GE Free New Zealand
In Food And Environment Inc.

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Food Standards Australia New Zealand
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Re: Application A1034 Advantame High Intensity Sweetener

11/03/2011

Dear FSANZ,

GE Free New Zealand in Food and Environment members oppose the approval of A1034 Food Advantame high intensity artificial sweetener.

WE submit FSANZ cannot approve Advantame without a gross breach of its duty of care and mission obligations under which it operates.

We note that Food Standards Australia New Zealand (FSANZ) legal requirements as stated in their mission statement are:

> To protect, in collaboration with others, the health and safety of people in Australia and New Zealand through the maintenance of a safe food supply.

FSANZ Values are:

> To be impartial, open and accountable;
> To use the best available sciences and evidence to guide decision-making;
> To seek, respect and be responsive to the issues raised by others;

FSANZ Responsibilities are

> Provide information to consumers to enable better consumer choice
> Undertake dietary exposure modeling and scientific risk assessments
> Provide risk assessment advice on imported food

We have read all the assessments that are on your website and believe that you have led consumers astray. We outline our concerns below

We wrote to you regarding the derivative compound Aspartame and whether it was genetically modified. Your reply dated September 15, 2010 12:35 PM saying

> *Dear Claire*
>
> *Further to … your question in relation to novel technology.*
>
> *Advantame is neither genetically modified, nor does it used novel technology*.

The FSANZ website states that Advantame is not genetically modified or contain GM

organisms. However on the Ajinomoto website and the FSANZ risk and technical assessment report, document 1, page 11 you state –

2.2 Manufacture Advantame is synthesised from Aspartame

It is our understanding that Aspartame is made from genetically engineered bacteria. This then is a misleading statement in relation to your own interpretation of food for sale

1.5.2 Division 1 – Sale and use of food produced using gene technology - Interpretation
(1) For the purposes of this Standard –
a food produced using gene technology means a food which has been derived or
Developed from an organism which has been modified by gene technology.

We believe that the public have been misled on the error of this statement. There has been a Regulatory error in advising the public of the source product and therefore a breach of natural justice.

As Ajinomoto brought out Monsanto's Aspartame business it is likely that Advantame has been developed from an organism that has been modified by gene technology.

Comment: Please can you advise us as to the production of the parent compound, Aspartame?

As assessed in the FSANZ ASSESSMENT REPORT 2

Preferred Approach to permit the use of Advantame as a Schedule 2 food additive in Standard 1.3.1 for use according to Good Manufacturing Practice (GMP) in foods specified in Schedule 1.
Reasons for Preferred Approach
• the safety assessment did not identify any public health and safety issues

FSANZ Supporting Document 1 RISK AND TECHNICAL ASSESSMENT REPORT Hazard Assessment 3, p.17- 94
http://www.foodstandards.gov.au/_srcfiles/A1034%20Advantame%20SD1%20Risk%20Assess.pdf
The data provided on the website does not reflect the conclusion for safety that has been proposed by FSANZ in the above statement. Many of the references to the data is unpublished, provided by Industry and not peer reviewed. Robust statistical analysis cannot be confirmed or performed by the public or independent experts especially as when asked for the raw data a cost was levied. It is against consumer choice to ask for comment then add a cost when asked for information. This is against your legal requirement of responsibility to the public namely to

- *Provide information to consumers to enable better consumer choice*
- *Undertake dietary exposure modeling and scientific risk assessments*
- *Provide risk assessment advice on imported food*

Approval permits for 'Good Manufacturing practice' and 'technological function' does not

mean that the product Advantame is safe.

This report does not up hold the standard that the public expects of its steward for food safety and is reliant on industry data as no assessments have been made by other International Food Safety bodies.

Aspartame metabolites are neuro toxic and there is no assurance that Advantame will be no less. The new metabolite Advantame Acid has never been eaten before and there are no documented studies as to its safety, however the green/purple staining of organs and stool in almost every test animal and human is cause for grave concern and is dismissed as inconsequential. The consumer market that will be most targeted in advertising will be the diabetics and overweight people, these people are already suffering from illness and are susceptible to adverse effects of the by products that are outlined. Anyone who has a gastrointestinal problem or IRS, Crohn's disease, liver/ colon/rectal/ stomach cancer, duodenal ulcers are at very high risk of worsening their symptoms.

