	min 150°C

For "crude" oil the specification is the same as "crude degummed" with the exception that phosphorus and foots specifications do not apply to crude oil.
For "crude super degummed" oil, the specification is the same as "crude degummed" with the exception that phosphorus is maximum 50ppm in super crude degummed
(*) Canola oil is also referred to as **Rapeseed oil - low erucic acid** (low erucic acid turnip rape oil; low erucic acid colza oil; canola oil)
(**) Values provided by Cargill Australia
ND – not detected
n/a – not applicable

4.0 PRICE ADJUSTMENTS

4.1 General

A consignment shall be acceptable to the purchaser if it conforms to specification requirements for clarity, flash point, colour, free fatty acids, refractive index and heat test properties and otherwise meets the Australian Oilseeds Federation (AOF) industry characteristics.

Where stated in the following section and agreed to by the buyer, oil may be accepted with a quality parameter over the tolerance limit. However, acceptance of this oil over the limit is not mandatory.

4.2 Free Fatty Acids (FFA)

If accepted over the specified limit, the following price deductions shall apply.

4.2.1 Crude Oils other than those specified below

2.0–3.5%	2% price deduction
Over 3.5%	Rejectable

4.2.2 Soybean Oil

1.0-1.5%	1.0% price deduction
Over 1.5%	Rejectable. If accepted over 1.5% a 2% price deduction for each 1% over 1.5% shall apply

4.2.3 Sunflower Oil (all types), Linola Oil

2.0-3.0%	1.0% price deduction
Over 3%	Rejectable. If accepted over 3%, a 3% price deduction for each 1% over 3% shall apply

4.2.4 Canola Oil Crude Degummed

1.0%–1.5%	1.0% price deduction
Over 1.5%	Rejectable. If accepted over 1.5% a price deduction of 2% for each 1% over 1.5% shall apply

4.2.5 Peanut Oil

2.0%–3.0%	2% price deduction
3.10%–5.0%	3% price deduction for each 1% over 3%
Over 5%	Rejectable

4.2.6 Unbleached Refined Cottonseed Oil

Over 0.25% is rejectable. If accepted over 0.25%, a 2% price deduction for each 1 % of free fatty acid that exceeds this limit shall apply (fractions in proportion). Negotiable over 0.75%.

4.3 Moisture, Volatiles and Impurities

Oil is rejectable over the prescribed limit. If accepted over the prescribed limit, a 2% price deduction for each 1% of moisture, volatiles and impurities that exceed this limit shall apply.

4.4 Chlorophyll in Canola Oil

If accepted over the prescribed limit of 30ppm, the following price deductions shall apply.

31–50ppm	2.0% price deduction (fractions in proportion)
Over 50ppm	Rejectable over

4.5 Phosphorus

Oil is rejectable over the prescribed limit. If accepted over the prescribed limit, a 0.06% price deduction for each 10ppm the phosphorus content exceeds this limit shall apply.

4.6 Peroxide Value

Oil is rejectable over the prescribed limit of 10mEq/kg. If accepted over this limit, a 1.5% price deduction shall be applied for each 1mEq/kg. Negotiable over 15 mEq/kg if accepted.

5.0 DISPUTED RESULTS

Refer to front of Standards Manual for applicable procedures.

6.0 COLD PRESSED OILS

6.1 General

Cold pressed oils are edible vegetable oils obtained by mechanical extraction from the parent oilseed without pre-cooking or heating and without subsequent chemical extraction and/or chemical refining.

The oilseeds shall be selected so as to give an extracted oil of the characteristic odour, taste and free fatty acids content.

Specified cold test requirements specifications as outlined in 6.2 shall only be applicable when the oil is labelled "Winterised".

6.2 Specification

All cold pressed oils must conform to the basic standards of the oil listed in *Table 1: Vegetable Oil Standards* obtained via non-cold pressed methods.

