

# **SUBMISSION**

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Submission to

**Food Standards Australia New Zealand**

in response to:

**Proposal P298 – Benzoate and Sulphite permissions in food.**

September 2005

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## 1 THE AUSTRALIAN FOOD AND GROCERY COUNCIL

The AFGC is the peak national organisation representing Australia's packaged food, drink and grocery products industry.

The membership of the AFGC comprises more than 170 companies, subsidiaries and associates which constitutes in the order of 80 per cent of the gross dollar value of the highly processed food, beverage and grocery products sectors (A list of members is included at *Appendix 1*.) The AFGC represents the nation's largest manufacturing sector. By any measure Australia's food, drink and grocery products industry is a substantial contributor to the economic and social welfare of all Australians. Effectively, the products of AFGC's member companies reach every Australian household.

The industry has an annual turnover in excess of \$73 billion and employs 200,000 people - almost one in five of the nation's manufacturing workforce. Of all Australians working in the industry, half are based in rural and regional Australia, and the processed food sector sources more than 90 per cent of its ingredients from Australian agriculture.

The AFGC's agenda for business growth centres on public and industry policy for a socio-economic environment conducive to international competitiveness, investment, innovation, employment growth and profitability.

The AFGC's mandate in representing member companies is to ensure a cohesive and credible voice for the industry, to advance policies and manage issues relevant to the industry and to promote the sector and the virtues of its products, enabling member companies to grow their businesses.

The Council advocates business matters, public policy and consumer-related issues on behalf of a dynamic and rapidly changing industry operating in an increasing globalised economy. As global economic and trade developments continue to test the competitiveness of Australian industry, trans-national businesses are under increasing pressure to justify Australia as a strategic location for corporate production, irrespective of whether they are Australian or foreign owned. In an increasingly globalised economy, companies' ability to internationalise their operations is as significant as their ability to trade globally.

Increased trade, rationalisation and consolidation of businesses, increased concentration of ownership among both manufacturers and retailers, intensified competition and a dynamic, increasingly complex and demanding consumer are features of the industry across the globe. Moreover, the growing global middle-class of consumers is more sophisticated and discerning, driving innovation and differentiation of products and services.

The AFGC is working with governments in taking a proactive, even tactical, approach to public policy to enable businesses to tackle the threats and grasp the dual opportunities of globalisation and changing consumer demands.

## 2 COMMENTS ON THE PROPOSAL

The Australian Food and Grocery Council (AFGC) welcomes this opportunity to make a submission to Food Standards Australia New Zealand (FSANZ) in response to the initial assessment report on Proposal P298 – *Benzoates and Sulphites Permissions in Foods*.

The AFGC **supports option 1:** Maintain the *status quo* by not altering permissions for benzoates and/or sulphites, where there is no available information on the safe current practices or uses of benzoates and/or sulphites in particular foods either as an additive or a processing aid.

The AFGC **supports option 2:** Review and consider reducing permissions for benzoates and/or sulphites for certain foods, where available data demonstrates that safe current industry practices do not require the current maximum permission given in the Food Standards Code.

The AFGC does **not support Option 3:** Review and partially replace the use of benzoates and/or sulphites with alternative preservatives, or consideration of altering the methods of preventing microbial spoilage.

The AFGC supports providing manufacturers with information on the opportunity to use alternative methods of preventing microbial spoilage but notes that this does not require specification in the Food Standards Code unless it results in residues or chemical changes to foods.

The AFGC also notes that Option 3 would only address foods for which an antimicrobial function was the sole concern and would not consider situations where colour stability and oxidation effects were also a matter of concern. This would therefore be of limited value and fail to achieve the intended outcome, namely that some foods would continue to have high levels of sulphites.

The AFGC **supports Option 4:** Encourage consumers to eat a balanced diet and not over-consume foods with high levels of benzoates and/or sulphites. The AFGC notes that this is a necessary function of both FSANZ and the States and Territories and that a range of information is available for the public on both ‘eating a balanced and nutritious diet’ and also concerns about sulphites.

