



The **Anaphylaxis** campaign
Helping people with severe allergies live their lives

Peanut oil: the risk of over-labelling

Should refined peanut oil be viewed as a cross-contamination risk necessitating “may contain” labelling? The question has arisen once again in light of the fact that refined peanut oil is subject to mandatory allergen labelling.

Refined peanut oil failed to gain exemption from mandatory labelling despite the fact that researchers in Southampton demonstrated that the refined oil will **not** cause allergic reactions for the overwhelming majority of peanut allergic individuals.

The “may contain” question is relevant where products containing edible oil are produced in a plant that handles refined peanut oil. One of our corporate members has asked: Should these products carry advisory warning statements?

In January 2005 a joint message was put out by The Anaphylaxis Campaign, Food and Drink Federation, British Retail Consortium, FEDIOL and SCOPA (the European and UK oilseed associations).

The message stated: There is no need to label products “may contain peanut” based on the possibility that refined peanut oil may pose a cross-contamination risk for other oils.

The reason behind this is based, in part, on the Southampton research. We were convinced then and are convinced now that any miniscule amount of protein left in refined peanut oil does **not** constitute a cross-contamination problem that would put consumers at risk.

The Food Standards Agency view

The Food Standards Agency reached a similar conclusion in 2006 and for illustrative purposes described a hypothetical situation involving the production of oven chips with sunflower oil that was refined in premises also refining peanut oil. The Agency concluded: “There is no need for an advisory warning label for peanut because the only probable risk of peanut exposure is highly refined peanut oil with little or no protein present.”

We would advise food companies to consult the full text, which is contained on Page 47 of the Agency’s “Guidance on allergen management and consumer information.”

<http://www.food.gov.uk/multimedia/pdfs/maycontainguide.pdf>

FEDIOL's calculations

FEDIOL has recently published a new document entitled "Code of Practice on the production and labelling of certain oils in connection with allergy."

This states: "FEDIOL members shall encourage their customers not to use a precautionary label ('may contain'), when a potential cross-contact has been identified with fully refined peanut oil, provided that good manufacturing practices, as described in this Code of Practice have been applied to the process."

This position is supported by FEDIOL calculations looking at hypothetical "worst case" contamination at an oil supplier's factory. FEDIOL considered what this contamination would mean in terms of actual peanut protein consumed in a meal with high oil content.

FEDIOL pointed out that internal specifications developed by the oils and fats sector stipulate that crude peanut oil should meet certain quality requirements. This is a key step in ensuring that when refining is applied to this raw material, the fully refined oil is suitable for human consumption.

In the specification of crude peanut oil, the level of moisture and impurities, which includes proteins, must not exceed **0.5%** (= 5,000 ppm).

A level of protein as high as this has never been reported in any crude oil.

A recent study by the Institute of Food Research (IFR), initiated by FEDIOL, on peanut protein content in processed and commercialised peanut oils, shows the following results:

Crude oil: 16.6 - 76.1 ppm protein (5 samples) Refined oil: 0.07 - 1.8 ppm protein (22 samples)
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So what is the risk for people with peanut allergy? This is what FEDIOL's calculations show: Let us assume that contamination of a rapeseed oil with refined peanut oil occurs during processing. A conservative figure for cross-contact is 2% and an extreme figure is 5%. To assess the risk of an allergic reaction occurring, one can consider the dose of allergenic food that may reasonably be ingested within a relatively short period of time, such as a meal. This dose can be estimated by considering the size of portions that are normally consumed, making appropriate allowance to include people consuming above average amounts.

The main applications for rapeseed oil are margarine, salad dressing, mayonnaise, and frying oil.

	Serving size	Oil content	Rapeseed oil in product (g)
Margarine	10 g	80%	8
Salad dressing	15 ml	100%	15
French fries	200 g	20%	40
Mayonnaise	25 ml	70%	17.5
Total exposure in single meal sitting			80.5

The total exposure in one meal as described is therefore 80.5g rapeseed oil. Assuming levels of cross-contact of 2% and 5%, the amount of peanut oil potentially present in that amount is 1.6g peanut oil and 4.0g peanut oil respectively.

Taking into consideration the results from the IFR study presented above, the highest calculated amount of residual peanut protein present would be:

- 2% cross-contact	2.9 micrograms peanut protein
- 5% cross-contact	7.1 micrograms peanut protein

To put these figures in context, it should be noted that recent work shows that more than 95% of people with peanut allergy can tolerate 2mg or more of peanut protein without reaction, while the few reacting to smaller amounts experience generally mild reactions at their threshold doses. A report on this work appears on The Anaphylaxis Campaign web page for corporate members under the headline “Establishing a threshold dose for peanut allergy.”

Conclusions

FEDIOL’s calculation is intended to show that the risk to allergic individuals is exceedingly low. It provides information to allow food companies to make an informed decision on whether they should be using “may contain peanut” labels on products containing refined vegetable oils. It is our view that they should not.

FEDIOL believes the same approach for calculating cross-contact can be applied to any other vegetable oil.