Food Intolerance Network

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Application A555 Initial Assessment Report:
Declaration of Antioxidants in Fats and Oils

On behalf of the 4,000 members of the Food Intolerance Network, I wish to make a submission on the above Application urging that the Application should be accepted for further consideration.

The single change proposed would mean a huge drop in the number of complaints that we and the food industry have to deal with and remove a major source of uncertainty for consumers.

1. **The safety of these antioxidants in fats and oils**

Many of our members are affected in health, behaviour or learning by the presence of the antioxidants 310-312 (Propyl gallate, Octyl gallate, Dodecyl gallate) and 319-321 (tert-Butylhydroquinone (TBHQ), Butylated hydoxyanisole (BHA), Butylated hydroxytoluene (BHT)), even at very low levels, and so seek to avoid these additives.

However current labelling regulations allow the use of these additives in many fats and oils without declaration on the label in foods where oil is a compound ingredient at less than 5% and so are believed by the food manufacturer not to perform a technological function in the final food.

In addition, enquiries made by Network members have found many instances of mislabelling by even major food companies at oil levels higher than 5% (see Attachment A), raising a safety concern quite apart from the legal concern for those who know that they react to these additives.

The safety of these additives has been inadequately tested as may be seen in the scientific evidence presented in 3 below. In particular, the details given in Application A555 concerning JECFA evaluation ignores completely that JECFA's evaluation process does not include behavioural and learning criteria, nor any testing at all on children, nor in fact any of the following health effects: lethargy and myalgia, impairment of memory and concentration, mental agitation or depression, dysphasia, visual disturbances, tinnitus, dizziness, autonomic disturbances, paraesthesias, neuralgias, irritable bowel symptoms, behavioural and sleep disturbance reactions, migraines and headaches, and eczema. It is as though we have declared safe an aeroplane, so long as it is not flown.

2. Which food products are likely to be affected

BHA (and/or TBHQ) is in virtually all commercial oils and margarines and some oils for home cooking (except olive oil), and can be in any product which contains vegetable oil or margarine. Typical problem foods are frozen chips and french fries, biscuits, bread, cakes, pastries, butter-oil blends, soymilks and canned fish. Anything fried is a risk to such people: fish and chips, french fries, stir fries, restaurant food, potato crisps and other snacks, doughnuts. These antioxidants can be in frozen products such as icecream and fish fingers, in sweets with margarine such as fudge, in chocolate, stock cubes, ice cream cones and mayonnaise.

Soymilks are a particular concern because their oil content is typically slightly less than 5% and there has been an explosion in the range of choices available on the shelves. Consumers find it nearly impossible to keep up with which cartons do not contain these antioxidants, given the frequent changes in oil supplies to manufacturers, poor and conflicting information given to consumers by manufacturers, and the absence of any guidance on the ingredients panel of most. This leads to a loss of confidence in the regulation of food additives generally.

3. Information on food intolerance in relation to these antioxidants

Scientific justification for the negative effects of these antioxidants has been reported by Loblay R.H. and Swain, A.R. (1986) 'Food intolerance'. In: Wahlqvist M.L., Truswell A.S., editors. *Recent Advances in Clinical Nutrition.* London: John Libbey, 169-177.

In those presenting with food intolerance to Loblay and Swain's clinic at Royal Prince Alfred Hospital, challenges with the above antioxidants resulted in the following percentage of positive reactions:

- 54% with systemic reactions (headache, lethargy and myalgia, impairment of memory and concentration, mental agitation or depression, dysphasia, visual disturbances, tinnitus, dizziness, autonomic disturbances, paraesthesias and neuralgias)
- 48% with irritable bowel symptoms
- 41% with behavioural and sleep disturbance reactions.

- 36% with migraines and headaches
- 21% with eczema

Other relevant references (as in Attachment B):

Clarke L. and others. 'The dietary management of food allergy and food intolerance in children and adults'. Australian Journal of Nutrition and Dietetics 1996; 53(3):89-94.

Feingold BF. Dietary management of nystagmus. J Neural Transm. 1979;45(2):107-15.

Fisherman EW and Cohen G. Chemical intolerance to Butylated-Hydroxyanisole and Butylated-Hydroxytoluene, Annals of Allergy 1973;31:126-133.