**The AFGC recommends a review of these resources and an assessment of the need to develop new material targeted to the public and health professionals.**

### 2.1 Issues of concern

The AFGC notes that sulphites and benzoates are widely used as they are effective broad spectrum antimicrobial agents that are relatively low cost and ensure the safety of many processed foods. However, they are also important in retaining the colour and freshness of a product, without which products would either look unappealing or would require the addition of other chemicals that reduce oxidation or artificially add colour.

In considering the costs and benefits of using sulphites and benzoates it should be noted that these preservative make an important contribution to limiting spoilage and microbial growth. While this is essential in preventing the growth of pathogens and food poisoning, it is also

valuable in reducing the unnecessary costs to consumers through shortened shelf-life of products.

The AFGC notes that there is poor data available from which to extrapolate the potential saving to the community from food poisoning incidences that are prevented from the use of preservatives. However, it is evident that in the absence of effective microbiological control in high risk products there is a significant risk of food poisoning outbreaks.

### **Information on use by industry**

The data provided by the AFGC shows that the level of benzoates and sulphites used depends on the product and other preservatives that may be used in combination with sulphite. For example, in considering the level of sulphite present in dried fruits, factors such as the level of water activity and the need to preserve the natural colour, and the period of storage for the product need to be considered.

As a result, dried apricots consistently use sulphites to the maximum permitted level of 3000 ppm while dried papaya utilises levels of 300 ppm. It is essential that the maximum permitted level of 3000ppm be retained for dried fruit as a category to enable the continued use in dried apricots and dried pears.

Storage conditions are an important factor as the level of sulphites progressively decreases in these products over the period of their shelf life. Because dried fruit is intended to be stored at ambient temperatures for several months sulphite levels need to be high enough to ensure that the sulphite levels remain effective.

It is therefore important that the FSANZ modelling process take account of the small proportion of dried fruits that use sulphites at this level.

It is also essential that should FSANZ propose alternative food additives which may have antimicrobial and colour preserving functions, consideration be given to unintentional chemical reactions and the added costs that may be incurred through the need to reformulate products.

For example, sulphites are able to be used in combination with salt, nitrites and lactates depending on the product being manufactured. A replacement for sulphites would need to take into account of the potential chemical reactions with these chemicals and the potential reduction in effectiveness of these chemicals as a consequence of the reaction.

### **Consideration of alternative processes**

There are a number of non-thermal processes currently under development which may have the potential to reduce the need for preservatives, but these technologies are yet to reach commercially feasibility.

In particular, there is potential use for hyperbaric (high pressure) processing, pulsed electric fields and ultrasound as potential methods for reducing microbial and viral load without the use of chemicals. However, these methods have yet to fully resolve technical issues, such as the inability to inactivate proteins and enzymes that lead to product spoilage, or the suitability of the methods to current in-line manufacturing processes.

One non-thermal process that has had significant development in the food industry is the use of ultra-violet light as a sterilising agent on clean food preparation surfaces and the reduction of bacterial load in thin film liquids or water supplies. While it is an effective antimicrobial agent, there are limitations on penetration and the types of foods that it is able to be used with that severely limit its applicability in the food industry.

It should also be noted that UV light has a strong potential to initiate certain chemical reactions and polymerisation in foods which would also have undesirable consequences.

## Alternative risk management options

The food industry is aware that certain consumers are sensitive to sulphites and that some consumers may suffer adverse reactions from exposure to high levels of sulphites. Information is currently provided to consumers via the advisory declaration on packaged foods and ingredient labelling using either the name of ingredients or food additive numbers. Consumers who are sensitive to such compounds are therefore able to make informed choices about the foods they purchase and avoid foods that may be of concern.

It is also worth noting that both ANZFA (now FSANZ) and various State jurisdictions have provided the public with information on the effects of sulphites, in particular the potential risks to children who are asthmatic, and provided advice on the levels of sulphites that may be present in a variety of foods. This information is available both on internet sites and is made available to general practitioners and medical centres.

