AUSTRALIAN OILSEEDS FEDERATION INCORPORATED

Section 1:
Quality Standards, Technical Information & Typical Analysis

2011/12

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IMPORTANT NOTICE

This Manual is compiled by the Australian Oilseeds Federation Inc. as an industry reference for Quality and Trading 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.

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 last three times a year to review all potential changes to the Standards. 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 "Contact Us" on the AOF website, http://www.australianoilseeds.com. Further information relating to technical issues and Standards used by the Australian oilseed industry can also be found at the AOF website.

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.

Changes reflected in this edition of the AOF Quality Standards are highlighted.

Definitions

Admix/Admixture

See Impurities definition, below.

Adventitious Presence

Adventitious Presence is defined as the unintended 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.

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

As Is

In terms of sample assessment, is the representative sample as taken from the load tendered for delivery without any interference to the sample. That is, there has been no cleaning or screening of the sample prior to analysis. 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 Seed

For **s**oybeans, broken or split soybeans are those soybeans not otherwise damaged that are three quarters of a soybean or less in size (except fines classified as impurities). Separated hulls are to be classified as broken or split soybeans.

For edible soybeans, broken or split is defined as half soybean or greater parts thereof (with or without hull) that do not come within the definition of damaged soybean. This includes soybeans, hulls and parts thereof not classified as damaged seed.

For all seeds other than soybeans and peanuts, all hulls, kernels or parts thereof, not otherwise damaged shall be classified as split or broken seed (except fines classified as impurities).

Broken or split seed is not included in the Defective Seed or Damaged seed category.

Broken or split seed is to be taken as a percentage of clean seed and expressed to the nearest 0.1%.

Chlorophyll

Chlorophyll is defined as a compound in plants that converts radiant energy to chemical energy through the process of photosynthesis. Its presence in seed devalues the seed and subsequent oil extracted from that seed. Chlorophyll is an alternative green seed assessment in canola and rapeseed.

Chlorophyll is to be determined on a clean seed basis and expressed in whole numbers and the amount reported in ppm.

Clean Seed

Clean seed includes all seed of the particular oilseed being tested other than that defined as 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.

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 and reported to the nearest percent.

Damaged Seed

Damaged seed includes whole and pieces of seed that are bin burnt, diseased, affected by field fungi, frost damaged, heat damaged, insect damaged, weather damaged, weather stained and immature. It does not include Broken or Split seed, Green seed (canola, rapeseed and soybeans only) or Sprouted. Damaged seeds are included for assessment in the Total Defective category.

Seeds which are surface damaged only are to be classified as sound.

Damaged seed is to be taken as a percentage of the clean seed expressed to the nearest 0.1%.

Defective Seed

Defective seed includes whole and pieces of seed that are classified as Damaged seed. This includes seed that is bin burnt, diseased, affected by field fungi, frost damaged, heat damaged, insect damaged, weather damaged, weather stained and immature. Defective seeds also include Green seed (canola, rapeseed and soybeans only) and Sprouted. It does not include Broken or Split seed. Refer also to Damaged Seed.

For edible soybeans, Defective seed includes soybeans and pieces of soybean which are frost damaged, badly weather stained, field fungi discoloured (including purple stain), weed stained (including nightshade purple stain), heat damaged, diseased, insect damaged or otherwise materially damaged.

Seeds which are surface damaged only are to be classified as sound.

Defective seed is to be taken as a percentage of the clean seed expressed to the nearest 0.1%.

Degraded Seed

Degraded seed is seed which is hot, musty, sour, mouldy or contains harmful substances, or not otherwise suitable for human or animal consumption. Degraded seed is to be rejected. Degraded seed is classified under the heading Objectionable Material.

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 Seed

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

Discoloured Seed

Discoloured seeds, relating to edible soybeans, are part of Damaged seed and are those whose seed coats have a colour that is distinctly different to that of the predominant variety in the sample. This includes excessive seed coat staining such as purple staining.

Discoloured seed is to be taken as a percentage of the clean seed expressed to the nearest 0.1%.

Diseased Seed

Diseased seed are those seeds that have not matured as per a normal seed. 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. Diseases seed is to be classified as a part of Damaged seed.

Diseased seed is to be taken as a percentage of the clean seed expressed to the nearest 0.1%.

Field Fungi

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 grain, 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.

Field fungi seed is to be taken as a percentage of the clean seed expressed to the nearest 0.1%.

Field Insects

Field insects are those insects that contaminate the seed through their presence on or in the vicinity of the growing crop. Field insects generally do not harm seed.

Note that there may be variances with the tolerances applied at export by AQIS.

Table 1: Field Insects

COMMON NAME	SCIENTIFIC NAME
Large Field Insects	
Grasshoppers	Various
Ladybirds	Various
Rutherglen Bugs	*Nysius vinitor*
Wood Bugs	Various
All Other Large Field Insects	Various
Small Field Insects	
Aphids	Various
Mites	Various
All Other Small Field Insects	Various

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

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

Foreign material is a part of impurities and is defined as all material other than whole, split or broken seeds or hulls of the respective oilseed being assessed if it falls through the screen. Foreign material is often referred to as admixture or foreign matter.

For edible soybeans, it includes all material other than soybeans passing through a 4.75 mm round hole sieve using 20 shakes including pods, but excluding cottonseed, canola and weed seeds.

Foreign Material is to be expressed as the percentage by weight of the entire half litre sample and reported to the nearest 0.1%.

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.

For seed, results are to be reported to the nearest 0.1%.

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 percent.

Frost Damaged Seed

Frost damaged seeds are part of Damaged seeds and are those seeds affected by frost during the growing phase. Seeds are generally recognised as intact shells only with no core.

Frost damaged seed is to be taken as a percentage of the clean seed expressed to the nearest 0.1%.

Genetic Modification

The adventitious presence of up to 0.9% of GM events approved by the Australian Government Office of the Gene Technology Regulator is allowed in non-GM canola. Canola is rejectable over this limit.

The adventitious presence of up to 5% of GM events approved by the Australian Government Office of the Gene Technology Regulator is allowed in non-GM canola meal. Canola meal is rejectable over this limit.

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%.

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 Seed

Green seeds only apply to canola and rapeseed and are those that are distinctively green when crushed, or when a cross-section shows an intense green colour. Seeds that are yellow-green are not considered green. Green seeds are not part of Damaged but are a part of Total Defectives.

Green seed is to be assessed on the clean seed.

Heat Damaged Seed

Heat damaged or bin burnt seed are those seeds and pieces of seed that are materially discoloured and damaged by heat. Heated seeds may have a heated odour or a brown powdery appearance when crushed. Heat damaged is a part of Damaged seed.

Heat damaged seed is to be taken as a percentage of the clean seed expressed to the nearest 0.1%.

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 Seed

Immature seeds are those that have not developed fully and are thus not whole sound seeds. Seeds may appear soft when crushed. Immature seeds are a part of Damaged seed.

Immature seed is to be taken as a percentage of the clean seed expressed to the nearest 0.1%.

Impurities (formally admixture or admix)

For cottonseed, impurities consist of foreign matter other than seed material, where seed material includes cotton fibre attached to the seed coat.

For all other commodities, impurities shall consist of the following:

a. Foreign matter (organic or inorganic) other than seeds of the respective oilseed being assessed. For peanuts the outer shells or hulls are classified as impurities except when shell and kernel are intact. For all other commodities, except peanuts and soybeans, the outer shells or hulls are always to be classified as impurities. For all commodities other than peanuts, when any seed is present in an unthreshed state, the seed and attached surrounding plant material is to be classified as impurities. Note that ryegrass ergot is not included under this definition as a separate tolerance exists.

   Note that there are separate tolerances for specific weed seeds within Foreign Matter, as described under the definition for Weed Seeds. There may also be specific tolerances for elements of impurities within each commodity Standard.

b. All material, including whole seed and partial seed material of the respective oilseed being assessed, passing through the screen prescribed for that oilseed. This material passing through the screen is also sometimes referred to by the name "fines".

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

Insect Damaged Seed

Insect damaged seeds are those that have been eaten in part by field or stored product insects. Insect damaged seeds are visually recognised through holes being present in the seed and are included in the damaged seed category.

Insect damaged seed is to be taken as a percentage of the clean seed expressed to the nearest 0.1%.

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.

Linoleic, Linolenic, Oleic Acid

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

Meals

Oilseed meals are the by-products of oil production and are a good source of protein for stockfeed.

Moisture Content

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%.

Mouldy Seed

Mouldy seed refers to seed that is visibly affected by mould, fermentation and any subsequent deterioration. It is included in the category of Degraded seed under Objectionable Material.

Objectionable Material

This includes harmful substances and material which significantly devalues the appearance of the commodity, imparts an unacceptable odour, renders the commodity unfit for human or animal consumption or is a food safety issue. Includes but is not limited to:

- Contaminants such as live or dead stored grain product insects, live or dead pea weevil, specified weed seeds in excess of the lowest limit prescribed in any of the State Stockfeed Regulations lists of permitted weed seeds, material imparting an odour to the grain, sand, earth, sticks
- Inorganic material such as glass and metal
- Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
- Chemicals such as pickled seed, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels

Note that there may be separate tolerances in edible soybeans for particular quality parameters within Objectionable Material such as dead stored insects and sand/earth.

This category does not include parameters that are classified under Impurities.

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.

Oil Content

The oil content shall be that 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.

Peroxide Value

The edible grades (refined and deodorised products), contain specified antioxidants. The peroxide value is to be reported to the nearest whole number and the units are mEq/kg.

