

From: [REDACTED]
Sent: Friday, 11 December 2020 6:00 PM
To: submissions
Subject: Submission on A1193 Irradiation on all fresh fruits and vegetables

Categories: [REDACTED]

Dear Sir

I wish to make a short submission against the irradiation of fresh fruits and vegetables in Australia.

While I understand that the purpose is to preserve fruits and vegetables so they live longer and to destroy any pests on the vegetables (including microbes, moulds, fungus) there are demerits to irradiation.

Food irradiation means food is exposed to gamma rays, X-rays and accelerated electrons (ionising radiation) meaning that the blast from the radiation knocks the electrons from the atoms and molecules. The radiation waves pass through the food without over-heating but **changes the molecular structure and DNA** of the food.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5820857/>

Because irradiation is such a relatively new thing, **we don't know the long term effects on human physiology**. It would take decades before scientific conclusions could be made. Studies so far have shown:-

* One study found that an irradiated diet produced **abnormal cells**, but it was disregarded when critics found that the sample size of cells were too small.

* Another test-tube study showed that irradiation caused **changes in chromosomes and was toxic** to cells, but was also disregarded when the scientists couldn't rule out other causes.

* What is known is that 'radiolytic by-products' results from rearranged molecular structure. These chemicals are also called cyclobutanones (2-TCB, 2-TDCB and 2-DCB). Tests on rats found that rats injected with a known carcinogen and 2-TCB were **three times more likely to develop colon cancer**. So these preliminary findings should raise a red flag for FSANZ.

* In 2009 about 90 Australian cats developed **neurological problems** and 30 died after being fed a dried cat food that was irradiated when imported from Canada. After that, **irradiation was banned for cat food**. In spite of that, irradiation is still allowed for food for human consumption. Is this applying the precautionary principle? I think not.

Another point is that while irradiation kills most bacteria in food, it also **kills good bacteria such as probiotics that we need for digestion**. Irradiation also destroys vitamins, especially vitamins A, B1, E and K.

For all these reasons, The Australian Organic Standard bans irradiated foods. Likewise, if a product is made in Australia using *only* Australian ingredients then we can be pretty sure that it has not been irradiated. However many packaged products made in Australia consist of a certain percentage of imported ingredients. That means there is a possibility that some of those products were irradiated without any warning sign. The symbol used for irradiation looks harmless and few people would be alerted to its meaning. The radura is a green circle with a stylised plant in its centre. The top half of the circle is dashed with radiating beams coming out from it. The symbol alone isn't really very clear. If you didn't know, it looks like a nice little plant growing away with beams happily radiating out over the top of it.

Therefore I request that if there are any foods containing ANY irradiated ingredients that the label clearly state **IRRADIATED**. Some labels, particularly herbal tea products, say the food was 'treated with ionised electrons'. Unfortunately few people know that 'ionised electrons' is the same as saying irradiated.

Another thing to be wary of is that irradiated herbs are not labelled when they are used for therapeutic or medicinal purposes, because the FSANZ does not classify them as food products. This is illogical because obviously herbs are ingested.

For all the above reasons I reject the irradiation of imported fruits and vegetables into Australia.

