

## FEED MATERIALS ASSURANCE SCHEME

### VEGETABLE OILS AND FATS SECTOR NOTES

Tim Oliver - ab.sustain



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**NOTE:** Although these Sector Notes may be translated into various languages for the convenience of users, the English version remains the definitive reference document in the event of any dispute.

## **NOTES ON THE IMPLEMENTATION OF FEMAS FOR BUSINESSES PROCESSING & BLENDING VEGETABLE FATS & OILS**

Sector Notes are provided to assist FEMAS participants and assessors in establishing some background knowledge of specific feed industry supply sectors where issues may exist that are uncommon, or of less relevance, in other sectors. These Notes are not necessarily exhaustive.

These Sector Notes are relevant to businesses involved in the processing and blending of vegetable fats and oils for use in animal feed.

These Notes are laid out in the same format as the FEMAS International Core Standard. Where additional comment is necessary, the clause reference is to the appropriate section of the FEMAS International Core Standard. It is emphasised that the comments included in this document are intended to assist in the application of the corresponding requirements of the FEMAS International Core Standard and are not to be considered in isolation. For clauses where no additional comments are provided in this document, the original requirements of the FEMAS International Core Standard continue to apply without any additions or exclusions.

In subsequent issues, additions and amendments to these Notes will be shown in *blue italics*, for ease of reference.

The assistance of the Feed Fat Association (FFA) in preparing these Notes is gratefully acknowledged.

For further information on FFA, please contact:

**The Feed Fat Association  
C/o Advanced Liquid Feeds  
Alexandra House  
Regent Road  
Liverpool  
L20 1ES  
United Kingdom**

**Telephone: 0151 944 3900**

**Fax: 0151 944 3901**

## 1.10 Definitions

**Acid Oils:** Produced from the chemical refining of crude vegetable oils or the re-refining of de-packaged or unused vegetable oils outside their “sell by date”. Must not include recovered oils from factory canteens or effluent processing material.

### Specification

<b>Moisture and Volatile Matter:</b>	Maximum 2%
<b>Insoluble Impurities:</b>	Maximum 0.4%
<b>Moisture, Volatile Matter &amp; Impurities combined:</b>	Maximum 3.0%
<b>Ash:</b>	Maximum 0.25%
<b>Free Fatty Acid:</b>	45% - 75% (Calculated as appropriate for parent oil, mixtures as Oleic)
<b>Fatty Acid Profile:</b>	Reflects parent oil e.g. Soya Acid Oil will have fatty acid profile of Soybean Oil.

**Crude Vegetable Oils:** Edible vegetable oils processed only to the extent that they are made chemically stable and not refined to the extent normally required for human consumption with regard to taste and colour.

**Food Factory Vegetable Oil:** Vegetable oil directly derived from food processing factories. Must not include recovered oils from factory canteens, prepared food distribution centres or effluent processing material.

### Specification

<b>Moisture and Volatile Matter:</b>	Maximum 10%
<b>Insoluble Impurities:</b>	Maximum 0.15%
<b>Fatty Acid Profile:</b>	Reflects constituent oils e.g. Palm Oil

**Mixed Unused Vegetable Oils / De-Packaged Oils:** Produced from unused vegetable oils, margarines, shortenings and spreads which are returned in original packaging to the producer, or a processor, or have never left the producers site as they are deemed unacceptable due to reasons such as: shelf life, unacceptable colour or smell, failed QC etc. These may also include material held in bulk storage tanks on the producer’s site. Must not include recovered oils from factory canteens or effluent processing material.

### Specification

<b>Moisture and Volatile Matter:</b>	Maximum 10%
<b>Insoluble Impurities:</b>	Maximum 0.15%
<b>Fatty Acid Profile:</b>	Reflects constituent oils e.g. Palm Oil

For additional definitions refer to FEMAS International Core Standard

## **SECTION 3      RESOURCES AND GOOD HYGIENIC PRACTICES**

### **3.3 Production / Processing Facilities & Equipment**

Where participants use open settling tanks or open tanks, these must be protected against ingress by contaminants or pests.

### **3.4 Storage Facilities**

To prevent nesting and other pest access, breather pipes on bulk tanks must be suitably protected. Breather pipes must also be downward facing to prevent ingress from rainwater and other potential contaminants.

### **3.8 Cross-Contamination**

Where other food or feed products (for example animal fats) are stored on the same site as fats or oils intended for feed use, participants must demonstrate effective clean-down and flushing procedures that prevent cross-contamination of fats and oils or fat blends. Cleaning methods must be validated and documented as effective and safe. Records must be kept of all clean-downs and flushing undertaken.

### **3.10 Pest Control**

To prevent rodent access, all detachable hoses must be capped when not in use.

### **3.16 Control of Contaminants**

Where inedible products (for example mineral oils) or products prohibited from inclusion in feed (for example used cooking oil from catering establishments) are stored on the same site as fats or oils intended for feed use, there must be physical separation between these products and the feed products. This will ideally be achieved by use of segregated tanks and lines, but blanking plates or locked off valves may be a practical alternative. Where blanking plates and/or locked valves are used, validation must be undertaken initially and on a regular subsequent basis not exceeding 12 months to confirm the initial and ongoing integrity of each critical blanking plate and valve. Records must be kept to demonstrate this.