Phosphorus

The Phosphorus content is a direct reflection of the degumming process, with Degummed oils containing low phosphorus content. Phosphorus is to be reported to the nearest whole number in ppm.

Pressed

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

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 25°C

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 25°C and reported to the nearest 0.001.

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 dimensions and the procedure to be used during the shaking process are outlined in the following Procedures section. Retention is to be reported to the nearest 1%.

Ryegrass Ergot

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

The tolerance is determined by the maximum length (in cm) that the pieces in the entire sample are not to exceed when aligned end to end.

Sand or Earth

Sand or earth is generally regarded as unconsolidated mineral or organic material and comprises clumps of earth and grains of sand.

For soybeans, a separate tolerance exists for sand/earth. For all other commodities, sand/earth is included in the definition of Objectionable Material.

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.

Small Foreign Seeds

Small foreign seeds are those weed seeds that fall through the screen used for the particular commodity and into the catch pan during the sieving process and do not have a specific tolerance nominated in the list of Weed Seeds in Table 4. Where a particular commodity is being assessed, if it is listed in the following table, the definition as a Small Foreign Seed does not apply. e.g., canola is not a SFS in canola.

Table 2: 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 snails or substantial portions thereof and include bodies without shells.

Table 3: Common 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

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

Solvent Extraction

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

Sprouted Seed

Sprouted Seed is also referred to as "shot" or "sprung". Sprouted seeds are those that show signs of swelling, splitting or the presence of a rootlet. Seed that gives any indication of the commencement of growth is to be classified as being sprouted. Sprouted seed is not included in Damaged, but is in the Total Defective category.

Sprouted seed is to be taken as a percentage of the clean seed expressed to the nearest 0.1%.

Stones

Stones include hard shale, coal, hard earth pellet, meghemite (ironstone or buckshot), limestone or other non-toxic material of a similar nature.

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

Subjective Test

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

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.

Unmillable Material Above Screen

For edible soybeans, includes all material other than soybeans retained above a 4.75 mm round hole sieve using 20 shakes including pods, but excluding cottonseed, canola and weed seeds.

Unmillable material is to be reported to the nearest 0.1% based on the entire sample received.

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%.

Weather Damaged Seed

Weather damaged seeds are those that have been subjected to rain during the maturation phase. Seeds are generally recognised as having a grey washed out appearance. When crushed, they may have a chalky texture. It is often difficult to determine the difference between these grains and Weather Stained grains. Weather Damaged seeds are classified under Damaged Seeds.

Weather damaged seed is to be taken as a percentage of the clean seed expressed to the nearest 0.1%.

Weather Stained Seed

Weather stained seeds are those that have been subjected to rain during the maturation phase. Seeds are generally recognised as having a greyish washed out appearance. Weather Stained seeds are often indistinguishable from Weather Damaged seeds and are often referred to as discoloured seeds and are classified under Damaged Seeds.

Weather stained seed is to be taken as a percentage of the clean seed expressed to the nearest 0.1%.

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 below except for edible soybeans which have a separate list of weed seeds. Refer also to the definition of Small Foreign Seeds.

Table 4: Weed Seed Limits by Species (maximum seeds per half litre)

Common Name	Scientific Name	Tolerance per half litre
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
Saffron Thistle	*Carthamus lanatus*	Nil
St. Johns wort	*Hypericum perforatum*	Nil
Star Burr	*Acanthospermum hispidum*	Nil
Stinkwort	*Inula graveolens*	Nil
Burrs – all, except where listed in this table	*Xanthium spp.*	1
Wild mignonette	*Reseda lutea*	1
Crow Garlic	*Allium vineale*	2
Skeleton weed	*Chondrilla juncea*	2
Thornapple	*Datura spp.*	2
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
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.

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.

Classification Dispute Settlement

1. 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 contaminants are 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 Receival 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 objective classification as per the Receival 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. Consignment Deliveries

2.1 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. A Storage and Handling Agreement may impact on and over-ride this dispute procedure.

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

2.3 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.

2.4 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 objective classification must be undertaken for each load.

2.5 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.

Section 1: AOF 1-1, Grain Quality Standards

1.0 PREAMBLE

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

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. With the exception of impurities, test weight and moisture, all analyses shall be conducted and reported on a clean seed basis.

3. For snails and stones, in any consignment there is a nil tolerance per 2.5 litre sample for any snails or stones remaining above a 3.0 mm round hole screen. If one snail or stone is found above the screen in the half litre sample, then a further four half litre samples should be taken. If a snail or stone is found in any one of the subsequent samples, the load is to be rejected.

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

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

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

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

8. 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.

9. Where Green canola seed can be measured as Chlorophyll, the Chlorophyll result overrides any result determined by the ruler method.

3.0 COMMODITY STANDARDS

Section 1 AOF 1-1 Table 1: Canola Standard

Commodity : CANOLA		**Standard Reference No: CSO 1**
Parameter	**Specification**	**Comment/Price Adjustment**
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 current AOF Variety Listing	Available on the AOF website under 'Technical Informaion"
Oil	42% base level	1.5% premium or deduction for each 1% above or below 42%
Free Fatty Acid	1% base level	2% deduction for each 1% over the base level, rejectable over 2.5%
Moisture	8% maximum	2% deduction for each 1% over maximum
Test Weight	62 kg/hl minimum	Rejectable under this limit
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Canola (Maximum % wt/wt based on cleaned half litre sample retained above 1.0mm round hole sieve)		
Broken or Split	7% maximum	0.5% deduction for each 1% over the maximum
Total Defective, including:	10% maximum	0.5% deduction for each 1% over the maximum
Damaged	3% maximum	0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted	5% maximum	0.5% deduction for each 1% over the maximum
Green	2% maximum	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 per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	3% maximum	Is all foreign matter including 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%.
Snails/Stones	Nil above screen	Nil tolerance 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.
	1 stone/snail per ½ litre below screen	Tolerance of 1 stone/snail per ½ litre sample, passing through a 3.0 mm round hole screen.
Field Insects	10 large per ½ litre	Includes Rutherglen bugs, ladybirds, grasshoppers and wood bugs
	100 small per ½ litre	Includes all species of aphid and all species of mites
Ryegrass Ergot	0.5cm maximum	Maximum of all pieces aligned end on end
Sand/Earth	0.06% maximum	Rejection above this limit.
Objectionable Material	nil	Harmful substances include live or dead stored grain product insects, live or dead 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, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels, smut, material imparting an odour to the grain, sticks and pickled grain. Includes Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds, rejectable over)		
Type A	nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Saffron Thistle, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, 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

Section 1 AOF 1-1 Table 2: Non-GM Canola Standard

Commodity : CANOLA		Standard Reference No: CSO 1-a
Parameter	**Specification**	**Comment/Price Adjustment**
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 adventitious 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 current AOF Variety Listing	Available on the AOF website under 'Technical Informaion"
Oil	42% base level	1.5% premium or deduction for each 1% above or below 42%
Free Fatty Acid	1% base level	2% deduction for each 1% over the base level, rejectable over 2.5%
Moisture	8% maximum	2% deduction for each 1% over maximum
Test Weight	62 kg/hl minimum	Rejectable under this limit
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Canola (Maximum % wt/wt based on cleaned half litre sample retained above 1.0mm round hole sieve)		
Broken or Split	7% maximum	0.5% deduction for each 1% over the maximum
Total Defective, including:	10% maximum	0.5% deduction for each 1% over the maximum
Damaged	3% maximum	0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted	5% maximum	0.5% deduction for each 1% over the maximum
Green	2% maximum	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 per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	3% maximum	Is all foreign matter including 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%.
Snails/Stones	Nil above screen	Nil tolerance 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.
	1 stone/snail per ½ litre below screen	Tolerance of 1 stone/snail per ½ litre sample, passing through a 3.0 mm round hole screen.
Field Insects	10 large per ½ litre	Includes Rutherglen bugs, ladybirds, grasshoppers and wood bugs
	100 small per ½ litre	Includes all species of aphid and all species of mites
Ryegrass Ergot	0.5cm maximum	Maximum of all pieces aligned end on end
Sand/Earth	0.06% maximum	Rejection above this limit.
Objectionable Material	nil	Harmful substances include live or dead stored grain product insects, live or dead 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, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels, smut, material imparting an odour to the grain, sticks and pickled grain. Includes Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds, rejectable over)		
Type A	nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Saffron Thistle, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, 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

Section 1 AOF 1-1 Table 3: Canola Quality Juncea Standard

Commodity : CANOLA QUALITY JUNCEA		Standard Reference No: CSJ 1-a
Parameter	**Specification**	**Comment/Price Adjustment**
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 adventitious 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 current AOF Variety Listing	Available on the AOF website under 'Technical Informaion"
Oil	42% base level	1.5% premium or deduction for each 1% above or below 42%
Free Fatty Acid	1% base level	2% deduction for each 1% over the base level, rejectable over 2.5%
Moisture	8% maximum	2% deduction for each 1% over maximum
Test Weight	62 kg/hl minimum	Rejectable under this limit
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Canola (Maximum % wt/wt based on cleaned half litre sample retained above 1.0mm round hole sieve)		
Broken or Split	7% maximum	0.5% deduction for each 1% over the maximum
Total Defective, including:	10% maximum	0.5% deduction for each 1% over the maximum
Damaged	3% maximum	0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted	5% maximum	0.5% deduction for each 1% over the maximum
Green	2% maximum	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 per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	3% maximum	Is all foreign matter including 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%.
Snails/Stones	Nil above screen	Nil tolerance 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.
	1 stone/snail per ½ litre below screen	Tolerance of 1 stone/snail per ½ litre sample, passing through a 3.0 mm round hole screen.
Field Insects	10 large per ½ litre	Includes Rutherglen bugs, ladybirds, grasshoppers and wood bugs
	100 small per ½ litre	Includes all species of aphid and all species of mites
Ryegrass Ergot	0.5cm maximum	Maximum of all pieces aligned end on end
Sand/Earth	0.06% maximum	Rejection above this limit.
Objectionable Material	nil	Harmful substances include live or dead stored grain product insects, live or dead 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, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels, smut, material imparting an odour to the grain, sticks and pickled grain. Includes Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds, rejectable over)		
Type A	nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Saffron Thistle, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, 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