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Other food intolerance reactions are described by parents in Attachment A.

It is likely that a sizable proportion of the population is affected by these antioxidants but that many do not know the cause of their various symptoms.

4. Costs and benefits to stakeholders of complete labelling

The objective of the proposed change cannot be achieved by good manufacturing practice (GMP) or other means within the Code since the discretion currently afforded food manufacturers regarding declaration or not of antioxidants does not allow consumers to be adequately informed.

Up to two thirds of the complaints made by consumers to the Food Intolerance Network relate to the non-declaration of antioxidants in fats and oils. Network members put a large effort into contacting manufacturers to ascertain whether particular antioxidants are present or not. Manufacturers often give contradictory advice to different callers, fail to provide the advice or give the wrong advice. The advice given is entirely at the discretion of the manufacturer, who may decline to help. Some comments from Network members are at Attachment A.

Sources of fats and oils change for manufacturers and, since at present antioxidants often need not be declared, the manufacturer frequently doesn't know or need to know which antioxidants, if any, are in the fat or oil they are using in each batch of food. Therefore a product can be acceptable to consumers affected by particular antioxidants one week and then not in the next week, leading to considerable distrust of the labelling regime and of food manufacturers.

The Food Intolerance Network functions by phone, emails and website, with emails running at about 150 per day and web hits at over 1,000 per day. It would considerably reduce the volunteer workload of the Network to have the proposed change implemented.

The proposed change will increase the ability of consumers to make an informed choice regarding the added antioxidants in fats and oils that they purchase and also restore confidence in the application of the food labelling laws. It cannot be correct to claim, as does Application A555 (p5) that adding this information would be "unlikely to promote consumers' understanding and use of the ingredient list" – logically the opposite would be true. There are only positive public health and safety outcomes from the current proposed change, which will allow consumers to be better informed and so avoid these particular additives.

It is believed that the proposed change will have no implications for international standards. Although Application A555 opines that the final food would not align with international requirements, alignment is not in practice essential or even widely practiced, as any person with experience of reading labels in Japan, Norway, Italy or even Australia can attest.

There will be a minor increase in the regulatory burden on food manufacturers, who will be required over time to change labels and to ensure that they are adequately informed of the presence and identity of antioxidants in fats and oils in their products. This burden will be balanced by a positive consumer response to improved information and choice.

More specifically:

- Cost implications will be minimal. Fat and oil suppliers are already required to provide antioxidant information to customers if requested.
- Profit implications will be zero.
- Market share implications may exist, in that consumers may choose foods that don't contain undesirable antioxidants if they are informed. The market can of course respond positively to such signals and no company will be disadvantaged with respect to another in this regard. At present, those companies that do choose to report all antioxidants appear to be at a disadvantage to those that choose not to report them, since some consumers are believed to avoid foods with numbers on them. The proposed change will level the playing field.

- Price implications are zero. Antioxidants are already in use and will merely need to be reported on labels.
- Trade implications are not foreseen except perhaps in the positive sense of increasing trust in the accuracy of food labels in Australia and New Zealand.
- Employment implications are zero.

In conclusion, the Food Intolerance Network wants manufacturers to declare the presence of these food additives in their products, no matter how small the amount, and irrespective of whether or not the manufacturer believes that the additives perform a technological function in the final product.

When we express concerns about the health, behaviour and learning effects of particular food additives, Ministers and FSANZ often tell us as consumers that we can read the label and make informed decisions about the foods we buy. But without transparent and complete labelling requirements, consumers are in fact denied this basic right.

Yours faithfully

Howard Dengate BSc PhD FAICD

ATTACHMENT A

Comments provided by Food Intolerance Network members concerning antioxidants

These reports have been edited for brevity and to maintain anonymity.

Winning entry in the "Worst additive competition"

In my opinion the worst food additives are those in the range of antioxidants 310-321 "The Nasty Antioxidants". As antioxidants are not considered to be preservatives (by regulators), and the suppliers/manufactures are not required to list these on the label, it is the most frustrating additive by far. At least with colours, you can readily see them and hence avoid them. Same with most other additives, they are usually on the labels in some sort of description. But the good old nasty antioxidants are secret unless you go to extreme lengths to ask the supplier of the food and then the manufacturer of the contents eg. vegetable oil what exactly are in their oils.