The feeding studies show that in all animals there was a significant change in intestinal, weights, tumors and liver, kidney, endocrine, thyroid function yet it has all been dismissed. Depression of appetite, weight loss, nausea and GIT symptoms were significant also thermo genesis, increase in temperature. This could highlight a serious effect on the thyroid gland that could lead to hyperthyroidism as well as heightened or lowered metabolism, anxiety and heart fibrillation due to the effects of thyroid stimulation.

There is no documentation recorded of what the 'control diet' for the animal and human subjects were and if it contained another artificial sweetener or no sweetener at all. This is very important in relation to the significant changes that were observed in all animals and humans and also if the studies were recording significant changes between artificial sweetener diet or a traditional diet.

References to dead, dying and *in extremis* animal subjects including litters were noted, however no explanation was provided to ascertain why. Numbers were not provided to the public to see if these deaths were significant. It is therefore an error to further dismiss all deaths as 'not treatment related'.

The studies did not look at this in the very short time 12 weeks that they ran. However rabbits suffered serious adverse effects and death. Animal referred to as dead or dying there are no figures as to how many. These data assessed are industry generated whose opinion has minimized and dismissed the adverse data findings. As well where there is the possibility of the ability to discover if the findings are treatment related they do not provide the relevant data and FSANZ has not required it of them. This is not protection of the public, or the use of the best science or evidence to gather information.

Advantame Acid is a new metabolite and it was noted the Advantame acid is extensively metabolized (p.84) only two metabolites were documented were there any others new or existing? Advantame Acid and its metabolites could prove to be highly toxic long term as to date it is an untested chemical that has not had any data about persistence or further breakdown products. There is no data on how it will affect the body's nervous system or organs. However there appears to be evidence that it is an endocrine disruptor and should be further tested.

In excretion data the study (Supporting Document 1 p.29), the assessor noted that that

there was inadequate sampling duration and sulphate conjugate data was missing. FSANZ did not ask for the missing data. Specific analysis of plasma metabolites was not undertaken. Why has FSANZ allowed this to not be done? This information is vital to be able to follow what and how the breakdown metabolites would affect the neuro, system, organs. Such data could inform an expert as to what long term effects could be expected. This data lack must be immediately rectified.

In all animals there was a loose, green or pale stool which indicates possible problems in the gastrointestinal tract. This finding could be indicative of irritable bowel, abnormal liver function and over production of bile. There are significant concerns about the easy dismissal of data as 'unrelated to the treatment'. The high levels of thyroid, tumors and liver weights in the mice and rats needs further study before this can be released into the food chain.

Benign mammary tumors, lower uterine and ovary weights all were significant in the 104 day female rat study (p66) compared to the control group. Pancreatic Islet cell carcinoma, renal and bladder cells changes occurred in male subjects though not significant still showed an increase. This needs to be properly studied in another trial before being approved for public consumption. Yet, this was also dismissed as 'not treatment related'.

Why conduct any tests if the significant results are dismissed? This is a truly serious error in evaluation and could lead to chronic ill health and death.

We are extremely disturbed over the submission by the New Zealand Food Safety Authority (NZFSA) http://foodsafety.govt.nz/elibrary/industry/a1034-advantame-ass-report-subm-oct-2010-jv.htm as to the deleterious effects

> *The presence of colour in the rabbit gut suggests that their metabolism may be different (3.2.8.2). Therefore, we question whether other data in the submission demonstrates that the rabbit is an appropriate model for humans. We note that the rabbit developmental/reproduction toxicity testing gave rise to the NOAEL used to establish an ADI of 5 mg/kg-bw for Advantame, and that this was a very conservative decision by the risk assessor. A higher ADI may have been justifiable if the rabbit is found not to be a good surrogate for humans.*

This approach by an expert body responsible for public safety has no standing in credible risk assessment and fails to meet the legislated responsibilities of the NZFSA.

No animal can be suitable for human studies as they have different metabolisms and diets that they are adapted to, however it is deemed acceptable to run such animal studies and extrapolate the results. In this case Ajimomoto has provided the results of the data and the regulators have been irresponsible to allow such findings to be approved.

