

## submissions

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**From:** Friends of the Earth NZ <foenz@kcbbs.gen.nz>  
**Sent:** Tuesday, 29 March 2016 10:44 AM  
**To:** standards management  
**Cc:** submissions  
**Subject:** Re: Labelling review recommendation 34 - irradiation labelling.

This submission is from Friends of the Earth(NZ), a voluntary environmental and consumer watchdog NGO. Our street address is Auckland Trades Hall, 147 Great North Road, Grey Lynn, Auckland 1021, New Zealand. Our postal address is PO Box 5599, Wellesley St, Auckland 1141, New Zealand.

Our contact person is myself, Bob Tait, Co-director FoE(NZ). [REDACTED]

My experiences on this issue go back to being a member of the Irradiation Issues Working Party, that was set up by the NZ Ministry for the Environment in the mid 1980's. Also I co-authored a paper on Food Irradiation that was presented at the "Food Irradiation 1987", ANZAAS Congress, at Palmerston North, NZ. I graduated in Mechanical Engineering from Sydney University in 1969.

Firstly we wish to endorse and support the detailed submission of Food Irradiation Watch/Friends of the Earth Brisbane.

We note that the recent advertisement for a new Chair for FSANZ includes a description of the role as one "which supports informed consumer food choices".

The fact is that the only way that a consumer can know if a food is irradiated is if it is clearly labelled as such. Without labelling there is no basis for any form of informed consumer food choices.

On this basis the two big inquiries held in Australia, the "Food Irradiation 1987", by the Australian Consumers Association, and the "Use of Ionising Radiation - Report of the House of Representatives (Senate) Standing Committee on Environment, Recreation and the Arts, 1988, both found that mandatory labelling was required. Previously the International Union of Consumer Union of Consumer Unions had also taken this position.

In our view there is a sound and scientific reason for this, due to the fact that irradiated food has been exposed to ionising radiation. It is disturbingly misleading to compare such ionising radiation to exposure to microwaves, which are not ionising. Such a false comparison was regrettably included in Appendix A (1) of the FSANZ documentation supplied for this consultation.

Only ionising radiation has the energy to break stable molecular bonds, thus creating ions, including free radicals that were never present in the food item prior to it being irradiated. That is how irradiation "works" to damage pests or pathogens - the ionising radiation and the free radicals damages DNA {which is a comparatively large molecule/target} - and not only the DNA of the pests/pathogens.

The scientific fact is that every molecule of everything that is subject to the intense irradiation process in the irradiation chamber gets blasted with ionising radiation. No exceptions. To expect otherwise, would be the equivalent of switching on a light in a room and expecting it to only illuminate nominated objects in that room, whilst leaving ones adjacent to them, in darkness. Surely the FSANZ Board has sufficient understanding of scientific facts to accept the true action and effects of intense ionising radiation that emanates from the massive amount of penetrating gamma radiation produced by the mega curies of Cobalt 60 in the source rack.

I have visited and inspected the Steritech Irradiation Plant in Sydney, and I can confirm that even the air in the irradiation chamber gets ionised when exposed to the intense gamma rays from the Cobalt 60 source. A lot of ozone is created from the ionisation of the oxygen in the air and this has to be extracted to prevent it from attacking goods within the chamber. Even when the source rack is immersed deep within the water

(which itself has to be kept de-ionised) storage pool, the intense gamma rays cause the water surrounding the Cobalt 60 source rack to emit an eerie blue glow that is quite pronounced, even in daylight. The cobalt 60 actually gets very hot, and one of the Australian irradiation plants once had a fire inside the plant chamber when the source rack became jammed and cardboard packaging ignited.

It is the presence of ionised molecules - sometimes termed URP's (Unique Radiolitic Products) that are the markers found when a food is laboratory tested to confirm that it has been irradiated. Some of these are carcinogenic, as was confirmed in the earlier ANZFA/FSANZ report issued prior to the approval of irradiated mangoes. Consumers cannot take a laboratory with them when they go shopping.

Having studied the process, and having inspected the irradiation plant, I do not wish to eat foods that have been totally artificially "processed" using this ionising radiation. Nor should any consumers in NZ have irradiated/nuked food unknowingly foisted on them.

Consequently we fully support the need for clear mandatory labelling of all irradiated foods.

It is clear that the industry does not want consumers to know if a food has been irradiated, as illustrated by the extremely tiny print size used on much of the irradiated mangoes. The letters that indicate irradiation are in some cases no wider than the thickness of a paper clip wire, and often they are printed in a fainter colour than black. No doubt many consumers, who do not carry a magnifying glass, or think that the thumbnail sized coloured sticker on a food product is just a brand logo, would have unknowingly purchased and themselves and/or their families would have eaten some irradiated produce.

Over recent years I have found irradiated mangoes, and recently irradiated tomatoes, on sale without any labelling or signage stating that they have been irradiated. The proof is often on the cartons, which sometimes I have to extract from their recycling bins. Although these breaches of the Food Regulations have been reported to the relevant authorities, and to the media, there has never been a prosecution. The recent tomato case was doubly disturbing, as the irradiated Australian tomatoes were on sale and labelled New Zealand tomatoes. I alerted Horticulture NZ, who through Tomatoes NZ, followed it up with MPI, but still there was no prosecution.

I look forward to receiving confirmation of receipt and acceptance of this submission, and we would be grateful if you could please include us in your further information and mail outs.

Regards,  
Bob Tait  
Co-director  
Friends of the Earth(NZ)