There are alternatives to the nasty antioxidants which are failsafe and haven't been associated with cancer in rats and possible genetic changes and also nausea, vomiting, ringing in the ears, delirium and collapse, children's behaviour just to name a few.

Even those "failsafe" foods like Betta Natural Cone Cups can't be trusted. They change their oils on a regular basis and also the use of antioxidants from friendly ones (300-309) to nasty ones (310-321). I only found this out after my son experienced an ADVERSE REACTION to these cones and I telephoned the supplier and was told that they had changed their oil and it included BHA (320) & tBHQ (319).

What hope have we got for our children and ourselves if such nasty things are HIDDEN in our foods?

I would just love for my son to be able to tolerate eating the occasional fish 'n chips on a Friday night just like I used to when I was a child. Is that so much to ask for? – *mother from Victoria.*

From a health promotion dietitian

The labelling issue for antioxidants in oil ... is one that ticks me right off I have to say. I know the labelling laws have improved things a lot but to have to call the company before you eat a product is crazy. When I called Arnotts about their Thins I was told that they only used 304 and 306 but it was essentially cooked out. My understanding from the email group is that the oil already contains 319/320 so the customer service number written on the packet is a fairly useless piece of information in my book. – *dietitian from Australia*.

Mislabelling by a major food company

Six months ago our daughter developed severe behavioural problems, including depression, lack of motivation, poor sleeping habits, lethargy and loss of enthusiasm. These were very uncharacteristic of a hard-working fulltime student and a complete puzzle to her concerned teachers. As a consequence, her exam results declined, as did her study performance.

Her problems were eventually traced to her consumption of home-baked products containing Dairysoft, a butter-oil blend manufactured by one of Australia's largest companies, the Murray Goulburn Co-Operative Ltd.

Our daughter is known to be affected by antioxidants 310-312 and 319-321 and several other food additives. Before she started using Dairysoft, verbal advice was obtained from Murray Goulburn that there were no antioxidants in the oil which comprised 22% of the product.

After months of increasing problems, we contacted Murray Goulburn again and were now that informed that the canola oil in the product did in fact contain 320, Butylated Hydroxyanisole. Our daughter removed Dairysoft from her diet and she has since made a complete recovery, although there can be no compensation for the six months of pain and uncertainty which she suffered.

Following complaints, Murray Goulburn have now correctly labeled this product, although without any food recall, product safety or public apology notice. – *parents from Darwin.*

A Disastrous Christmas

At Christmas we went for a month's holiday to New Zealand. I got slack on avoiding preservatives so he was eating lots of peanut butter with BHA (320).

The worst thing is that we didn't really think about what was causing his deteriorating behaviour, but just battled through our holiday trying to cope with it. We returned home but it wasn't until he returned to school and went from an average maths student at the end of 2003 to bottom of the class in a remedial group at the start of 2004, and looking back at the horrendous hour-long tantrums we were experiencing at home, that I seriously started questioning what was going on. Living with him was like treading on eggshells. At the end of one particularly distressing tantrum he said he hated himself and hated the way he felt. His teachers said he has NO concentration. I had noticed this myself at home during the holidays but STILL didn't think of diet! He had also totally lost interest in playing the piano which he was mad keen on before we went on holidays. He said it was too hard.

I phoned Woolworths to double check on the ingredients in their gluten free Kerry Formula bread. They told me they don't put preservatives in their bread. Then when I asked specifically about E320 she said, oh yes, it has that.

Anyway, apart from 320 being in the bread he was eating 2-3 times a day, I'm not sure of what other preservatives he's had, but for nearly 2 weeks now he's been off them all and his behaviour has become quite reasonable. He has again become excited about playing the piano, and I have my lovely little boy back. Even my husband who is a bit of a 'disbeliever' until he is thoroughly convinced has noticed a big difference.