## **SECTION 4      TRANSPORT REQUIREMENTS**

### **4.2.3 Inspections of Land Transport Prior to Loading**

Where the health and safety of quality personnel would be put at risk by climbing onto road tankers to carry out internal inspections, participants must comply with one of the following:

- Allow safe access by provision of safety platforms from which inspections may be done
- Nominate and train drivers to undertake inspections (in which case records of training must be held)
- Utilise risk assessment methodology to put in place alternative controls that will ensure issues of cross-contamination can be avoided (e.g. by use of dedicated tankers). In any such assessment, consideration must be given to the potential effects of inadvertently mixing different grades of the same product.

## SECTION 5 PRODUCT SAFETY MANAGEMENT

### 5.2 Raw Materials

#### Factory Produced Used Vegetable Oils

##### 1. Direct Sourcing of Vegetable Oils from Food Factories

Where raw materials are sourced direct from food factories the risk assessment must consider possible contamination in the food factory. In particular, consideration must be given to:

- i) Food residues from the food manufacturing process (particularly animal protein products).
- ii) Contamination with cleaning materials and chemicals.
- iii) Contamination with personal protective clothing such as gloves, headwear, etc.
- iv) Contamination with factory canteen catering waste.
- v) Incorporation of material recovered from fat traps.
- vi) Contamination with mineral oils and other hazardous materials in use on the site.

Where processors/blenders are sourcing raw materials direct from food factories, PAI reserves the right to include visits to these food factory sources as part of the audit process:

1. Where bulk raw materials are received direct from food factories, up to two food factory sources of the assessor's choice will be visited as part of the audit of each processing/blending plant, at each audit.
2. Where only food-grade fats and oils contained within intact original packaging are received direct from food sources, visits to the food factory sources will only be required if specific potential hazards are identified during the audit of the processor/blender.

##### 2. Sourcing of Food Factory Vegetable Oils via Third Parties

Where raw materials from food factories are sourced via a third-party, FEMAS audits will include visits to those third-parties as part of the assessment of the participant, unless the third party is certified in his own right against the Vegoil By Product Scheme<sup>1</sup>.

**NOTE:** Participants and assessors are advised that additional audit time will be required to accommodate visits where food factory sources are involved.

### 5.2 Raw Materials iii)

Participants must ensure that their risk assessments of individual vegetable fats/oils include consideration of contamination with Pesticides and Dioxins & Dioxin-like PCBs. Controls must be implemented to ensure legal limits prescribed under EU feed law are not exceeded.

#### 5.13.4 Analysis

The following test data must be available for all vegetable oils **prior** to blending or sale:

- i) Free Fatty Acid (FFA)

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<sup>1</sup> Details of the Vegoil By Product Scheme can be obtained from PAI Ltd

- ii) Moisture & Impurities (M&I)
- iii) Monomeric Fatty Acids (Elutables)
- iv) Fatty Acid Profile
- v) Mineral Oil (by Ultraviolet Lamp)
- vi) Pesticides (on a risk basis)
- vii) PCBs (on a risk basis)

Due to concerns over historical contamination on board vessels, where Crude Vegetable Oils are received or delivered by ship, tests must be available for each tank of each vessel.

Where Crude Vegetable Oils are received or delivered by road direct from an oilseed crushing plant, tests must be undertaken on composite samples of each road tanker unless the crushing plant is certified as assured under a feed safety programme acceptable to FEMAS and records are available to confirm the suitability of the road tanker prior to loading.

#### **NOTE 1 Additional Controls For PFAD**

Due to known risks with this product, dioxin tests must be available for all parcels of Palm Fatty Acid Distillate sold 'straight' or incorporated into blends.

#### **NOTE 2 Additional Controls for Acid Oils and Former Food Oils**

**All** deliveries of the following vegetable oils must be tested prior to blending or sale, regardless of their source or origin:

- i) Acid Oils
- ii) Mixed Unused Vegetable Oils
- iii) Factory Produced Used Vegetable Oils
- iv) De-Packaged Oils

Test data for PCBs must be available for **all** deliveries of vegetable oils from the above list prior to blending, unless the source is certified to FEMAS or the Vegoil By Product Scheme in its own right.

#### **NOTE 3 Test Data**

Where reliable and traceable test data can be obtained from suppliers to confirm the analysis of parcels of fats & oils purchased by the participant (e.g. for a load delivered from a bulk land tank or ship tank that has been analysed), there may be no need to undertake further tests as long as:

- a.) Copies of the relevant test data are held on file by the participant
- b.) The analysis provided can be related to the goods delivered
- c.) The laboratory undertaking the analysis can be relied upon

## **Applicable Regulations**

**N.B.** This section of the Sector Notes is intended to assist participants and assessors in identifying specific regulations that should be considered with regard to this sector. It is not necessarily exhaustive nor does it reduce the obligation of both participants and assessors to ensure they are familiar with any regulations relevant to this sector.

In addition to those regulations that apply to all feed ingredients, suppliers of Vegetable Fats & Oils based in, or supplying to, the EU must be aware of the following specific regulations:

- 1. Regulation (EC) No 1774/2002** Laying down health rules concerning animal by-products not intended for human consumption

**NOTE:** Under the above Regulation, with effect from the 31<sup>st</sup> October 2004, used cooking oil from catering premises can no longer be used as an ingredient in animal feed. Used cooking oils from food manufacturing, and fresh or unused cooking oil, can continue to be used in animal feed.