

FEMAS Calculator Beginners' Guide

Background

Following Feed safety issues in other European countries and the 2011 Food and Veterinary Office (FVO) mission, the UK Food Standards Agency challenged AIC schemes over the level of analysis that participants were carrying out. As a response to this, the FEMAS Steering and Working Groups agreed to a project to develop a monitoring "calculator" which would define minimum sampling and testing frequencies across a range of undesirable substances in feed ingredients.

How does it work?

The calculator is accessed via a secure online portal at <u>https://aicportal.paipyramid.com</u> and contains all feed materials listed in the current EU Catalogue of Feed Materials as well as additives in the current EU Register of Feed Additives. The calculator also contains a list of undesirable substances (as defined in EU law) in addition to some other "hazards" known to occur in feed. Each of these hazards is assigned a severity score (based on potential impact to human health) and each feed ingredient is given a likelihood score for each hazard. These two numbers are then used in conjunction with the annual volume of the feed ingredient produced/ sold by the participant to produce an annual minimum monitoring plan.

Not a replacement for own risk assessment

The calculator cannot take into account all hazards and risk factors with individual sources or production processes, so it is important that FEMAS participants continue to take into account potential issues with their specific supply chain and adjust their monitoring accordingly. Examples of specific hazards which cannot be covered include regional/ seasonal weather related hazards, geological factors or process specific issues.

Using the calculator

From the landing page of the portal at <u>https://aicportal.paipyramid.com</u>, you are given two options, either to login using your company credentials, or to click the **Continue to Calculator** button which will take you directly to the calculator input.

When logged in you will see a page with your company details including sites certified to FEMAS and previous feed ingredient calculations (if any).



To add a new ingredient click Add Product and you will see the page below. The page is almost identical to the one seen by non-logged in users, except for the addition of a Save option.





Home > Test Site 1 > Add Product

Ingredient Group			
Please Select		• *	
Ingredient Please Select * Process Aid II Please Select Dryer			
Please Select	•		
Weight 🛺	* ?		calculate
			save cancel

Ingredient Groups

This is a drop down list of categories of feed ingredient and includes the 13 chapters of the EU Catalogue of Feed Materials, and the functional group heading from the EU Register of Feed Additives:

Feed Material Catalogue Chapters

- 1. Cereal grains and products derived thereof
- 2. Oil seeds, oil fruits, and products derived thereof
- 3. Legume seeds and products derived thereof
- 4. Tubers, roots, and products derived thereof
- 5. Other seeds and fruits, and products derived thereof
- 6. Forages and roughage, and products derived thereof
- 7. Other plants, algae and products derived thereof
- 8. Milk products and products derived thereof
- 9. Land animal products and products derived thereof
- 10. Fish, other aquatic animals and products derived thereof
- 11. Minerals and products derived thereof
- 12. Fermentation (by-)products from microorganisms the cells of which have been inactivated or killed
- 13. Miscellaneous

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Additive Register Functional Groups

- Acidity regulators
- Amino acids, their salts and analogues
- Antioxidants
- Binders, anti-caking agents and coagulants
- Carotenoids and xanthophylls
- Coccidiostats and histomonostats
- Coccidiostats and other medicinal substances
- Digestibility enhancers
- Emulsifying and stabilizing agents, thickeners and gelling agents
- Enzymes
- Flavours Artificial substances
- Gut flora stabilisers
- Microorganisms
- Micro-organisms
- Other colourants
- Preservatives
- Radioactive caesium binders (137Cs and 134Cs)
- Trace elements
- Urea and its derivatives
- Vitamins and provitamins
- Zootechnical additives (other)

Each of the revised FEMAS Sector Notes has an indication of the ingredient groups most likely to be relevant to participants, but some businesses may also need to refer to additional groups.

Having selected an ingredient group, next select the ingredient itself from the next drop down list. In the case of feed materials these are in the number order they appear in the catalogue of feed materials.

Continue selecting from drop down boxes as necessary covering processing aids used to produce the feed ingredient(the list is not exhaustive, but contains materials known to represent a risk to feed/ food safety) and type of drier where relevant, before inputting annual volume of the feed ingredient

(in Tonnes for feed materials and kilogrammes for micro ingredients) and click calculate

The results will be displayed on the page and may be downloaded as a pdf document for your records.



If logged in choosing the save option will take you back to your home page, and the product added is now displayed.



Clicking edit will allow changes to be made to the product details, volumes etc. and additional products can be added by repeating the steps above. The tests calculated for an ingredient can be viewed by clicking on the ingredient name.

If a process aid has been added by mistake, or the process changes so that it is no longer used, it can be removed from the calculator by double clicking on the process aid in the edit screen.

Note: The process aid list is not intended to be exhaustive, but represents those which are known to have led to feed safety issues.