The AFGC is not aware of any significant evaluation as to whether consumers have found this information useful or how effective these have been as part of a risk management strategy.

## 2.2 Potential reduction in permissions

The AFGC has sought data from member companies on actual use of sulphites and benzoates in products. Data has been provided by 20 member companies which has been collated against permissions for additions to foods. Data for sulphite levels are provided in appendix 1 and data for benzoates are provided in appendix 2.

The AFGC notes that the data provided indicates that there are certain categories of foods for which the level of sulphites and benzoates currently used are significantly lower than the maximum level prescribed. However, the AFGC also notes that the data is limited and there are a number of categories for which data have not been provided. **The data provided must be considered with care and considered as indicative only.**

The AFGC recommends that in considering any changes to the permissions for use of sulphites and benzoates FSANZ will need to allow adequate time for companies to communicate world wide with suppliers and manufacturers.

FSANZ needs to be cognisant of the time frames that are inherent in the re-design and development of products and the times for ordering and supply of ingredients from overseas sources. In particular, the AFGC draws attention to the timeframes that were required for the changes to the treatment of herbs and spices using ethylene oxide and that a period of at least two years may be needed if any significant change to current levels is proposed.

The other issues involved relate to food safety issues. FSANZ needs to consider that although there may be technological or chemical alternatives to the use of preservatives in

certain foods and under certain conditions, these alternatives are not necessarily economically feasible or publicly acceptable. Again, the example of the removal of permission to use ethylene oxide to treat imported herbs and spices and replace it with irradiation is both scientifically and technologically justified, yet publicly unacceptable and therefore economically unsustainable.

International trade will be affected due to different levels permitted in other countries and the potential impact on local manufacturers if raw material suppliers are unable or unwilling to reformulate their products for the (small) Australian market. This can culminate in the raw material not being available with the cost to the manufacturer of lost opportunity and lost sales. Other costs to the manufacturer will be any label changes that result from reformulation of the product.

## Appendix 1: Current usage of Sulphites

Food group	Food category	Max Limit	No Data	Range In-Use	Comments on use
<b>Food additives</b>	Preparations of food additives	<b>1000</b>		1000 Colours 10-206 Flavours 50 Stabiliser (2 coy)	Colours (0.08-0.16% used in products); Flavour (used at <2%);
<b>Dairy</b>	Cheese and cheese products	<b>300</b>		<10 (3 coy)	
<b>Ice confection</b>	Ice confection sold in liquid form	<b>25</b>		25 (1 coy)	
<b>Fruit &amp; Vegetables</b>	grapes packed with permeable envelopes	<b>10</b>	<b>ND</b>		
	Longans	<b>10</b>	<b>ND</b>		
	Peeled and/or cut apples and potatoes for manufacturing purposes	<b>200</b>		58 – apple (1 coy)	
	Peeled and/or cut root and tuber vegetables	<b>50</b>		10 (1 coy)	
	Frozen avocado	<b>300</b>	<b>ND</b>		
	Processed ginger	<b>20</b>	<b>ND</b>		
	Dried fruits and vegetables	<b>3000</b>		3000 - Apricots 3000 - Pears 1200 - Apples 1200 - Celery 750 - 1000 - Peas 1200 - Beans 1000 - Carrots 1200 - Celery 200-400 - Potato 300 - Papaya 300 - Pineapple 100 - Orange 50 - Banana 50 - Strawberry	Dried apricot pieces - used in cakes and pastries (Peas Beans Ground Celery Carrots Apples) - used in soups/flavour sachets (0.76% - 6.3% in products) Potato - used in dehydrated potato pumpkin mash Potato flakes - cooked potato balls  Sulphites used in Little Kids Fruit Bars and Muesli Bars. Little Kids bars are marketed for children aged 1-3 years. Finished product sulphite levels: Apricot Fruit Bar 190ppm, Banana Fruit Bar 55ppm, Strawberry Fruit Bar 75ppm, Fruit Salad Muesli Yoghurt Bar 60ppm, Apple Blackcurrant Muesli Yoghurt Bar 30ppm, Sultana Apple Muesli Yoghurt Bar 30ppm