Section 1 AOF 1-1 Table 4: Rapeseed Standard

Commodity : RAPESEED		Standard Reference No: CSO 2
Parameter	**Specification**	**Comment/Price Adjustment**
Physical & Chemical Parameters		
General		Rapeseed tended for delivery shall be free from any uncharacteristic odours, live stored product insect infestation and any nominated commercially unacceptable contaminant
Oil	42% base level	1.5% premium or deduction for each 1% above or below 42%
Moisture	8% maximum	2% deduction for each 1% over maximum
Test Weight	n/a	
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Rapeseed (Maximum % wt/wt based on cleaned half litre sample retained above 1.0mm round hole sieve)		
Broken or Split	7% maximum	0.5% deduction for each 1% over the maximum
Total Defective, including:	10% maximum	0.5% deduction for each 1% over the maximum
Damaged	3% maximum	0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted	5% maximum	0.5% deduction for each 1% over the maximum
Green	2% maximum	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 per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	3% maximum	1% deduction for each 1% of impurities up to 4%, 2% deduction for each 1% of impurities over 4%
Snails/Stones	Nil above screen	Nil tolerance 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.
	1 stone/snail per ½ litre below screen	Tolerance of 1 stone/snail per ½ litre sample, passing through a 3.0 mm round hole screen
Field Insects	10 large per ½ litre	Includes Rutherglen bugs, ladybirds, grasshoppers and wood bugs
	100 small per ½ litre	Includes all species of aphid and all species of mites
Ryegrass Ergot	0.5cm maximum	Maximum of all pieces aligned end on end
Objectionable Material	nil	Harmful substances include live or dead stored grain product insects, live or dead 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, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels, smut, material imparting an odour to the grain, sand, earth, sticks and pickled grain. Includes Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds, rejectable over)		
Type A	nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Saffron Thistle, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, 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

Section 1 AOF 1-1 Table 5: Polyunsaturated Sunflower Standard

Commodity : SUNFLOWER - Polyunsaturated		Standard Reference No: CSO 3
Parameter	**Specification**	**Comment/Price Adjustment**
Physical & Chemical Parameters		
General		Sunflower tended for delivery shall be free from any uncharacteristic odours, live stored product insect infestation and any nominated commercially unacceptable contaminant
Oil	40% base level	1.5% premium or deduction for each 1% above or below 40%
Linoleic Acid	62% minimum	Rejectable under this limit
Moisture	9% maximum	2% deduction for each 1% over maximum
Test Weight	32kg/hl minimum	Rejectable under this limit
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Sunflower (Maximum % wt/wt based on cleaned half litre sample retained above 2mm round hole sieve)		
Broken or Split	7% maximum	0.5% deduction for each 1% over the maximum
Total Defective, including:	10% maximum	0.5% deduction for each 1% over the maximum
Damaged	3% maximum	0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted	5% maximum	0.5% deduction for each 1% over the maximum
Contaminants (Maximum per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	4% maximum	1% deduction for each 1% of impurities up to 4%, 2% deduction for each 1% of impurities over 4%
Snails/Stones	Nil above screen	Nil tolerance 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.
	1 stone/snail per ½ litre below screen	Tolerance of 1 stone/snail per ½ litre sample, passing through a 3.0 mm round hole screen
Field Insects	10 large per ½ litre	Includes Rutherglen bugs, ladybirds, grasshoppers and wood bugs
	100 small per ½ litre	Includes all species of aphid and all species of mites
Ryegrass Ergot	0.5cm maximum	Maximum of all pieces aligned end on end
Objectionable Material	nil	Harmful substances include live or dead stored grain product insects, live or dead 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, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels, smut, material imparting an odour to the grain, sand, earth, sticks and pickled grain. Includes Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds, rejectable over)		
Type A	nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Saffron Thistle, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, 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

Section 1 AOF 1-1 Table 6: Monounsaturated Sunflower Standard

Commodity : SUNFLOWER – Monounsaturated		Standard Reference No: CSO 4
Parameter	**Specification**	**Comment/Price Adjustment**
Physical & Chemical Parameters		
General		Sunflower tended for delivery shall be free from any uncharacteristic odours, live stored product insect infestation and any nominated commercially unacceptable contaminant
Oil	40% base level	1.5% premium or deduction for each 1% above or below 40%
Oleic Acid	80% minimum	Rejectable under this limit
Moisture	9% maximum	2% deduction for each 1% over maximum
Test Weight	32kg/hl minimum	Rejectable under this limit
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Sunflower (Maximum % wt/wt based on cleaned half litre sample retained above 2mm round hole sieve)		
Broken or Split	7% maximum	0.5% deduction for each 1% over the maximum
Total Defective, including:	10% maximum	0.5% deduction for each 1% over the maximum
Damaged	3% maximum	0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted	5% maximum	0.5% deduction for each 1% over the maximum
Contaminants (Maximum per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	4% maximum	1% deduction for each 1% of impurities up to 4%, 2% deduction for each 1% of impurities over 4%
Snails/Stones	Nil above screen	Nil tolerance 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.
	1 stone/snail per ½ litre below screen	Tolerance of 1 stone/snail per ½ litre sample, passing through a 3.0 mm round hole screen
Field Insects	10 large per ½ litre	Includes Rutherglen bugs, ladybirds, grasshoppers and wood bugs
	100 small per ½ litre	Includes all species of aphid and all species of mites
Ryegrass Ergot	0.5cm maximum	Maximum of all pieces aligned end on end
Objectionable Material	nil	Harmful substances include live or dead stored grain product insects, live or dead 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, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels, smut, material imparting an odour to the grain, sand, earth, sticks and pickled grain. Includes Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds, rejectable over)		
Type A	nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Saffron Thistle, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, 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

Section 1 AOF 1-1 Table 7: Sunflower Birdseed Grade Standard

Commodity : SUNFLOWER BIRDSEED GRADE – Grey Stripe or Black		Standard Reference No: CSO 5
Parameter	**Specification**	**Comment/Price Adjustment**
Physical & Chemical Parameters		
General		The seed shall be free of staining, well defined stripe or shiny black as per type for that variety, fresh, bright and of sound merchantable quality
Oil		
Moisture	9% maximum	Rejectable over this limit
Test Weight	38kg/hl minimum	
Protein	n/a	
Seed Retention	n/a	See Admixture
Germination	n/a	
Defective Sunflower (Maximum % wt/wt)		
Broken or Split		
Total Defective	2.5%	Seed or grain
Insect Damaged		
Sprouted		
Contaminants (Maximum per half litre unless otherwise stated)		
Admixture	6.0% maximum by wt	Subject to rejection at buyers option over 6.0%. Screen size retention on 7.5 mm round on top screen and throughs on 4.0 mm slot bottom screen
Soil	Nil	Nil tolerance for soil subject to rejection at buyers' option
Insects	nil	Live insects
	5	Dead insects
Ryegrass Ergot		
Objectionable Material	Nil	Objectionable material is defined as material or evidence of other items that may be found in the delivered product which cannot be processed into a saleable product. • Seed must comply with the Agricultural Standards Regulations regarding pesticides in grain. • No Contaminants e.g. pickle • Nil GMO refers to each contracted commodity • mould , fungus or toxins • Vermin and or excrement. • Any harmful substance including prohibited and noxious seeds as declared by State Legislation and which are not otherwise of commercial quality, will be subject to rejection • Free of odour , rancidity and or mustiness
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds)		
	various	Where weed seeds are evident in birdseed then the tolerance levels are the same as those nominated in the grain sorghum and or wheat standards.