In addition, the following specifications must be met where different to those specified, or where not specified, for the oil obtained via non-cold pressed methods:

Odour:	Mild, pleasantly characteristic
Taste:	Bland, with a slight nutty flavour
Free Fatty Acids:	FFA should be below the "Rejectable over limit' for FFA as per the COMMODITY TRADING STANDARDS, Section 1 AOF 1-1, for oilseeds
Peroxide Value:	Limit of 15 mEq active oxygen / kg oil

6.3 Price Adjustments

Price adjustments for cold pressed oils shall apply.

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Section 1: AOF 1-3 – Oilseed (Vegetable Protein) Meals and Hull Quality Standards

1.0 SCOPE

1.1 This document outlines the Quality Specifications for various Oilseed (Vegetable Protein) Meals and Hulls obtained from the processing of oilseeds. The Standards listed in this document apply to all oilseed meals and hulls traded and are to apply at Receival and / or on outturn, whichever is applicable.

1.2 Notwithstanding the specifications outlined in this document, all oilseed meals and hulls sold for incorporation into stockfeed must comply with the relevant Federal and / or State stockfeed or agricultural regulations.

1.3 In particular oilseed meals and hulls must comply with the maximum residue levels (MRLs) and any other quality specifications listed in both the FSANZ Food Standards Code and the APVMA MRL Standard (maximum residue limits in food and animal feedstuffs). Requirements of State Health Acts and Regulations must be observed where appropriate.

1.4 Sampling procedures must be followed to ensure that the Official Sample used for analysis is representative of the consignment.

1.5 For domestic trading, Official Samples shall be taken by the buyer and seller respectively at the time of receival and dispatch of each load. Samples shall be retained for at least two months after dispatch.

1.6 Specifications and price adjustments recorded are applicable to the analysis of Official Samples taken and tested according to the prescribed methods.

2.0 PROCEDURES

Where a commodity does not have a tolerance for that particular quality parameter as indicated by "n/a" (not applicable), a test for that quality parameter is not required.

2.1 Retention

For all meals, retention is to be assessed as follows:

3 mm screen using woven wire DIN 3, 200g sample for 3 minutes, or

2 mm screen using woven wire US10 DIN 2, 200g sample for 3 minutes.

2.2 Sampling Procedures

Refer to Section 2 — "Methods".

3.0 QUALITY SPECIFICATIONS

3.1 The Quality Specifications as outlined in *Table 1: Quality Specifications – Oilseed Meals and Hulls* apply to all oilseed meals and hulls traded at any stage in the supply chain. Any variations to the specifications for a particular trade are to be stated in the contract between the buyer and the seller.

3.2 Any variation to the general standard for crude protein shall be specified in the contract.

3.3 Glucosinolate: The glucosinolate content for canola meal must be less than 30 micromoles/g oil-free, air-dried meal of specified aliphatic glucosinolates (Canola Council of Canada). Determined by HPLC, GC or glucose hydrolysis as described in the AOF methods.

3.4 Gossypol: The maximum gossypol content for cottonseed is:

– 0.10% for solvent extracted meal or

– 0.12% for pressed meal.

Gossypol content in full fat cottonseed meal is also a maximum 0.12%.

3.5 Urease: Urease activity range for soybean meals are:

– Full fat soy (extruded) 0.05 – 0.2% units pH rise

– Solvent extracted meal 0.05 – 0.4% units pH rise

– Expeller meal (cold press) – n/a

3.6 Retention of all meals

– Retention maximum on 3 mm screen is 2%

– Retention maximum on 2 mm screen is 10%

Any variation to the general standard for retention shall be specified on the contract.

3.7 Pelleted meals: Where meal is pelleted, retention standards do not apply

3.8 Canola oil + moisture: The combined value of moisture and oil in canola meal must not exceed the specified limits.

– Canola meal solvent extracted – oil + moisture max 15%*

– Canola meal pressed – oil + moisture < 20%

3.9 Non GM Canola

The low level presence of up to 5% of GM events approved by the Australian Government Office of the Gene Technology Regulator is permitted in the various nominated non-GM canola meals listed in *Table 1: Quality Specifications – Oilseed Meals and Hulls*.