Food group	Food category	Max Limit	No Data	Range In-Use	Comments on use
				10 - Sultanas (3 coy)	
	Desiccated coconut	50		50 (1 coy)	
	Products made from bleached vegetables	750	ND		
	Low joule chutneys, low joule jams and low joule spreads	285		Maramalade - 30 (1 coy)	
	Candied fruits and vegetables	2000	ND		
	Fruit and vegetable preparations including pulp	350	ND		
	Fruit and vegetable preparations for manufacturing purposes	1000		0-500 (3 coy)	
	Imitation fruit	3000	ND		
<b>Confectionary</b>	Icings and frostings	0	ND		
<b>Cereal products</b>	Flour products (including noodles and pasta)	300	ND	0.75 - Fruit bread 0.5 - Fruit muffin (1 coy)	Carry-over from dried fruit results in levels of about 0.75ppm in fruit bread and 0.5 in fruit muffins
	Biscuits, cakes and pastries	300		<70 (1 coy)	Worst case cake scenario using apricots and coconut sulphite carryover is 70ppm
<b>Meat &amp; Seafood</b>	Processed comminuted meat, poultry and game products	500		370 - 500 (3 coy)	As products are cooked before eating much of the sulphites is driven off.
	Sausage and sausage meat containing raw, unprocessed meat *	500		375 - 500 (2 coy)	As products are cooked before eating much of the sulphites is driven off.
	Edible casings	500		<10 (2 coy)	Sulphites are not used as a preservative in regenerated collagen casings. Most likely use is in gut casings as a result of carry-over from hide dehairing process. No data on levels in gut casings.
	Crustacea - uncooked	100	ND		
	Crustacea - cooked	30	ND		
	Fish and fish products - fully preserved including canned	30	ND		

Food group	Food category	Max Limit	No Data	Range In-Use	Comments on use
	Abalone (paua) - canned	1000	ND		
Sweeteners	Sugars and syrups	450		5-300 (2 coy)	
	Tabletop sweeteners – liquid preparation*			10 - 25 (1 coy)	
Vinegar	Vinegars and related products	100	ND		
Sports food	Formulated supplementary sports foods - Solid	115	ND		
	Formulated supplementary sports foods - Liquid	115	ND		
Juices & drinks	Fruit and vegetable juices and fruit and vegetable juice products	115		275 concentrate 30 - 39 as consumed (2 coy)	
	Coconut milk coconut cream and coconut syrup	115	ND		
	Water based flavoured drinks	115		10 - 70 soft drink 40-50 cordial (3 coy)	Figures are for cordial drinks following dilution of 1+ 4. Please note that SO2 declines with age and level at consumer stage for be around 30ppm.
Alcoholic beverages (including no and low alcohol)	Beer and related products	25	ND		
	Wine - sparkling or fortified containing greater than 35 g/L residual sugar	400	ND		
	Wine - sparkling or fortified containing less than 35 g/L residual sugar	250	ND		
	Fruit wine, vegetable wine and mead containing greater than 5 g/L residual sugar	300	ND		
	Fruit wine, vegetable wine and mead containing less than 5 g/L residual sugar	200	ND		
	Alcoholic beverages not included in Std 1.3.1, Schedule 1, Item 14.2	250	ND		
Mixed foods	Sauces and toppings (including mayonnaises and salad dressings)	350		0-161 (3 coy)	