Section 1 AOF 1-1 Table 8: Edible Milling Grade Soybean Commodity Standard

Commodity : EDIBLE MILLING GRADE SOYBEAN		**Standard Reference No: CSO 6**
Parameter	**Specification**	**Comment/Variation**
Description		Edible soybeans comprising clean, sound, whole soybeans of light hilum varieties suitable for milling into flour
General		Soybeans tended for delivery shall be free from any uncharacteristic odours, live stored product insect infestation and any nominated commercially unacceptable contaminant
Genetic Modification	nil	Beans shall comply with the Australian standard for freedom from genetically modified materials
Moisture	12% maximum	
Test Weight	70 kg/hl minimum	Must be measured by a Trade Certified Chondrometer
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Soybeans (Maximum % wt/wt based on cleaned half litre sample retained above 4.75mm round hole sieve)		
Broken or Split	10% maximum	Defined as half soybean or greater parts thereof (with or without hull) that do not come within the definition of damaged soybeans
Total Defective	n/a	
Damaged	3% maximum	Includes soybeans and pieces of soybean which are frost damaged, badly weather stained, field fungi discoloured (including purple stain), weed stained (including nightshade purple stain), heat damaged, diseased, insect damaged or otherwise materially damaged.
Sprouted	Nil	Soybean that gives any indication of the commencement of growth
Green	2% maximum	Are soybeans where a cross section shows an intense green colour, or when it is green in colour and of a chalky consistency
Discoloured	1 bean maximum per ½ litre	Discoloured soybean that is not indicative of variety. Excessive seed coat staining is rejectable by visual inspection
Contaminants (Maximum per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	3% maximum	1% deduction for each 1% of impurities up to 3%, 2% deduction for each 1% of impurities over 3%
Seed Contaminants (Maximum 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	nil	Castor Oil plant, (Ricinis communis) Coriander, Crow Garlic or wild Garlic, Darling Pea, Opium poppy, Ragweed, Rattlepods, Common Broomrape, Star Burr, St Johns 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, Patersons 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

Section 1 AOF 1-1 Table 8 (cont): Edible Milling Grade Soybean Commodity Standard

Commodity : EDIBLE MILLING GRADE SOYBEAN		**CSO 6 Continued**
Parameter	**Specification**	**Comment/Variation**
Other Contaminants (Maximum per half litre)		
Chemical Treatment	nil	No chemical treatments are to be used on harvested soybeans unless authorised in writing by the buyer. Any other chemical treatments must be declared at the time of delivery
Specific Allergens	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 grain should be alerted. Should this instance arise, the truck should be re-sampled and reassessed to confirm the absence of peanut shell or kernel.
Foreign material (below 4.75 mm round hole screen)	4% maximum by wt	All material other than soybeans passing through a 4.75 mm round hole sieve using 20 shakes including pods, but excluding cottonseed, canola and weed seeds
Unmillable material (above 4.75 mm round hole screen)	0.5% maximum by wt	All material other than soybeans retained above a 4.75 mm round hole sieve using 20 shakes including pods, but excluding cottonseed, canola and weed seeds
Smut/Ergot/Sclerotinia	nil	
Stored Grain Insects - Live	nil	Includes Pea Weevil
Stored Grain Insects - Dead	5 maximum	Dead insect pests of stored grain (includes pea weevil), by count
Field Insects	3 maximum	*Nizura viridula* (Vegetable Bugs)
	3 maximum	Field insects by count – All others
Snails	nil	
Sand/Earth (>/= 4 mm diameter)	nil	
Sand/Earth (< 4 mm diameter)	20 grains	
Objectionable Matter	nil	Sticks, stones, glass, concrete or any other commercially unacceptable contaminant, smell or taste
Pickled and coloured seeds	nil	Fusarium (pink) fungal stained, pickled grain
Odours – sour and musty	nil	Beans which have any foreign odour due to taints or improper storage conditions resulting in mould, souring or musty odours

Section 1 AOF 1-1 Table 9: Edible Manufacturing Grade Soybean Commodity Standard

Commodity: EDIBLE MANUFACTURING GRADE SOYBEAN		**Standard Reference No: CSO 7**
Parameter	**Specification**	**Comment/Variation**
Description		Edible soybeans comprising clean, sound, whole soybeans of light hilum varieties suitable for production of tofu, tempeh, soymilk etc
General		Soybeans tended for delivery shall be free from any uncharacteristic odours, live stored product insect infestation and any nominated commercially unacceptable contaminant
Genetic Modification	nil	Beans shall comply with the Australian standard for freedom from genetically modified materials
Moisture	12% maximum	
Test Weight	70 kg/hl minimum	Must be measured by a Trade Certified Chondrometer
Protein	40% DMB	Measured on a dry matter basis
Seed Retention	90% minimum	Retained on a 6mm round hole screen after removing screenings through a 4.75 mm round screen
Germination	85% minimum	
Defective Beans (Maximum % wt/wt based on a cleaned half litre sample retained above a 4.75 round screen)		
Broken or Split	5% maximum	Defined as half soybean or greater parts thereof (with or without hull) that do not come within the definition of damaged soybeans
Total Defective	n/a	
Damaged	3% maximum	Includes soybeans and pieces of soybean which are frost damaged, badly weather stained, field fungi discoloured (including purple stain), weed stained (including nightshade purple stain), heat damaged, diseased, insect damaged or otherwise materially damaged.
Sprouted	Nil	Soybean that gives any indication of the commencement of growth
Green	2% maximum	Are soybeans where a cross section shows an intense green colour, or when it is green in colour and of a chalky consistency
Discoloured	1 bean maximum per ½ litre	Discoloured soybean that is not indicative of variety. Excessive seed coat staining is rejectable by visual inspection
Contaminants (Maximum per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	3% maximum	1% deduction for each 1% of impurities up to 3%, 2% deduction for each 1% of impurities over 3%
Seed Contaminants (Maximum 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	nil	Castor Oil plant, (Ricinis communis) Coriander, Crow Garlic or wild Garlic, Darling Pea, Opium poppy, Ragweed, Rattlepods, Common Broomrape, Star Burr, St Johns 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, Patersons 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 or SFS
Small Foreign Seeds	5	SFS – Small Foreign Seeds

Section 1 AOF 1-1 Table 9 (cont): Edible Manufacturing Grade Soybean Commodity Standard

Commodity: EDIBLE MANUFACTURING GRADE SOYBEAN		CSO 7 Continued
Parameter	**Specification**	**Comment/Variation**
OTHER CONTAMINANTS (Maximum per half litre)		
Chemical Treatment	nil	No chemical treatments are to be used on harvested soybeans unless authorised in writing by the buyer. Any other chemical treatments must be declared at the time of delivery
Specific Allergens	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 grain should be alerted. Should this instance arise, the truck should be re-sampled and reassessed to confirm the absence of peanut shell or kernel.
Foreign material (below 4.75 mm round hole screen)	3% maximum by wt	All material other than soybeans passing through a 4.75 mm round hole sieve using 20 shakes including pods, but excluding cottonseed, canola and weed seeds
Unmillable material (above 4.75 mm round hole screen)	0.5% maximum by wt	All material other than soybeans retained above a 4.75 mm round hole sieve using 20 shakes including pods, but excluding cottonseed, canola and weed seeds
Smut/Ergot/Sclerotinia	nil	
Stored Grain Insects - Live	nil	Includes Pea Weevil
Stored Grain Insects - Dead	5 maximum	Dead insect pests of stored grain (includes pea weevil), by count
Field Insects	3 maximum	Nizura viridula (Vegetable Bugs)
	3 maximum	Field insects by count – All others
Snails	nil	
Sand/Earth (>/= 4 mm diameter)	nil	
Sand/Earth (< 4 mm diameter)	20 grains	
Objectionable Matter	nil	Sticks, stones, glass, concrete, or any other commercially unacceptable contaminant, smell or taste
Pickled and coloured seeds	nil	Fusarium (pink) fungal stained, pickled grain
Odours – sour and musty	nil	Beans which have any foreign odour due to taints or improper storage conditions resulting in mould, souring or musty odours

Section 1 AOF 1-1 Table 10: Crushing Soybean Standard

Commodity : SOYBEAN		Standard Reference No: CSO 8
Parameter	**Specification**	**Comment/Price Adjustment**
Physical & Chemical Parameters		
General		Soybeans tended for delivery shall be free from any uncharacteristic odours, live stored product insect infestation and any nominated commercially unacceptable contaminant
Oil	n/a	
Linoleic Acid	n/a	
Oleic Acid	n/a	
Moisture	13% maximum	2% deduction for each 1% over maximum
Test Weight	n/a	
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Soybeans (Maximum % wt/wt based on cleaned half litre sample retained above 3.175mm round hole sieve)		
Broken or Split	20% maximum	0.5% deduction for each 1% over the maximum
Total Defective, including:	10% maximum	0.5% deduction for each 1% over the maximum
Damaged	3% maximum	0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted	5% maximum	0.5% deduction for each 1% over the maximum
Contaminants (Maximum per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	4% maximum	1% deduction for each 1% of impurities up to 4%, 2% deduction for each 1% of impurities over 4%
Snails/Stones	Nil above screen	Nil tolerance 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.
	1 stone/snail per ½ litre below screen	Tolerance of 1 stone/snail per ½ litre sample, passing through a 3.0 mm round hole screen
Field Insects	10 large per ½ litre	Including Rutherglen bugs, ladybirds, grasshoppers and wood bugs
	100 small per ½ litre	Including all species of aphid and all species of mites
Ryegrass Ergot	0.5cm maximum	Maximum of all pieces aligned end on end
Objectionable Material	nil	Harmful substances include live or dead stored grain product insects, live or dead 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, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels, smut, material imparting an odour to the grain, sand, earth, sticks and pickled grain. Includes Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds, rejectable over)		
Type A	nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Saffron Thistle, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, 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

Section 1 AOF 1-1 Table 11: 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 and be free from rancidity and musty or commercially unacceptable contaminant
Oil	n/a	
Linoleic Acid	n/a	
Oleic Acid	n/a	
Moisture	11% maximum	AOCS Aa 3-38. May be rejectable over 11%
Test Weight	n/a	
Protein	15% minimum	
Seed Retention	n/a	
Germination	n/a	
Defective Cottonseed (Maximum % wt/wt based on a 0.5kg sample). May be rejectable over.		
Total Defective, of which	5% maximum, of which	
Damaged	1% maximum	
Weather Damaged/Field Fungi	2% maximum	
Sprouted	2% maximum	
Contaminants (Maximum per 0.5kg unless otherwise stated). May be rejectable over.		
Foreign Material, including Seed contaminants	2% maximum	Unless tighter limits apply as per State Stockfeed legislation
Stones	Nil	
Field Insects	10 Sitona weevil 3 All others	
Stored Product Insects	Nil	May be rejectable over
Ryegrass Ergot	As per State Legislation	
Objectionable Material	nil	Nil substances harmful to animal health including glass, metal, sticks, soil, smut, pre or post-harvest chemicals not registered for use or at levels in excess of permitted levels