I can't believe I let all of this happen. And when it was happening I can't believe I didn't see it earlier. It's scary that chemicals permitted in our foods can have such an extreme effect. My son avoids gluten because he hates being sick. There is no problem there. But preservatives are more difficult. I can keep him off them now, but when he's a teenager will he have to become antisocial and drop to the bottom of the class again and reach rock bottom before he is determined to avoid them, because at the moment he can't, or doesn't want to, understand the connection. It's very hard, but when I feel sorry for myself or him I just remind myself that at least we know what the problem is. Wouldn't it be awful having that sort of behaviour and not knowing why? *– reader from NSW.*

BHA in food packaging

About a month after being home from the hospital, I was wanting something to snack on and thought that I could eat the rice krispies type cereal, dry, as a crunchy snack. Interestingly, the first salicylate list they gave me had BHT/BHA & tartrazine listed on it. But I never looked at the label on the cereal. I just assumed that cereals were ok. Within 30 minutes of eating the rice krispies, I was wheezing, had hives, was itching and eyes swelled. Wasn't a super bad reaction, but bad enough to have to use medicines for it. We thought, this certainly couldn't be the cereal but it was the only thing that I had consumed different that day. When we looked at the label on the box, it said that the packaging had BHT in it. I couldn't figure out why they would put it in the packaging when it was the cereal they were trying to preserve!! But I did react and being that it wasn't quite as bad as most of my reactions are, I figured that the BHT from the packaging was enough to get into the cereal and give me that reaction. But just to be certain that it wasn't the malt I was reacting to that was in the cereal, we went to the health food store and bought some plain, rice krispies with just the rice and sugar, no preservatives, no fruit juices, etc...and I didn't react. From that moment on, I tried to make sure that I didn't ingest BHT or BHA. *– reader from USA.*

Asthma and antioxidants

I am writing to thank you for all the help your book 'Fed up with Asthma' has given my family. My daughter is two and a half years old, and was diagnosed with asthma when she was 10 months old. She was hospitalized with croup and later we were told she has asthma. She was put on a steroid puffer and I was told she would need this for most of her childhood.

I knew that food additives were not safe and I tried not to buy anything with 'numbers' on the back of the packs, which proved to be difficult. Still this didn't seem to help, I also put her on goats milk and took her off all other dairy products.

I took her to an asthma pediatrician, three months ago. He gave her an allergy prick test which came back totally negative. She was allergic to nothing! The doctor assumed that food was not a cause of her asthma. I was told that the cold winter nights were triggering her asthma, to go home and put her back on her steroid puffer. This winter she seemed to get worse. As the cold nights set in, her coughing increased to the point that I was up every 20 minutes comforting her. I was desperately trying to keep her off the steroid puffer and I was about to give in, when I saw your book.

My daughter has now been on the failsafe diet for three weeks with amazing results. By the end of the first day she coughed only once, same the second day and the next two days nothing. At the end of the second week I made a mistake. I bought a packet of plain rice crackers, the ingredients: rice, canola oil and salt. I thought they would be okay (I realised later they probably contain antioxidants in the oil), so my daughter had quite a lot as a snack. That night she was back to coughing every two minutes and using her ventolin puffer. After 24 hours she was okay again and back on the failsafe diet. I realise that we still need to discover her sensitivities but for now she can breath easy with no barking cough and we can both have a good nights sleep. If it hadn't been for your dedication to this cause I don't where we would be today. Thank you. - *reader from WA*

Unlabelled antioxidants in vegetable oil

An aggressive five year old boy who improved dramatically on the elimination diet passed most of his challenges except for a few additives such as artificial colours. After several weeks of excellent behaviour, the boy's condition gradually deteriorated to the stage where he was uncontrollable, breaking windows and punching others. His mother was at a loss to explain the downturn. Eventually, we found the culprit - unlabelled BHA in the vegetable oil used in a gourmet garlic paste that she had started to use more frequently. There was no effect when it was eaten occasionally, but it caused catastrophic results when used every day. – *reader from the NT*

Unnecessary diet restriction due to BHA

When my daughter was about four, she required Ventolin whenever she ate bread and so she ended up wheat free. The only time she has had asthma since last year was during the antioxidant (BHA, 320) challenge. You were right about the wheat - it is no trouble whatsoever. We realise now that our daughter was wheat free unnecessarily for years. – *reader from NZ*

Mislabelling is rife

When a Food Intolerance Network member phoned the manufacturer about Signature Range frozen oven fries (ingredients list says: potatoes, canola oil, salt) she was told firmly there were no antioxidants in the oil. She couldn't understand why her 3 year old son was failing to improve on the elimination diet and seemed to be reacting to their product. Two weeks later the company admitted that their product did contain unlisted BHA under the 5% loophole.