## Appendix 2: Current usage of Benzoates

Food group	Food category	Max Limit	No Data	Range In-Use	Comments on use
Food additives	Preparations of food additives	350		10 (1 coy)	Flavours
	Rennetting enzymes	9000	ND		
Edible oils	Oil emulsions (<80% oil)	1000		600 (1 coy)	
Ice confection	Ice confection sold in liquid form	400		250 (1 coy)	
Fruit & Vegetables	Mushrooms in brine or water and not commercially sterile	500	ND		
	Preserved cherries known as maraschino cherries, cocktail cherries or glace cherries	1000		400 (1 coy)	Maraschino cherries - 1000ppm combine benzoate and sorbate - used in cakes and pastries
	Fruits and vegetables in vinegar, oil, brine or alcohol	1000	ND		
	Low joule chutneys, low joule jams and low joule spreads	1000	ND		
	Fruit and vegetable preparations including pulp	1000		450-550 (1 coy)	
	Chilli paste	3000	ND		
	Imitation fruit	400		400 (1 coy)	
Confectionary	Icings and frostings	1000	ND		
Meat & Seafood	Fish and fish products - semi preserved	2500	ND		
Sweetners	Tabletop sweeteners – liquid preparation*	1000	ND		
Sports food	Formulated supplementary sports foods - Solid	400	ND		
	Formulated supplementary sports foods - Liquid	400		50 (1 coy)	
Juices & drinks	Fruit and vegetable juices and fruit and vegetable juice products	400		1750 concentrate 50 - 250 as used (4 coy)	

Food group	Food category	Max Limit	No Data	Range In-Use	Comments on use
	Coconut milk coconut cream and coconut syrup	1000	ND		
	Water based flavoured drinks	400		170-250 soft drink (2 coy) 60 - 120 cordial (2 coy)	Benzoate level varies from 200 to 400ppm depending upon variety.
Alcoholic beverages (including no and low alcohol)	Fruit wine, vegetable wine and mead (including cider and perry)	400	ND		
	Alcoholic beverages not included in Std 1.3.1, Schedule 1, Item 14.2	400		150 - 250 (1 coy)	
Mixed foods	Dairy and fat based desserts, dips and snacks	700		690 (1 coy)	
	Sauces and toppings (including mayonnaises and salad dressings)	1000		160 - 1000 (3 coy)	

## Appendix 3: AFGC Membership List

### Membership

As at 1 September 2005

AAB Holdings Pty Ltd  
AB Food & Beverages Australia Pty Ltd  
Arnott's Biscuits Ltd  
    Snack Foods Ltd  
    The Kettle Chip Company Pty Ltd  
Asia-Pacific Blending Corporation Pty Ltd  
Australia Meat Holdings Pty Ltd  
Australian Pacific Paper Products  
Beak & Johnston Pty Ltd  
Berri Limited  
BOC Gases Australia Ltd  
Bonland Dairies Pty Ltd  
Boots Healthcare Australia Pty Ltd  
Bronte Industries Pty Ltd  
Bulla Dairy Foods  
Bundaberg Sugar Ltd  
Cadbury Schweppes Asia Pacific  
Campbell's Soup Australia  
Cantarella Bros Pty Ltd  
Cerebos (Australia) Ltd  
Christie Tea Pty Ltd  
Clorox Australia Pty Ltd  
Coca-Cola Amatil (Aust) Ltd  
Colgate-Palmolive Pty Ltd  
Coopers Brewery Ltd  
Dairy Farmers Group  
Devro Pty Ltd  
DSM Food Specialties Australia Pty Ltd  
DSM Nutritional Products  
Fibrisol Services Australia Pty Ltd  
Firmenich Ltd  
Fletchers Foods Pty Ltd  
General Mills Australia Pty Ltd  
George Weston Foods Ltd  
    AB Food and Beverages Australia  
    AB Mauri  
    Cereform/Serrol  
    GWF Baking Division  
    GWF Meat & Dairy Division  
    George Weston Technologies  
    Jasol  
    Weston Cereal Industries  
Gillette Australia Pty Ltd  
GlaxoSmithKline Consumer Healthcare  
Golden Circle Ltd  
Goodman Fielder Ltd  
    Uncle Toby's  
    Meadow Lea Foods  
    GF Commercial  
Green's Foods Ltd  
H J Heinz Company Australia Ltd  
Hans Continental Smallgoods Pty Ltd  
Harvest FreshCuts Pty Ltd  
Heimann Foodmaker Group  
Hoyt Food Manufacturing Industries Pty Ltd