Section 1 AOF 1-1 Table 12: Polyunsaturated Safflower Standard

Commodity : SAFFLOWER - Polyunsaturated		Standard Reference No: CSO 10
Parameter	**Specification**	**Comment/Price Adjustment**
Physical & Chemical Parameters		
General		Safflower tended for delivery shall be free from any uncharacteristic odours, live stored product insect infestation and any nominated commercially unacceptable contaminant
Oil	38% base level	2% premium or deduction for each 1% above or below 38%
Linoleic Acid	75% minimum	Rejectable under this limit
Moisture	8% maximum	2% deduction for each 1% over maximum
Test Weight	n/a	
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Safflower (Maximum % wt/wt based on cleaned half litre sample retained above 2.0mm round hole sieve)		
Broken or Split	7% maximum	0.5% deduction for each 1% over the maximum
Total Defective, including:	10% maximum	0.5% deduction for each 1% over the maximum
Damaged	3% maximum	0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted	5% maximum	0.5% deduction for each 1% over the maximum
Contaminants (Maximum per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	4% maximum	1% deduction for each 1% of impurities up to 4%, 2% deduction for each 1% of impurities over 4%
Snails/Stones	Nil above screen	Nil tolerance 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.
	1 stone/snail per ½ litre below screen	Tolerance of 1 stone/snail per ½ litre sample, passing through a 3.0 mm round hole screen
Field Insects	10 large per ½ litre	Includes Rutherglen bugs, ladybirds, grasshoppers and wood bugs
	100 small per ½ litre	Includes all species of aphid and all species of mites
Ryegrass Ergot	0.5cm maximum	Maximum of all pieces aligned end on end
Objectionable Material	nil	Harmful substances include live or dead stored grain product insects, live or dead 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, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels, smut, material imparting an odour to the grain, sand, earth, sticks and pickled grain. Includes Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds, rejectable over)		
Type A	nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Saffron Thistle, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, 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

Section 1 AOF 1-1 Table 13: Monounsaturated Safflower Standard

Commodity : SAFFLOWER – Monounsaturated		Standard Reference No: CSO 11
Parameter	**Specification**	**Comment/Price Adjustment**
Physical & Chemical Parameters		
General		Safflower tended for delivery shall be free from any uncharacteristic odours, live stored product insect infestation and any nominated commercially unacceptable contaminant
Oil	38% base level	2% premium or deduction for each 1% above or below 38%
Oleic Acid	75% minimum	Rejectable under this limit
Moisture	8% maximum	2% deduction for each 1% over maximum
Test Weight	n/a	
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Safflower (Maximum % wt/wt based on cleaned half litre sample retained above 2.0mm round hole sieve)		
Broken or Split	7% maximum	0.5% deduction for each 1% over the maximum
Total Defective, including:	10% maximum	0.5% deduction for each 1% over the maximum
Damaged	3% maximum	0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted	5% maximum	0.5% deduction for each 1% over the maximum
Contaminants (Maximum per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	4% maximum	1% deduction for each 1% of impurities up to 4%, 2% deduction for each 1% of impurities over 4%
Snails/Stones	Nil above screen	Nil tolerance 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.
	1 stone/snail per ½ litre below screen	Tolerance of 1 stone/snail per ½ litre sample, passing through a 3.0 mm round hole screen
Field Insects	10 large per ½ litre	Includes Rutherglen bugs, ladybirds, grasshoppers and wood bugs
	100 small per ½ litre	Includes all species of aphid and all species of mites
Ryegrass Ergot	0.5cm maximum	Maximum of all pieces aligned end on end
Objectionable Material	nil	Harmful substances include live or dead stored grain product insects, live or dead 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, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels, smut, material imparting an odour to the grain, sand, earth, sticks and pickled grain. Includes Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds, rejectable over)		
Type A	nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Saffron Thistle, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, 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

Section 1 AOF 1-1 Table 14: Linseed Standard

Commodity : LINSEED		Standard Reference No: CSO 12
Parameter	**Specification**	**Comment/Price Adjustment**
Physical & Chemical Parameters		
General		Linseed tended for delivery shall be free from any uncharacteristic odours, live stored product insect infestation and any nominated commercially unacceptable contaminant
Oil	39% base level	1.5% premium or deduction for each 1% above or below 39%
Moisture	10% maximum	2% deduction for each 1% over maximum
Test Weight	n/a	
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Linseed (Maximum % wt/wt based on cleaned half litre sample retained above 1mm round hole sieve)		
Broken or Split	7% maximum	0.5% deduction for each 1% over the maximum
Total Defective, including:	10% maximum	0.5% deduction for each 1% over the maximum
Damaged	3% maximum	0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted	5% maximum	0.5% deduction for each 1% over the maximum
Contaminants (Maximum per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	4% maximum	1% deduction for each 1% of impurities up to 4%, 2% for each 1% of impurities over 4%
Snails/Stones	Nil above screen	Nil tolerance 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.
	1 stone/snail per ½ litre below screen	Tolerance of 1 stone/snail per ½ litre sample, passing through a 3.0 mm round hole screen
Field Insects	10 large per ½ litre	Includes Rutherglen bugs, ladybirds, grasshoppers and wood bugs
	100 small per ½ litre	Includes all species of aphid and all species of mites
Ryegrass Ergot	0.5cm maximum	Maximum of all pieces aligned end on end
Objectionable Material	nil	Harmful substances include live or dead stored grain product insects, live or dead 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, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels, smut, material imparting an odour to the grain, sand, earth, sticks and pickled grain. Includes Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds, rejectable over)		
Type A	nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Saffron Thistle, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, 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

Section 1 AOF 1-1 Table 15: Linola Standard

Commodity : LINOLA		Standard Reference No: CSO 13
Parameter	**Specification**	**Comment/Price Adjustment**
Physical & Chemical Parameters		
General		Linola tended for delivery shall be free from any uncharacteristic odours, live stored product insect infestation and any nominated commercially unacceptable contaminant
Oil	40% minimum	1.5% premium or deduction for each 1% above or below 40%
Linoleic Acid	66% minimum	Rejectable under this limit
Linolenic Acid	3% maximum	Rejectable over this limit
Moisture	9% maximum	2% deduction for each 1% over maximum
Test Weight	n/a	
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Linola (Maximum % wt/wt based on cleaned half litre sample retained above 1mm round hole sieve)		
Broken or Split	7% maximum	0.5% deduction for each 1% over the maximum
Total Defective, including:	10% maximum	0.5% deduction for each 1% over the maximum
Damaged	3% maximum	0.5% deduction for each 1% over the maximum, rejectable over 10%
Sprouted	5% maximum	0.5% deduction for each 1% over the maximum
Contaminants (Maximum per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	3% maximum	1% deduction for each 1% of impurities up to 4%, 2% deduction for each 1% of impurities over 4%
Cruciferous seeds	1% maximum	Maximum of 1% Cruciferous seeds
Snails/Stones	Nil above screen	Nil tolerance 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.
	1 stone/snail per ½ litre below screen	Tolerance of 1 stone/snail per ½ litre sample, passing through a 3.0 mm round hole screen
Field Insects	10 large per ½ litre	Includes Rutherglen bugs, ladybirds, grasshoppers and wood bugs
	100 small per ½ litre	Includes all species of aphid and all species of mites
Ryegrass Ergot	0.5cm maximum	Maximum of all pieces aligned end on end
Objectionable Material	nil	Harmful substances include live or dead stored grain product insects, live or dead 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, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels, smut, material imparting an odour to the grain, sand, earth, sticks and pickled grain. Includes Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds, rejectable over)		
Type A	nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Saffron Thistle, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, 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

Section 1 AOF 1-1 Table 16: Peanut Standard

Commodity : PEANUT		Standard Reference No: CSO 14
Parameter	**Specification**	**Comment/Price Adjustment**
Physical & Chemical Parameters		
General		The peanuts tended for delivery shall be free from any uncharacteristic odours, live stored product insect infestation and any nominated commercially unacceptable contaminant
Oil	41% base level	1.5% premium or deduction for each 1% above or below 41%
Free Fatty Acid	2% base level	2% deduction for each 1% of FFA up to 3%, 3% deduction for each 1% of FFA between 3% and 5%. Rejectable over 5%. Applied on clean seed.
Moisture	9% maximum	2% deduction for each 1% over maximum
Test Weight	n/a	
Protein	n/a	
Seed Retention	n/a	
Germination	n/a	
Defective Peanuts (Maximum % wt/wt based on cleaned half litre sample retained above 2mm round hole sieve)		
Broken or Split	n/a	
Total Defective, including:	n/a	
Damaged	n/a	
Sprouted	n/a	
Contaminants (Maximum per half litre unless otherwise stated, rejectable over unless deductions are stated as applying)		
Impurities	4% maximum	1% deduction for each 1% of impurities up to 4%, 1.5% deduction for each 1% of impurities over 4%
Snails/Stones	Nil above screen	Nil tolerance 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.
	1 stone/snail per ½ litre below screen	Tolerance of 1 stone/snail per ½ litre sample, passing through a 3.0 mm round hole screen
Field Insects	10 large per ½ litre	Includes Rutherglen bugs, ladybirds, grasshoppers and wood bugs
	100 small per ½ litre	Includes all species of aphid and all species of mites
Ryegrass Ergot	0.5cm maximum	Maximum of all pieces aligned end on end
Objectionable Material	nil	Harmful substances include live or dead stored grain product insects, live or dead 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, the presence of pre or post-harvest chemicals not registered for use, used in excess of permitted levels or with residues in excess of their permitted levels, smut, material imparting an odour to the grain, sand, earth, sticks and pickled grain. Includes Degraded seed such as smutty seed, hot seed, musty seed, sour seed, mouldy seed.
Seed Contaminants (maximum tolerance per half litre to apply to individual seeds, rejectable over)		
Type A	nil	Alligator Weed, Cape Tulips, Castor Oil Plant, Coriander, Creeping Knapweed, Darling Pea, Dodder, Giant Sensitive Plant, Opium Poppy, Parthenium Weed, Ragweed, Rattlepod, Saffron Thistle, Star Burr, Stinkwort, St. Johns Wort
Type B	1	Burrs (Xanthium spp.) – all except where otherwise stated, 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

4.0 PRICE ADJUSTMENTS

4.1 General

Where stated in the comment/price adjustment 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, edible milling grade soybeans and edible manufacturing grade soybeans no price adjustments are applicable for impurity content.