Non-GM canola meal must only be processed from canola seed that has been traded, handled and stored as CS-01A Non-GM Canola Seed. Seed traded as CS-01A must follow industry guidelines for crop management, handling and traceability to ensure that customers purchasing the seed and/or the oil or meal from this seed can be assured of its identity.

Under this Standard there will be no requirement for testing for presence of GM protein or DNA. However, commercial arrangements for any additional testing between suppliers and customers can be negotiated as part of normal commercial practice.

Refer to quality specification concerning low level presence GM events approved by the Australian Government Office of the Gene Technology Regulator.

3.10 Microbiological: Meal production should be aimed at minimising the level of microbiological contamination of the product by the adoption of the codes of practice for hygienic production and storage, refer to EFISC[1]-GTP Aisbl Sector reference document on the manufacturing of safe feed materials from oilseed crushing and vegetable oil refining.

[1] European Feed and Food Ingredient Safety Certification

*Parties should be aware that some shipping/buyer requirements may differ

3.11 Mycotoxins: The maximum level of mycotoxins will be that as described in the National Feed Standard.

Contaminant	**Feed**	**Maximum level** (levels are expressed on a 12% moisture basis)
Mycotoxins		
Aflatoxin B1	Peanut shells or screenings and peanut meal included in feed for dairy species	0.2 mg/kg
	Oilseed meals (except for peanut meal) included in feed for dairy species.	0.1 mg/kg

3.12 Hexane residues. Residual hexane or solvent retained in oilseed meal must be at minimal levels such that there is no risk or hazard in handling and transporting the product.

3.13 Sticks and stone contamination. 0.1% by weight. No size limits apply.

3.14 Insects: Live stored grain insects – nil tolerance.

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Table 1: Quality Specifications – Oilseed Meals and Hulls

Trading Standard Reference	Commodity Name	Oil (min %)	Crude Protein[2] (min %)	Crude Fibre (max %)	Moisture (max %)
Oilseed Meals					
CAN:M:392/93	Canola Meal Solvent	0.5	36	15	12
CAN:M:392/94	Non GM Canola Meal Solvent [2]	0.5	36	15	12
CAN:M:391/93	Canola Meal Pressed	6	32	14	11
CAN:M:391/94	Non GM Canola Meal Pressed [1]	6	32	14	11
COP:M:401/15	Copra meal solvent	0.5	20	15	12
COP:M:402/15	Copra meal pressed	0.5	20	14	12
COT:M:313/93	Cottonseed Meal Solvent Hi Pro	0.5	43	15	12
COT:M:312/93	Cottonseed Meal Solvent	0.5	36	15	12
COT:M:314/93	Cottonseed Meal Pressed Hi Pro	6	40	17	10
COT:M:315/93	Cottonseed Meal Pressed	6	35	20	10
COT:M:316/93	Cottonseed Meal Pressed Full Fat	18	22	23	10
LINOLA:M:341/94	Linola Meal Pressed	6	30	11	11
LIN:M:323/79	Linseed Meal Solvent	0.5	32	12	12
LIN:M:322/86	Linseed Meal Pressed	6	31	11	11
PKM:M:405/15	Palm kernel meal solvent	0.5	15	30	10
PKM:M:406/15	Palm kernel meal pressed	6	15	30	10
PEA:M:332/79	Peanut Meal Solvent	0.5	46	10	9
PEA:M:331/79	Peanut Meal Pressed	4	44	10	9
RAP:M:333/79	Rapeseed Meal Solvent	0.5	34	15	12
RAP:M:332/79	Rapeseed Meal Pressed	4	31	14	11
SAF:M:362/79	Non-GM Safflower Meal Solvent	0.5	23	32	12
SAF:M:361/79	Non-GM Safflower Meal Pressed	4	22	30	8
SES:M:365/79	Sesame Meal Pressed	4	42	11	10
SOY:M:372/79	Soybean Meal Solvent	0.5	46	7	12
SOY:M:371/79	Soybean Meal Pressed	4	44	7	11
SOY:M:410/15	Non GM Soybean meal solvent	0.5	46	7	12
SOY:M:411/15	Non GM Soybean meal pressed	4	44	7	11
SOY:M:412/15	Soybean meal Full Fat	14	34	6	12
SOY:M:413/15	Non GM Soybean meal Full fat	14	34	6	12
SUN:M:382/93	Sunflower Meal Solvent	0.5	28	24	12
SUN:M:381/86	Sunflower Meal Pressed	4	27	22	8
SUN:M:385/93	Sunflower Meal - Dehulled Solvent	0.5	36	19	12
SUN:M:384/93	Sunflower Meal - Dehulled Pressed	4	35	18	8
Oilseed Hulls					
COT:H:313/96	Cottonseed Hulls	1	3.5	50	12
SOY:H:373/96	Soybean Hulls	0.5	10	50	12
SUN:H:386/96	Sunflower Hulls	1	4	50	12
PEA:H:420/15	Peanut Hulls	1	6	70	12