Johnson & Johnson Pacific Pty Ltd  
Kellogg (Australia) Pty Ltd  
    Day Dawn Pty Ltd  
Kerry Ingredients Australia Pty Ltd  
Kimberly-Clark Australia Pty Ltd  
Kraft Foods Asia Pacific  
La Famiglia Fine Foods Pty Ltd  
Madura Tea Estates  
Manildra Harwood Sugars  
MasterFoods Australia New Zealand  
    Food  
    Petcare  
    Snackfood  
Mayne Healthcare Pty Ltd  
McCormick Foods Australia Pty Ltd  
Merino Pty Ltd  
Merisant Manufacturing Australia Pty Ltd  
National Foods Ltd  
Nerada Tea Pty Ltd  
Nestlé Australia Ltd  
    Nestlé Foods & Beverages  
    Nestlé Confectionery  
    Nestlé Ice Cream  
    Nestlé Chilled Dairy  
    Nestlé Nutrition  
    Foodservice & Industrial Division  
Novartis Consumer Health Australasia Pty Ltd  
NutraSweet Australia Pty Ltd  
Nutricia Australia Pty Ltd  
Nutrinova (Australasia) Pty Ltd  
Ocean Spray International, Inc  
Parmalat Australia Ltd  
Patties Foods Pty Ltd  
PB Foods Ltd  
Peanut Company of Australia Ltd  
Pfizer Consumer Healthcare  
Prepared Foods Australia  
Procter & Gamble Australia Pty Ltd  
PZ Cussons Australia Pty Ltd  
Quality Bakers Australia Pty Ltd  
Quality Ingredients Ltd  
    Prima Herbs and Spices  
Reckitt Benckiser (Australia) Pty Ltd  
Ridley Corporation Ltd  
    Cheetham Salt Limited  
Sanitarium Health Food Company  
    Longa Life Vegetarian Products Pty Ltd  
Sara Lee Australia  
    Douwe Egberts  
    Sara Lee Bakery  
SCA Hygiene Australasia  
Schwarzkopf and Henkel  
Sensient Technologies Australia Corp Pty Ltd  
Sigma Pharmaceuticals Pty Ltd

Simplot Australia Pty Ltd  
SPC Ardmona Operations Ltd  
Specialty Cereals Pty Ltd  
Spicemasters of Australia Pty Ltd  
Stuart Alexander & Co Pty Limited  
Sugar Australia Pty Ltd  
Sunbeam Foods Pty Ltd  
SunRice  
Symrise Pty Ltd  
Tetley Australia Pty Ltd  
The Smith's Snackfood Company  
Unilever Australasia  
Waters Trading Pty Ltd  
Wyeth Australia Pty Ltd  
Yakult Australia Pty Ltd

### Associate Members

Accenture  
Amarco Fibre Packaging  
A T Kearney Pty Ltd  
CAS  
CHEP Asia-Pacific  
CoreProcess (Australia) Pty Ltd  
Dairy Australia  
Exel (Australia) Logistics Pty Ltd  
Flintfox (QSL)  
Focus Information Logistics Pty Ltd  
Food Liaison Pty Ltd  
Foodbank Australia Limited  
IBM Business Consulting Services  
innovations & solutions  
KPMG  
Legal Finesse  
Linfox Australia Pty Ltd  
Meat and Livestock Australia Ltd  
Minter Ellison Lawyers  
Monsanto Australia Ltd  
Novozymes Australia  
OTS Search  
PricewaterhouseCoopers  
Queensland Sugar  
Solae Australia Pty Ltd  
Sue Akeroyd & Associates  
Swire Cold Storage  
Touchstone Consulting Australia Pty Ltd  
Wiley & Co Pty Ltd