For other commodities, namely linseed, sunflower, safflower, 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.

4.2 Corrected Net Weight

For linseed, sunflower, safflower and 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).

4.3 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:

4.3.1 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).

4.3.2 Moisture

- Where stated in the relevant standard, receivals above the maximum limit may occur for particular commodities, with deductions as detailed in the Standard.

4.3.3 Broken or Split Seed

For those commodities with a tolerance for broken or split seeds, *excepting edible soybeans*, a 0.5% deduction applies for each 1% of broken or split seeds above the maximum limit (fractions in proportion).

4.3.4 Green Seed

For canola and rapeseed, no penalty shall be incurred for up to a maximum of 2% green seed. Seed is to be rejected above that limit.

4.3.5 Damaged Seed

For all commodities with a tolerance for damaged seed and/or sprouted seed, excepting edible soybeans, a 0.5% deduction applies to each parameter for each 1% over 3% (fractions in proportion) up to a maximum of 10%. For these commodities, the maximum level is 10% and seed is to be rejected above that limit.

4.3.6 Free Fatty Acids

For peanuts, the standard is 2%. A 2% deduction applies for each 1% of free fatty acids over 2% to 3%, and a 3% deduction applies for each 1 % of free fatty acids over 3% to 5% (fractions in proportion). The commodity is to be rejected if free fatty acids are over 5%.

For canola, a 2% deduction applies for each 1% of free fatty acids above 1% (fractions in proportion). The canola is to be rejected if free fatty acids are over 2.5%.

5.0 DISPUTED RESULTS

Refer to front of Standards Manual for applicable procedures

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

1.0 PREAMBLE

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 traded 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 recorded 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 Correction Factors are to be applied as follows:

Relative Density
- To be adjusted by -0.0007 per degree centigrade (^{0}C) above 25^{o}C, and
- To be adjusted by +0.0007 per degree centigrade (^{0}C) below 25^{o}C.

Refractive Index
- To be adjusted by -0.00036 per degree centigrade (^{0}C) above 25^{o}C, and
- To be adjusted by +0.00036 per degree centigrade (^{0}C) below 25^{o}C.

2.3 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-30	CSOF-33	CSOF-34	CSOF-24	CSOF-5
	Canola Oil (*)- Crude Degummed	**Canola Oil (*)- Bleached Refined**	**Rapeseed Oil - Crude Degummed**	**Soybean Oil – Crude Degummed**	**Soybean Oil - Bleached Refined**	**Cottonseed Oil - Bleached Refined**	**Cottonseed Oil - Alkali Refined**
Free Fatty Acids	max 1%	max 0.25%	max 2%	max 1%	max 0.25%	max 0.25%	max 0.25%
Linoleic Acid	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Linolenic Acid	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Oleic Acid	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Erucic Acid	max 2%	max 2%	max 5%	n/a	n/a	n/a	n/a
Colour (AOCS - Lovibond units or Gardner, 1933, where indicated)	max 7R 70Y (25.4 mm)	max 7R (133.35 mm)	max 7R 70Y (25.4 mm)	max 7R 70Y (25.4mm)	max 5R (133.35mm)	max 6R (133.35 mm)	max 12R (133.35 mm)
Moisture, Volatiles and Impurities	max 0.3%	max 0.25%	max 0.3%	max 0.3%	max 0.25%	max 0.25%	max 0.25%
Iodine Value	110-126	110-126	110–126	127-140	127-140	103–113	103–113
Refractive Index 25°C	1.470–472	1.470–472	1.470–472	1.471-475	1.471-475	1.470–472	1.470–472
Relative Density 25°C	0.910–916	0.910–916	0.910–913	0.915-922	0.915-922	0.911–917	0.911–917
Saponification Value	182–193	182–193	188–193	190-196	190-196	190–198	190–198
Peroxide Value mEq/kg	max 10	max 10	max 10	max 10	max 10	max 10	max 10
Unsaponifiable Matter	max 1.5%	max 1.5%	max 2%	max 1.5%	max 1.5%	max 1.5%	max 1.5%
Phosphorus	max 200ppm	n/a	max 200ppm	max 200ppm	n/a	n/a	n/a
Sulphur	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	Clear at 65^{0}C	n/a	n/a
Heat Test	n/a	n/a	n/a	n/a	no break at 340°C heat bleaches	n/a	n/a
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
Chlorophyll	30ppm	30ppm	n/a	n/a	n/a	n/a	n/a
Monounsaturated fat	n/a	n/a	n/a	n/a	n/a	n/a	n/a

For "crude" oil the specification is the same as "crude degummed" with the exception that phosphorus and foots specifications do not apply
For "crude super degummed" oil, the specification is the same as "crude degummed" with the exception that phosphorus is maximum 50ppm
(*) Canola oil is the oil from seed specified in any of Standard CSO1, CSO1-a or CSJ1-a

Table 1 (cont): Vegetable Oil Standards

Quality Parameter	CSOF-35	CSOF-36	CSOF-37	CSOF-38	CSOF-39	CSOF-40	CSOF-27
	Sunflower Oil – Crude Degummed	**Sunflower Oil - Bleached Refined**	**Sunflower Oil - Monounsaturated Crude Degummed**	**Sunflower Oil – Crude High Oleic**	**Sunflower Oil – High Oleic Refined Bleached**	**Sunflower Oil – High Oleic Refined Bleached Deodorized**	**Linola Oil – Crude Degummed**
Free Fatty Acids	max 2%	max 0.25%	max 2%	max 2%	max 0.25%	max 0.10%	max 2%
Linoleic Acid	min 62%	n/a	n/a	n/a	n/a	n/a	min 66%
Linolenic Acid	max 1%	max 1%	max 1%	max 1%	max 1%	max 0.5%	max 3%
Oleic Acid	n/a	n/a	min 80%	min 80%	min 80%	min 80%	n/a
Erucic Acid	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Colour (AOCS - Lovibond units or Gardner, 1933, where indicated)	max 6R 70Y (25.4mm)	max 4R (133.35mm)	max 6R 70Y (25.4mm)	max 6R 70Y (25.4mm)	max 4R (133.35mm)	max 2R (133.35mm)	max 5R 70Y (25.4 mm)
Moisture, Volatiles and Impurities	max 0.3% (Crude grade max.0.5%)	max 0.25%	max 0.3%	max 0.3%	max 0.25%	max 0.10%	max 0.3%
Iodine Value	120-140	120-140	78-88	77-88	77-88	77-88	n/a
Refractive Index 25°C	1.472-474	1.472-474	1.467-470	1.472-474	1.472-474	1.472-474	n/a
Relative Density 25°C	0.914-920	0.914-920	0.914-917	0.909-0.915	0.909-0.915	0.909-0.915	n/a
Saponification Value	190-196	190-196	190-196	182-194	182-194	182-194	n/a
Peroxide Value mEq/kg	max 10	max 10	max 10	max 10	max 10	max 10	max 10
Unsaponifiable Matter	max 1.5%	max 1.5%	max 1.5%	max 1.5%	max 1.5%	max 1.5%	max 1.5%
Phosphorus	max 200ppm	n/a	max 200ppm	max 200ppm	n/a	n/a	max 200ppm
Sulphur	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Foots	Clear at 65^0C	Clear at 65^0C	Clear at 65^0C	n/a	n/a	n/a	Clear at 65^0C
Heat Test	n/a	no break at 340°C heat bleaches	n/a	n/a	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	n/a	min 150°C
Chlorophyll	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Monounsaturated fat	n/a	n/a	n/a	min 80%	min 80%	min 80%	n/a

For "crude" oil the specification is the same as "crude degummed" with the exception that phosphorus and foots specifications do not apply
For "crude super degummed" oil, the specification is the same as "crude degummed" with the exception that phosphorus is maximum 50ppm