In the same month, another Food Intolerance Network member phoned Goodman Fielder about Gold n Canola oil when she noticed that previously listed tocopherols had disappeared from the label. The consumer hotline officer advised her firmly that tocopherols had been replaced by TBHQ. Another member separately received the same advice. When we pointed out that TBHQ was not listed on the label, the company changed its tune and explained equally firmly that there were no antioxidants in the oil, eventually explaining they had been confused by TBHQ in the New Zealand product. Can we believe them? The wellbeing of our kids depends on word of mouth from people like this. – *readers from WA, NSW and VIC.*

Protease inhibitor deficiency

Over the years, I have had some quite serious reactions to foods containing the antioxidants BHA and BHT. I have been advised that the reason for my particular sensitivity is genetic deficiency of an important protease inhibitor protein. I have a 70 percent deficiency of Alpha1-protease inhibitor (aka alpha1-antitrypsin, alpha1-serpin).

PI deficiency is the most common genetic disorder, affecting about 15 percent of Australians (The pi gene is co-dominant, with about 1 in 400 Australians carrying the severe deficiency). The protease inhibitor is a down-regulator of inflammatory processes associated with a number of metabolic pathways, particularly the myeloperoxidase (MPO) pathway. Consequently, I have adverse reactions with exposure to a number of substances at levels that are generally considered to be safe for persons with the normal pi genotype.

I am very concerned about the wider use of these substances as food additives, particularly where the use of additive is not described on the product packaging. – *reader from NSW.*

ATTACHMENT B

FOOD INTOLERANCE NETWORK FACTSHEET

320 BHA and other antioxidants

Antioxidants 310-312 and 319-321, used in prevent rancidity in oils, can cause a full range of reactions from asthma to insomnia, depression, tiredness, learning difficulties and children's behaviour problems. There are safe alternatives (see below).

Antioxidants are the most hidden of all additives. There are four ways consumers can be tripped up.

* manufacturer fails to list ingredient on the product label

* ingredient is unlisted under the 5% labelling loophole

* consumer hotline gives wrong information when contacted

* staff give incorrect information regarding unlabelled food, eg takeaways

My family has been following the failsafe diet for ten years with excellent results, but over one recent three month period, my daughter's concentration and ability slowly decreased. We were appalled to find that we had been caught, yet again, by food manufacturers. This time the problem was unlisted 320 (BHA) in Devondale Dairysoft butter-oil blend, despite previous assurances from the consumer hotline that the canola oil (forming 22% of the final product) was antioxidant free. Since she was in the final year of a three year course, she was unable to catch up the damage done. The product is now correctly labelled, following strong complaints.

Antioxidants recently won the *Worst Additive* competition on this website.

After battling with her son's behaviour following such treats as supposedly additive-free fish and chips and icecream cones, the winner, Jenny Savige from Warragul in Victoria, wrote:

"Antioxidants are secret unless you go to extreme lengths to ask the supplier of the food and then the manufacturer of the contents … what hope have we got if such nasty additives are hidden in our foods?"

5% labelling loophole

Antioxidants do not have to be listed if vegetable oil forms less than 5% of the final product. In September 2003, Marnie Little from south of Perth suspected antioxidants in Signature Range frozen chips. She was assured by the consumer hotline that the product was free of antioxidants. While on a strict elimination diet she gave her three year old son a handful of chips fried in failsafe oil. Within an hour, her son was 'having screaming fits, teary, really temperamental - like world war three - and waking at night.' It took a week for his behaviour to return to normal. The company eventually confirmed the presence of both 320(BHA) and 319 (TBHQ) in the oil. These do not have to be listed under the 5% labelling loophole, but what are consumers to do when consumer hotlines tell us that their products are antioxidant free?