[1] Refer to Section 4.0 Price Adjustments, concerning low level presence of GM events below.
[2] Protein is calculated from the total nitrogen content. i.e. % Protein = Total nitrogen (%) x 6.25.

4.0 PRICE ADJUSTMENTS

4.1 General

Requests for adjustment for quality deficiencies of meals shall be made in writing within 30 days of the date of delivery of the load in question. Where such adjustments are to be made, and unless otherwise agreed to, the Official Samples of both buyer and seller shall be analysed by their respective laboratories and an average of the two results taken.

Claims for quality deficiencies of hulls shall be subject to negotiation between buyer and seller.

Where stated in the following section and agreed by the buyer, oilseed meals and hulls may be accepted with a quality parameter outside the tolerance limit. However, acceptance of this oilseed meal or hull over the limit is not mandatory.

In relation to premium and deduction adjustments, fractions will be in proportion.

4.2 Protein

4.2.1 Moisture within specification

Where the crude protein level (or adjusted protein, see 4.2.2) is greater than 0.5% below the minimum trading standard, the selling price shall be adjusted in the proportion that the measured protein bears to that minimum standard.

4.2.2 Moisture outside specification

Where the moisture is outside specification, the crude protein level shall be adjusted to the basis of the maximum moisture trading standard and price adjustments made as in 4.2.1 above using this adjusted protein:

$$\text{Protein, Standard moisture} = \text{Protein, actual} \times \frac{(100 - \text{Standard moisture})}{(100 - \text{Actual moisture}}$$

4.3 Moisture

Where the moisture content is above the maximum trading standard and the meal or hull is accepted, a 1% price deduction shall apply to the selling price up to 1% over the maximum level and a 1.5% price deduction shall apply between 1% and 2% over the maximum level (fractions in proportion). Meals and hulls are rejectable above 2% over the maximum moisture level.

4.4 Other analyses

Should analysis show any other specifications do not meet the trading standard, settlement is to be made between the parties concerned on the basis agreed to at the time of offer acceptance. If a settlement basis has not been defined at that time in the contract, then settlement will be made on a mutually acceptable basis or as decided by a mutually acceptable arbitrator.

5.0 DISPUTED RESULTS

Refer to **Classification Dispute Settlement** in this Standards Manual for applicable procedures.

Section 1: AOF 2 – Technical Information

Australian Oilseeds Federation Ltd

Section 1: AOF 2-1 – Typical Density Guide for Seed and Meal

1 lb/cu ft = 16.018 kg/cu m.
1 Imperial Bushel = 2219.3 cu ins = 1.2843 cu ft = 0.363677 hectolitres
1 US or Winchester Bushel = 2150.42 cu ins = 1.2444 cu ft = 0.35238 hectolitres