Table 1 (cont): Vegetable Oil Standard

Quality Parameter	CSOF-4	CSOF-31	CSOF-32	CSOF-25	CSOF-26	CSOF-28	CSOF-29
	Safflower Oil – Crude Degummed	**Safflower Oil - Monounsaturated Crude Degummed**	**Safflower Oil - Bleached Refined**	**Linseed Oil - Crude**	**Linseed Oil – Refined**	**Peanut Oil - Crude**	**Peanut Oil - Bleached Refined**
Free Fatty Acids	max 2%	max 2%	max 0.25%	max 2%	max 0.25%	max 2%	max 0.25%
Linoleic Acid	Minimum 75%	n/a	n/a	n/a	n/a	n/a	n/a
Linolenic Acid	max 1%	max 1%	max 1%	n/a	n/a	n/a	n/a
Oleic Acid	n/a	min 75%	n/a	n/a	n/a	n/a	n/a
Erucic Acid	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Colour (AOCS - Lovibond units or Gardner, 1933, where indicated)	max 5R 35Y (25.4 mm)	max 5R 35Y (25.4 mm)	max 4R (133.35mm)	10–12 Gardner	max 5 Gardner	max 4R 35Y (25.4 mm)	max 2.5R (133.35mm)
Moisture, Volatiles and Impurities	max 0.3% (Crude grade max 0.5%)	max 0.3% (Crude grade max 0.5%)	max 0.25%	max 0.3%	max 0.25%	max 0.5%	max 0.25%
Iodine Value	138-150	141-147	138-150	min 175	min 175	85–105	85–105
Refractive Index 25°C	1.472-4755	1.473-1.476	1.472–4755	1.477–482	1.477–482	1.466–470	1.466–470
Relative Density 25°C	0.918-924	0.919-0.924	0.918–924	0.924–930	0.924–930	0.907–912	0.907–912
Saponification Value	190-196	186-194	190–196	188–195	188–195	188–196	188–196
Peroxide Value mEq/kg	max 10	max 10	max 10	n/a	max 10	max 10	max 10
Unsaponifiable Matter	max 1.5%	max 1.5%	max 1.5%	max 1.5%	max 1.5%	max 1%	max 1%
Phosphorus	max 200ppm	max 200ppm	n/a	n/a	n/a	n/a	n/a
Sulphur	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Foots	Clear at 65^0C	Clear at 65^0C	Clear at 65^0C	max 1% 96 hours	Clear at 65^0C	n/a	Clear at 65^0C
Heat Test	n/a	n/a	no break at 340°C heat bleaches	n/a	no break AT 340°C – heat bleaches	n/a	n/a
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
Chlorophyll	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Monounsaturated fat	n/a	n/a	n/a	n/a	n/a	n/a	n/a

For "crude" oil the specification is the same as "crude degummed" with the exception that phosphorus and foots specifications do not apply
For "crude super degummed" oil, the specification is the same as "crude degummed" with the exception that phosphorus is maximum 50ppm

4.0 PRICE ADJUSTMENTS

4.1 General

A consignment shall be accepted by 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 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.

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

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 for each 1% over 2% (fractions in proportion)
Over 3.5%	Rejectable

4.2.2 ***Soybean Oil***

1.01%–1.05%	0.6% price deduction (fractions in proportion)
1.06%–1.15%	0.9% price deduction
1.16%–1.25%	1.2% price deduction
1.26%–1.35%	1.5% price deduction
1.36%–1.50%	1.8% 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***

2.1%–2.29 %	0.3% price deduction (fractions in proportion)
2.3%–2.49 %	0.7% price deduction
2.5%–2.69 %	1.1% price deduction
2.7%–2.89 %	1.5% price deduction
2.9%–3.0%	1.9% 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***

1.01%–1.29%	0.5% price deduction (fractions in proportion)
1.3%–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 for each 1% over 2% (fractions in proportion)
3.10%–5.0%	3% price deduction for each 1% over 3%
Over 5%	Rejectable over

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 (fractions in proportion).

4.4 Chlorophyll in Canola Oil

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

31–35ppm	1.0% price deduction (fractions in proportion)
36–40ppm	2.0% price deduction
41–45ppm	2.5% price deduction
46–50ppm	3.0% price deduction
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 (fractions in proportion).

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 15mEq/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 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.

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

N/A

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.

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.

3.0 QUALITY SPECIFICATIONS

The Quality Specifications as outlined in Table 1 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.

The gossypol content for cottonseed is either maximum 0.10% (solvent extracted) or 0.12% (pressed).

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

Table 1: Quality Specifications – Oilseed Meals and Hulls

Trading Standard Reference	Commodity Name	Oil (min %)	Crude Protein (min %)	Crude Fibre (max %)	Moisture (max %)	Retention max (%) 3mm screen	Retention max (%) 2mm screen	Glucosinolates (micromoles /g oil-free air-dry solids)	Erucic Acid (%)	Gossypol (%)
Oilseed Meals										
CAN:M:392/93	Canola Meal Solvent	0.5	36	15	12	2	10	< 30	< 2	n/a
CAN:M:392/94	Non GM Canola Meal Solvent [1]	0.5	36	15	12	2	10	< 30	< 2	n/a
CAN:M:391/93	Canola Meal Pressed	4	32	14	11	2	10	< 30	< 2	n/a
CAN:M:391/94	Non GM Canola Meal Pressed [1]	4	32	14	11	2	10	< 30	< 2	n/a
COT:M:313/93	Cottonseed Meal Solvent Hi Pro	0.5	43	15	12	2	10	n/a	n/a	0.10
COT:M:312/93	Cottonseed Meal Solvent	0.5	36	15	12	2	10	n/a	n/a	0.10
COT:M:314/93	Cottonseed Meal Pressed Hi Pro	6	40	17	10	2	10	n/a	n/a	0.12
COT:M:315/93	Cottonseed Meal Pressed	6	35	20	10	2	10	n/a	n/a	0.12
COT:M:316/93	Cottonseed Meal Pressed Full Fat	18	22	23	10	2	10	n/a	n/a	0.12
LINOLA:M:341/94	Linola Meal Pressed	4	30	11	11	2	10	n/a	n/a	n/a
LIN:M:323/79	Linseed Meal Solvent	0.5	32	12	12	2	10	n/a	n/a	n/a
LIN:M:322/86	Linseed Meal Pressed	4	31	11	11	2	10	n/a	n/a	n/a
PEA:M:332/79	Peanut Meal Solvent	0.5	46	10	9	2	10	n/a	n/a	n/a
PEA:M:331/79	Peanut Meal Pressed	4	44	10	9	2	10	n/a	n/a	n/a
RAP:M:333/79	Rapeseed Meal Solvent	0.5	34	15	12	2	10	n/a	n/a	n/a
RAP:M:332/79	Rapeseed Meal Pressed	4	31	14	11	2	10	n/a	n/a	n/a
SAF:M:362/79	Safflower Meal Solvent	0.5	23	32	12	2	10	n/a	n/a	n/a
SAF:M:361/79	Safflower Meal Pressed	4	22	30	8	2	10	n/a	n/a	n/a
SES:M:365/79	Sesame Meal Pressed	4	42	11	10	2	10	n/a	n/a	n/a
SOY:M:372/79	Soybean Meal Solvent	0.5	46	7	12	2	10	n/a	n/a	n/a
SOY:M:371/79	Soybean Meal Pressed	4	44	7	11	2	10	n/a	n/a	n/a
SUN:M:382/93	Sunflower Meal Solvent	0.5	28	24	12	2	10	n/a	n/a	n/a
SUN:M:381/86	Sunflower Meal Pressed	4	27	22	8	2	10	n/a	n/a	n/a

[1] The adventitious presence of up to 5% of GM events approved by the Australian Government Office of the Gene Technology Regulator is permitted
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.

Trading Standard Reference	Commodity Name	Oil (min %)	Crude Protein (min %)	Crude Fibre (max %)	Moisture (max %)	Retention max (%) 3mm screen	Retention max (%) 2mm screen	Glucosinolates (micromoles /g oil-free air-dry solids)	Erucic Acid (%)	Gossypol (%)
SUN:M:385/93	Sunflower Meal - Dehulled Solvent	0.5	36	19	12	2	10	n/a	n/a	n/a
SUN:M:384/93	Sunflower Meal - Dehulled Pressed	4	35	18	8	2	10	n/a	n/a	n/a
Oilseed Hulls										
COT:H:313/96	Cottonseed Hulls	1	3.5	50	12	n/a	n/a	n/a	n/a	n/a
SOY:H:373/96	Soybean Hulls	0.5	10	50	12	n/a	n/a	n/a	n/a	n/a
SUN:H:386/96	Sunflower Hulls	1	4	50	12	n/a	n/a	n/a	n/a	n/a

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.

The adventitious presence of up to 0.9% 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.

4.2 Protein

4.2.1 *Moisture within specification*

Where the crude protein level (or adjusted protein, see 5.2.2) 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 pride adjustments made as in 5.2.1 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 front of Standards Manual for applicable procedures.

Section 1: AOF 2, Technical Information

Section 1: AOF 2-1, Common Storage of Oilseeds - Accounting for Gains/Losses

1.0 DEFINITION

This Standard gives a means of determining losses in common storage and their allocation to pool participants. In principle, seed is valued on receival and outturn: loss in value due to loss of stock, weighing errors, analysis errors, etc. as well as gains are divided among participants. On the other hand, losses above a guaranteed level are allocated to the Pool Manager.

However, the disadvantage of the procedure has been that it requires finalisation of the pool before allocations can be made; this leads to unacceptable delays because the pool is mostly not finalised for some time after completion of the intake. Costs of sampling and testing of outturns and the differences noted in analyses have also been of concern, even though effects of the latter are covered in the standard.