In Human subjects:

There are no records of how many people under took the first study yet of the three subjects documented there were 5 adverse effects. The adverse effects point to hypersensitivity reactions affecting blood pressure, namely respiratory distress and headache and dizziness. The study notes the underestimation of Advantame and its metabolite Advantame acid.
In the second oral dosing (p.82) 6 subjects were identified. There were 8 adverse events recorded in 5 subjects this shows an 83% adverse reaction even through yet again the findings were discounted as mild however the record states - injury, poisoning and procedural complications, musculoskeletal and connective tissue disorders and a GIT disorder (p 84), our consumers would not consider these as mild reactions. The dismissal of these findings does not give confidence to the public about the safety of this product.

The high levels of HF-1 could lead to a high vitamin D conversion which could lead to para thyroid effects. It should be noted that thyroid evaluation data was missing and not even evaluated in some animal subjects.

HU -1 is a highly acidic metabolite and could inhibit certain minerals and vitamins from being properly absorbed there bye affecting cellular function, organ metabolism and enzyme production.

In the 12 week study (p. 86) there was no record if the control subjects took other artificial sweeteners. Did the Advantame subjects also take artificial sweeteners? The two subjects (22%) who suffered pneumonia, dyspepsia flatulence and nausea were associated with the treatment. Why was this not considered further as in is not acceptable that nearly ¼ of the population taking Advantame suffer such adverse symptoms.

The small number of subjects undertaking these studies cannot give any assurance of safety. The smaller the trial numbers are open to statistical error and the more significant any adverse event become. The lack of any peer review makes these findings highly suspect and until longer term and larger trial numbers are conducted the FSANZ Authority cannot approve this product.

The production of methanol (p.93) is of concern as its metabolite is formaldehyde and formic acid; both of these are highly toxic to the human system. Whilst the finding did not talk about mortality long term chronic illness from Advantame should be considered as a safety issue. Advantame is also related to the very controversial studies on Aspartame. This is yet another error in the evaluation and adds to the reasons why consideration of Advantame cannot legitimately proceed without further studies on this and many other effects.

It is concerning that the low levels generated from the normal metabolism of Advantame to methanol and phenylalanine are ‘considered’ safe but the lack of supporting data makes this an opinion and should not be posited in by FSANZ as being scientific based. To meet its official duties as a trans-Tasman body FSANZ is supposed to evaluate and undertake food safety assessments but in this case it has relied on industry data.

Conclusions
There are severe deficiencies including out standing, wrongly interpreted and missing data revealed in the assessment of the Advantame. These have serious implications for public health and safety issues associated with the proposed addition of Advantame to food. It cannot be approved without a gross failure by FSANZ to be science based and ethical.

1. The statistics outlined above show that Advantame will cause adverse events in a significant level of the consuming population.
2. Advantame poses a great risk to children, elderly, and ill.
3. There is no record of the control diet and what it contained.
4. There has been no data provided on the level of deaths in the studies.
5. Advantame has not proven safe in healthy or people who have existing diseases, further Advantame is highly likely to cause or severely worsen any existing illness.
6. These disease include but are not limited to Diabetes, liver failure, Crohn's disease, GIT disease, respiratory disease, CORD, allergy, anaphylaxis, hypo/hyper thyroidism, immune system depletion, bradycardia, hypertension, benign tumor growth, worsening of cancer patients or loss of fertility.
7. This data also indicates that vitamin and mineral mal-absorption and possibly anxiety and neurotoxicity could lead to Alzheimer's or Parkinson's disease.
   This could be related to the formation of a totally new metabolite that this product creates - Advantame Acid - that has no safety data associated with it.

Advantame cannot be approved when such serious findings in test are then dismissed as not treatment related, without follow up to justify that conclusion. No credible scientifically-based process could allow the data generated to be considered as an indicator of safety of Advantame for entry into the food chain.

We ask that all this raw data be provided for independent scientific assessment.
Until that time FSANZ must stop the clock on its consideration of Advantame.

Advantame must not be approved for sale in Australasia.

Yours sincerely,

Jon Muller

Secretary of GE Free (NZ) in food and environment.