Table 1: Seed and Meal Density

	SAFFLOWER		LINSEED & LINOLA		SUNFLOWER (all types)		CANOLA & RAPESEED		SOYBEAN	
	SEED	**MEAL**	**SEED**	**MEAL**	**SEED**	**MEAL**	**SEED**	**MEAL**	**SEED**	**MEAL**
AVERAGE DENSITY:										
lb/cu ft	33	32	45	36	26	28	43	40	47	37
kg/cu m	529	513	721	577	416	449	689	641	753	593
kg/hl	53	51	72	58	42	45	69	64	75	59
BUSHEL (IMPERIALWEIGHT)										
lb	42	41	57	46	33	36	55	51	60	47
kg	19	19	26	21	15	16	25	23	27	21
CUBIC ft/ton:	67	70	50	62	85	79	52	56	48	60
BUSHELS ton:	53	54	39	49	67	62	41	44	37	48
CUBIC METRES tonne	1.87	1.95	1.39	1.73	2.38	2.21	1.44	1.56	1.33	1.67

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Section 1: AOF 2-2 –Typical Composition of Vegetable Fats and Oils

MAIN COMPONENT FATTY ACIDS

Table 1: Main Component Fatty Acids

Carbon double bonds	Caprylic 8-0	Capric 10-0	Lauric 12-0	Myristic 14-0	Palmitic 16-0	Palmitoleic 16-1	Stearic 18-0	Oleic 18-1	Linoleic 18-2	Linolenic 18-3
Castor (1)					1		2	3	4	
Canola				0.1	4	0.3	2	62	19	9
Coconut	8	7	48	16	8	1	4	6	2	
Corn (maize)	8	7	48		12		2	30	54	1
Cottonseed				0.5	19.5	0.5	2.2	16	59	0.15
Crambe					3		2	18	10	6
Linola					7		4	17	69	2
Linseed (4)					6		4	18	19	53
Oticica (2)					7		6	5		
Olive				1	12	1	2	75	9	
Palm				1	47		4	38	10	
Palm kernel	3.3	3.4	48	16	8		1	16	1	
Peanut				1	10	0.2	3	44	34	66
Perilla (4)	2	2	51	18	7		2	13	12	2
Poppyseed					12		2	19	65	
Rapeseed					4		1	17	13	8
Rice bran					17		2	39	39	3
Safflower				0.1	7	0.1	3	12	78	0.4
Sesame					9		5	45	41	
Soybean				0.1	10	0.1	4	22	55	8
Sunflower – hilin					6		4	24	65	
Sunflower – lolin					6		4	32	56	
Sunflower – mono					4	0.1	4	80	10	
Unsaturated tung					4		1	8	4	3

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MAIN COMPONENT FATTY ACIDS

Table 1: Main Component Fatty Acids (Cont.)

Carbon double bonds	Saturated	Unsaturated	Total Saturated	Total Mono-unsaturated	Total Poly-unsaturated 18 2-3	Iodine value	Saponification value
Castor (1)						85	180
Canola		20-24	6	62	28	112	190
Coconut	20-24	1-3	91	7	2	9	255
Corn (maize)			14	30	55	122	190
Cottonseed			23	17	59	119	192
Crambe			5	18	16	95	170
Linola			11	17	71	139	190
Linseed (4)			10	18	72	180	190
Oticica (2)		59(5)			7	150	190
Olive			14	75	9	80	
Palm			52	38	10	52	200
Palm kernel			82	16	1	20	250
Peanut			18	44	34	100	190
Perilla (4)	5(30		9	13	78	200	190
Poppyseed			14	19	67	134	190
Rapeseed	4		9	17	21	104	175
Rice bran			19	39	42	87	190
Safflower		53(6)	10	12	78	145	190
Sesame			14	45	41	110	190
Soybean	1		15	22	63	135	190
Sunflower – hilin	1		11	24	65	134	190
Sunflower – lolin	1		11	32	56	125	190
Sunflower – mono	1		9	81	5	165	190
Unsaturated tung		80(7)				165	190

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Section 1: AOF 2-3 — Colour Comparisons

(Approximate Conversions Only)