This current revision offers a compromise to satisfy these concerns: value allocations are made on finalisation of intakes to participants according to a comparison of the intake value of each at average receival analysis with the value of the receival weight at average total pool analysis. The assumption is that all outturns will be at intake weight and near enough to average pool quality. At completion of the pool a final supplementary adjustment is made for each party for the actual weight of outturns together with any deficiency for guaranteed outturn that may be payable by the Pool Manager.

2.0 GUARANTEED OUTTURN

The Pool Manager shall guarantee a percentage outturn yield based on the value of the intake (or a percentage of the pool intake weight valued at average pool analysis) and this shall be specified in the contract. If the value of the total outturn at average pool analysis is less than this calculated yield value, the Manager shall make a credit of the deficiency to the parties using the facility. The major portion of such credit can be made with seed of no lesser quality than the pool average. The Pool Manager shall direct all outturn deliveries to those participating in the storage programme and to no other party except by direction of one of the parties (see 3.3 below). Any guarantee adjustment shall be made according to the proportion of the value of the intakes (at intake analysis) plus outturns for each party (at average pool analysis) to the value of total intakes plus outturns so calculated.

3.0 MATERIALS BALANCES

3.1 Seed Price

3.1.1 The price of seed at standard quality, clean seed basis, shall be agreed upon by participating parties and shall reflect the value of the seed accumulated at the time of intake including storage costs. It shall be specified in the agreement.

3.1.2 This price, adjusted for quality (oil content, clean seed basis, impurities and other parameters to be determined by the parties) according to the provisions of the AOF*, shall be used for determining seed value in storage calculations.

3.1.3 Where transfers within the pool are made between participating parties to the pool, the price of the seed traded or transferred between parties will only be of concern to the parties involved (see 3.3 below).

3.2 Analysis

3.2.1 Seed into storage shall be sampled and analysed according to the Quality Standards of the AOF whose provisions for disputed results shall also apply. Samples shall be stored in sealed plastic bags or containers in a protected area to minimise moisture changes. Analyses shall be carried out by an independent NATA* Laboratory or as otherwise agreed.

* AOF - Australian Oilseeds Federation Inc

3.2.2 The Pool Manager (or as otherwise agreed) shall take duplicate 1 kg samples of each load going into storage, sending one of these to each party or their agent for analysis and calculation of purchase payments and/or calculation of storage adjustments according to AOF provisions. Analyses of all seed for storage shall be sent to the Pool Manager as soon as completed.

Note : *This eliminates the need for analysis of the intake by the Pool Manager. Analysis of the 500 tonne composites is thereby eliminated. Also no outturn analyses.*

3.3 Transfers

3.3.1 Transfers or trade between pool participants or with an outside party shall be handled as a separate calculation by the pool participant(s) concerned, not by the Pool Manager. All seed in the pool retains the identification of the originators during the course of the pool.

3.3.2 Transferred seed shall be outturned under the originator's name, but with a further description such as "Oilseeds Pty Ltd a/c Smith & Co." and shall be valued separately for the sale by the parties involved but included in the originator's pool calculations at pool price. The originator will either apply a set surcharge to the agreed transfer price to take care of any possible pool charges for an early settlement or apply a proportion of the pool charges (or credits) when known to the agreed transferred seed price, the proportion being:

$$\frac{\text{Value of transfer at pool price}}{\text{Value of transerer's total seed out}}^{\alpha}$$

$^{\alpha}$ including transferred quantities

NOTE: *Transfers are completely separate to and independent of pool calculations.*

3.4 Calculations

3.4.1 *Average Analysis of Seed*

Calculate the average analysis (oil content, clean seed basis and impurities) of the total seed intake for each party in the pool as described below. Other quality parameters shall be evaluated where above the allowed levels, but only if stipulated in the contract. For each load calculate :

$$\text{Weight of clean seed} = \frac{\text{wt.seed} \times (100 - \text{impurities}, \%)}{100}$$

$$\text{Weight of Oil} = \frac{\text{oil content}, \% \times \text{wt.clean seed}}{100}$$

$$\text{Weight of impurities} = \frac{\text{wt.seed} \times \text{impurities}, \%}{100}$$

Then calculate for each party and the total pool :

$$\text{Average oil content}, \% = \frac{\text{total wt.oil} \times 100}{\text{total wt.clean seed}}$$

$$\text{Average impurity content}, \% = \frac{\text{total wt.impurities} \times 100}{\text{total wt.seed as received}}$$

3.4.2 *Value of Seed Intakes and Total Seed Stored*

a. Calculate the weight and value of seed into storage for each party in the pool using the average analysis of each party's intake at the agreed seed price. From these calculate the total pool weight and value. Pool intake values shall be of the dried seed where drying has been undertaken.

b. Calculate the average total pool analysis. Calculate the value of each party's intake at average pool analysis by taking a proportion of the total pool value based on each party's weight to total pool weight.

3.4.3 *Seed Balances*

a. Preliminary Base Adjustment:

At the completion of receivals, determine the excess or deficit of the calculated seed value for each party taking the seed value out as being equivalent to the receival weight at the total pool average analysis. These adjustments will be self-balancing:

$$\text{Base Adjustment} = \text{Value in} - \text{Value at average pool analysis}$$

A positive result indicates a credit due to the party and vice versa. These are the first payments made to all parties at the completion of receivals.

b. Overall Seed Value Balance

When all outturns have been made from the pool determine the overall seed value balance for the pool "in" minus "out" in this case using actual weights out of storage for each party and the total pool but still at the average pool value (ie analysis).

c. Determine the proportion of the value of intakes plus outturns (at average analysis) for each party in relation to the total value of intakes plus outturns (at average analysis). Intakes and transfers do not include any transfers between parties to the pool (see 3.3 above).

d. Apportion the overall seed value balance, either as a debit or credit as appropriate, to each party according to (see 3.4.3, c.). In this case a positive result indicates a debit to the party and vice versa.

3.4.4 *Outturn Guarantee*

Determine the extent, if any, that the total outturn value is below the guarantee as specified in the contract and credit each party for any deficiency in terms of seed value in the proportion of the value of seed each has received and out-turned (see 4.3.4, c). These payments are payable by the Pool Manager.

3.4.5 *Supplementary Final Adjustment*

Subtract the Preliminary Base Adjustment from the corresponding Total Pool Adjustment to give a final outstanding credit/debit to be applied to each participant and the Manager (if required).

Storage Calculations – an example

(Outturn Guarantee 99.5%)
Accounting for Gains/Losses

	A	B	C	TOTAL
Receivals				
Wt. Tonnes	1355	950	2391	4696
Value	$450,352.71	$318,478.07	$802,135.79	$1,570,966.57
Outturn Assumption for Preliminary Calculations				
Wt. Tonnes	1355	950	2391	4696
Value (at pool average)	$453,292.10	$317,806.27	$799,868.20	$1,570,966.57
Outturn – Actual				
Wt. Tonnes	1350	955	2360	4665
Value	$451,619.44	$319,478.93	$789,498.69	$1,560,596.05

Preliminary Base Adjustment

		A	B	C
3.4.3	**Seed Balances**			
	i) Value in – Value out	$2,939.39 dr	$671.80 cr	$2267.59 cr
	ii) Pool Balance		Nil	
	FIRST PAYMENT	$2,939.39 dr	$671.80 cr	$2267.59 cr

Supplementary Final Adjustment

3.4.3	**Seed Balances**			
	i) Value in – Value out	$1,266.73 dr	$1,000.86 dr	$12,638.11 cr
	ii) Overall Balance		$10,370.52 dr	
	iii) Proportion in and out	28.80262205%	20.37184248%	50.82553546%
	iv) Balance to each party	$2,986.98 dr	2,112.67 dr	$5,270.87
3.4.4	**Outturn Guarantee Deficit**			
	Outturn	–	$1,560,596.05	–
	99.5% outturn	–	$1,563,111.74	–
	Deficit	–	$2515.69 cr	–
		$724.58 cr	$512.49 cr	$1,278.61 cr
	Total	$3,529.12 dr	$2,601.04 dr	$8,645.61 cr
	Less Base Adjustment	$2,939.39 dr	$671.80 cr	$2,267.59 cr
	FINAL PAYMENT	**$589.73 dr**	**$3,272.84 dr**	**$6378.26 cr**
			Manager pays $2,515.69	

TRANSFERS

3.5 Party A transfers $200,000 seed (pool value) at an agreed price of $210,000 to Party B (identified as "A, a/c B") and $100,000 seed (pool value) at an agreed price $110,000 to an "outside" party, Smith & Co, (identified as "A, a/c Smith & Co").

Adjustments are then calculated as follows:

* Party B: $3529.12 dr x $200,000 / $450,352.71 = $1567.26 dr
* Smith & Co: $3529.12 dr x $100,000 / $450,352.71 = $783.63 dr

These adjustments are added to the respective agreed prices of seed for each of the transfers.

Section 1: AOF 2-2, 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

	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

Section 1: AOF 3, Technical Information

Section 1: AOF 3-1, Typical Composition of Vegetable Fats and Oils

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				0.7	22	0.6	2	20	54	
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

Section 1: AOF 3-1, Typical Composition of Vegetable Fats and Oils (cont.)

MAIN COMPONENT FATTY ACIDS

Carbon double bonds	Saturated	Unsaturated	Total Saturated	Total Mono-saturated	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			25	21	54	108	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

Section 1: AOF 3-2, Colour Comparisons

(Approximate Conversions Only)

	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 3-3, Typical Amino Acid Composition of Meals

(as percentage of protein)

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