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**International Fishmeal & Oil  
Manufacturers Association**

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**PROCESSING OF FISH MEAL FOUND  
TO CONTAIN SALMONELLA  
IMPORTED INTO THE EU FROM  
THIRD COUNTRIES**

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# PROCESSING OF FISH MEAL FOUND TO CONTAIN SALMONELLA IMPORTED INTO THE EU FROM THIRD COUNTRIES

## Introduction

Most parcels of fish meal imported into the EU from third countries are free of salmonella.

Official statistics from EU member states on this matter are generally not available for public information. The UK Government has been publishing statistics on “Salmonella in Animal Feedingstuffs and Ingredients” for some years (UK Ministry of Agriculture, Fisheries and Food, Animal Health (Disease Control) Division). The UK is the largest consumer (about 280 thousand tonnes) and net importer (about 240TT) of fish meal in EU. In 1998 the salmonella detection rates in official sampling domestically produced animal protein (including meat and bone meal) was 4.5% and that in imported animal protein (almost entirely fish meal) was 8%. In national testing of feed ingredients produced at domestic processing plants animal protein registered 1.7% positive (9,661 samples) and vegetable meals (rapeseed, soyabeans and sunflower) registered 2.6% positive (3,822 samples) in 1998.

A French laboratory (Laboratoire de Rennes – Departement du Morbihan 56) reported results of salmonella analysis of animal and vegetable feed ingredients (domestically produced and imported) during the period January – September 1999. Some of the results are shown below:

<u>Feed Ingredients</u>	<u>No.of tested samples</u>	<u>% contaminated</u>
Fish meal	2	0
Rapeseed meal	116	9
Soya meal	336	4
Sunflower meal	95	4

The purpose of this Report is to compare the different means used in the EU member states for treating the occasional parcel of fish meal from third countries found to contain salmonella.

## Survey of Procedures Undertaken by EU Member Countries

Fish meal arriving from third countries into the EU must be subject to inspection at the first port of entry. Inspection may include tests for salmonella according to Council Directive 92/118/EEC using ISO method 6579 (1993) or equivalent. Should the fish meal prove positive for salmonella then the competent authority within the country which the inspections have been made have one of the following three options:-

- a) Re-export the consignment from the community
- b) Use the consignment for purposes other than animal feed

c) Reprocess in a treatment plant approved pursuant to Directive 90/667/EEC or any plant approved for de-contamination. Movement from the port or storage depot shall be controlled by permits from the competent authority.

So far all EU competent authorities have chosen option (c) when the occasional parcel of salmonella contaminated fish meal has been detected.

However, reprocessing techniques differ from one member state to another. All, however, comply with Directive 92/118/EEC in that the consignments shall not be released until it has been treated, re-tested for salmonella by the competent authority and a negative result obtained.

If after the reprocessing treatment a positive result is obtained, all competent authorities, with the exception of France, insist on further reprocessing possibly using stronger conditions or exporting the consignment from the community at the discretion of the owner of the consignment. France only allows reprocessing once. If the meal remains positive it must be re-exported to the country of origin.

Reprocessing treatments differ from country to country but have to be approved by the competent authority. The different treatments are tabulated on the next page (the list may not be exhaustive but represents the best information available from fish meal producers and traders in the countries listed):-

Country	Category of Treatment	Type of Treatment	Manufacturers or Specification
UK	Physical chemical	heat	Directive 90/667/EEC
		aliphatic acids, aldehydes and natural terpenes	Termin 8 (Anitox Corp, USA)
		Formic and propionic acid	Bioadd (BP Chemicals, UK)
Netherlands	Physical chemical	Propionic acid and its salts	BASF, Germany
		heat	Directive 90/667/EEC
		aliphatic acids, aldehydes and natural terpenes	Termin 8 (Anitox Corp, USA)
Germany	Physical chemical	Formic and propionic acid	Bioadd (BP Chemicals, UK)
		Propionic acid and its salts	BASF, Germany
		heat	Directive 90/667/EEC
France	Physical chemical	Formic and propionic acid	Bioadd (BP Chemicals, UK)
		Propionic acid and its salts	BASF, Germany
		heat	Directive 90/667/EEC
Italy	Physical chemical	Formic and propionic acid	Bioadd (BP Chemicals, UK)
		Propionic acid and its salts	BASF, Germany
		heat	Directive 90/667/EEC
Spain	Physical chemical	aliphatic acids, aldehydes and natural terpenes	Termin 8* (Anitox Corp, USA)
		Formic and propionic acid	Bioadd (BP Chemicals, UK)
		Propionic acid and its salts	BASF, Germany
Sweden	Physical chemical	Formic and propionic acid	Bioadd (BP Chemicals, UK)
		heat	Directive 90/667/EEC
		aliphatic acids, aldehydes and natural terpenes	Termin 8* (Anitox Corp, USA)
Finland	Physical chemical	Formic and propionic acid	Bioadd (BP Chemicals, UK)
		heat	Directive 90/667/EEC
		aliphatic acids, aldehydes and natural terpenes	Termin 8* (Anitox Corp, USA)
Belgium	Physical	heat	Directive 90/667/EEC
Denmark	Physical	heat	Directive 90/667/EEC

\*Each case is decided on a case-by-case basis by the competent authority if the treatment is appropriate.

## **Where Can Reprocessing be done?**

With chemical treatments reprocessing normally takes place at the port of entry where the salmonella tests have been done originally or in some cases the competent authority issues a movement certificate to another warehouse more suitable for treatment. Chemical treatment enables mobile reprocessing equipment to be used. Member states which permit chemical treatment have not yet harmonised at an EU level the places and conditions which can be approved for decontamination. With physical treatments unless the facility is built at the port of entry, the contaminated meal has to be transported to the plant. This is controlled by the issuing of a movement certificate by the national competent authority.

## **Use of Chemical Treatments**

Concern has been expressed by some parties on the safety of use of formaldehyde containing products in animal feedingstuffs in Europe. In the EU, formaldehyde is permitted as a preservative of some feedingstuffs in defined circumstances, mainly, it can be used for the treatment of silage without restriction to be fed to all animal species, and can be used to preserve skimmed milk up to a level of 600 ppm for feeding to pigs up to the age of six months (Council Directive 70/524/EEC and amendments).

In the USA the Food & Drug Administration has recently amended the regulation for food additives permitted in food and drinking water of animals to provide for a safe use of formaldehyde at a rate of 2.5 kg/tonne as an antimicrobial additive for maintaining animal feeds and feed ingredients salmonella negative for up to 21 days (Federal Register Vol. 63, No. 193, page 53579).

The UK Ministry of Agriculture, Fisheries & Food have taken the view that the use of formaldehyde containing products as a treatment of feed ingredients to remove salmonella is legal provided that there are no residues of formaldehyde resulting from this treatment in the finished feed. Its use for salmonella decontamination has also been allowed in Netherlands, Spain Sweden and Finland.

The German Ministry of Agriculture currently prohibit the use of formaldehyde containing material as a treatment of salmonella containing feed ingredient, but allow other forms of chemical treatment.

Belgium, Italy and Denmark currently prohibit the use of all chemical treatments.