Table 1: Colour Comparisons

	COMPARISON VALUE		COMPARISON VALUE	
GARDNER	**LOVIBOND (133.35MM)**	**AOCS TINTOMETER**	**LOVIBOND (25.4MM)**	**AOCS TINTOMETER**
1	1R 10Y	1R 10Y	0.24R 2.4Y	0.24R 2.4Y
2	1.6R 16Y	1.6R 16Y	0.32R 3.2Y	0.32R 3.2Y
3	2.5R 25Y	3.0R 25Y	0.45R 4.5Y	0.45R 4.5Y
4	4R 40Y	4.5R 40Y	0.65R 6.5Y	0.65R 6.5Y
5	6.2R 62Y	7.0R 62Y	0.8R 8.0Y	0.8R 8.0Y
6	8.5R 80Y	-	1.2R 12.0Y	1.2R 12.0Y
7	-	-	1.7R 17.0Y	1.7R 17.0Y
8	-	-	2.15R 21.5Y	2.5R 21.5Y
9	-	-	2.9R 29.0Y	3.5R 29.0Y
10	-	-	4.0R 40.0Y	4.5R 40.0Y
11	-	-	5.5R 55.0Y	5.9R 55.0Y
12	-	-	7.3R 73.0Y	7.9R 73.0Y
13	-	-	10.0R 100Y	-
14	-	-	14.9R 149Y	-
15	-	-	20.0R 200Y	-
16	-	-	25.0R 250Y	-
17				
18				

Reference:

Procter Thomson, Journal of American Oil Chemists Society, Society, 30, 259 (1953).
V C Mehlenbacher "Analysis of Fats and Oil" (The Garrard Press).
Tintometer brochure "Lovibond Colour Scale Renotation".

Note The Lovibond scale listed applies to models up to Model D. Model E uses the "renotated Lovibond glasses". It gives a slightly higher reading on the red scale with the same yellow scale up to 20Y. Over this there is a slight change in the renotated yellow glasses. The AOCS red scale is the renotated red values multiplied by 0.95. This has been taken into account in the above conversion.

The Gardner 1933 scale (Hellige discs 620C-40 and 620C-42) gives a much better colour comparison for vegetable oils than the colours of ASTM D 1544 (Hellige discs 620C-43 and 620C-44).

Section 1: AOF 2-4 – Typical Amino Acid Composition of Meals

(as percentage of protein)

Table 1: Typical Amino Acid Composition (% of Protein) Australian Oilseed Meals

	Cottonseed	Linseed	Peanut	Rapeseed & Canola	Safflower	Soybean	Sunflower
Alanine	3.7	4.3	3.7	4.2	4.1	3.9	4.0
Arginine	11.7	9.1	11.3	6.2	8.9	7.1	7.9
Aspartic Acid	8.8	7.8	8.7	5.9	8.3	9.5	8.0
Cystine	2.5	1.7	1.5	1.6	1.1	1.3	1.4
Glutamic Acid	21.0	20.3	19.3	18.4	21.6	18.9	21.2
Glycine	3.4	5.7	5.3	5.3	5.9	4.3	5.8
Histidine	3.3	2.5	2.4	3.1	2.6	2.8	2.6
Leucine	5.1	5.8	6.2	7.0	6.4	7.4	6.5
Isoleucine	3.1	3.9	3.0	4.0	3.7	4.4	4.0
Lysine	4.5	4.0	3.5	5.9	3.3	6.1	3.5
Methionine	0.8	1.7	1.1	2.0	1.2	1.3	2.1
Phenylalanine	4.7	4.5	4.8	4.3	5.0	4.8	4.7
Proline	3.5	3.6	4.0	6.1	4.4	4.7	4.4
Serene	4.4	4.1	4.0	3.7	3.8	4.6	3.8
Threonine	3.5	3.6	2.6	4.0	3.1	3.9	3.7
Tyrosine	2.4	2.5	3.5	3.0	2.6	3.4	2.7
Valine	3.8	4.9	3.6	4.8	4.9	4.5	4.7

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