Harmful antioxidants

310 Propyl gallate

311 Octyl gallate

312 Dodecyl gallate

319 tert-Butylhydroquinone, tBHQ

320 Butylated hydroxyanisole, BHA

321 Butylated hydroxytoluene, BHT

Safe alternatives:

300 Ascorbic acid (vitamin C)

301 Sodium ascorbate

302 Calcium ascorbate

303 Potassium ascorbate

304 Ascorbyl palmitate

306 Mixed tocopherols (vitamin E)

307 dl-a-Tocopherol

308 g-Tocopherol

309 d-Tocopherol

- opaque containers

Where to find harmful antioxidants

Look for these additives in cooking oils, margarines, lards and any other fats or oils. Then look for the products which contain these and you will start to understand the problem. Nearly every processed food contains some kind of fat or oil. It doesn't matter whether the ingredient label says vegetable oil, a specific oil like canola or sunflower, fats of vegetable origin, or beef tallow - unless they list some of the safe alternatives, they will probably contain one of these harmful additives. Small amounts don't affect people unless they are very sensitive, but if you eat them every day, effects will build up.

What the 5% labelling loophole says

If the amount of an ingredient in a food is less than 5% of the food (such as 4.5 per cent sunflower oil added to soymilk), a food additive (such as antioxidant TBHQ, 319) in that ingredient does not have to be included in the ingredients list on the label unless the food additive is performing a technological function in the final food. Who decides is the additive is performing a technological function? The food manufacturers. What if consumption of the unlisted food additive can affect consumers? Too bad.

Home and away

Unlike commercial oils, most but not all cooking oils for home use in Australia are antioxidant-free. New Zealanders are worse off. Virtually all vegetable oils in NZ, and products containing vegetable oils, include at least one potentially harmful antioxidant. In Christchurch, a girl avoided bread and wheat products for eight years after her mother noticed her asthma seemed to be related to sandwiches. When the girl finally undertook an elimination diet with challenges, they discovered her asthma was related to BHA (320), which is present in most breads and margarines.

Avoid fried takeaways

When you eat out, any oils used to cook your food will almost certainly contain at least one of these potentially harmful additives.

Check other products

Check the ingredients of your pantry. Look at your margarine, dairy blend, crackers, biscuits, bread, baked goods, croissants, potato crisps, snack foods, muesli bars, crushed garlic in oil, soymilk and other processed foods. Any food which contains vegetable oils may contain these antioxidants and they are not necessarily labelled. Eat these products every day and you will never know what has affected you.

I discovered this when I carried out research, published in a medical journal, using the failsafe diet for children's behaviour. In the first stage of the study, two of the children failed to improve on the diet. I noticed that both were eating large quantities of a particular biscuit. A call to the manufacturer revealed that the biscuits contained vegetable oil with unlabelled BHA. As soon as we removed these items from the diet, the children improved.

Soymilk

Failsafers were outraged when a health food company started using a sunflower oil containing TBHQ in their soymilks without any mention on the label. Many families using this soymilk gradually realised that the failsafe diet had stopped working for them. When the mother who discovered this change switched her son to another soymilk, he started doing much better. She said 'I'm so angry about manufacturers getting away with what they put in their foods'. The company has since switched to a safe antioxidant.

To avoid harmful antioxidants, you must stick to the products listed on the failsafe shopping list and read the product updates on the website. If you want to eat any unlisted products containing any fats or oils, phone the manufacturers and ask specifically about each of the gallates, TBHQ and BHA listed above - but you might still get the wrong answer. We shouldn't have to rely on word of mouth to judge the safety of food products. Public health is not protected when parents have to go to these lengths to safeguard their children.

What you can do

In a 25 year review of diet and behaviour (www.cspinet.org), scientists from the Centre for Science in the Public Interest concluded that:

"The obvious public health response would be to remove the irritants, if possible, from the foods that children eat."

The answer is clear: **REFUSE TO BUY**! And tell the food companies of your decision.

References

Clarke L. and others. 'The dietary management of food allergy and food intolerance in children and adults'. Australian Journal of Nutrition and Dietetics 1996; 53(3):89-94.

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www.fedupwithfoodadditives.info *updated November 2004*