27 July 2017

Food Standards Australia New Zealand
PO Box 5423 PO Box 10559
KINGSTON ACT 2604

A1130 – Triacylglycerol Lipase as a Processing Aid (Enzyme)

Further to my submission made on behalf of the Network on 14 July, I wish to add one further point:

The current Food Standards Code requires that lipases are shown on the ingredients label as they are a regulated additive. My understanding is that if this current lipase is to be hidden from view as a processing aid then the Food Standards Code will need to be amended by a full public process.

1104 Lipases
Australia New Zealand Food Standards Code Schedule 8:
https://www.comlaw.gov.au/Details/F2015L00478

Again, I make the point that while we do not oppose the use of the enzyme *per se* we object strongly to it being classified as a processing aid. As consumers, we want to know what changes have been made in our food. To hide the cause of the the change as a 'processing aid' is deliberately misleading.

We look forward to a favourable response to this reasonable request that consumers are informed what is in their food, as your Act requires.

Regards

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Ref 1: http://www.fedup.com.au/images/stories/TheRealFoodtrend.pdf

ANNEX A

EXERPT FROM: **JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FOOD ADDITIVES Forty-Ninth Session Macao SAR, China, 20-24 March 2017**

PROPOSED DRAFT REVISION TO THE INTERNATIONAL NUMBERING SYSTEM (INS) FOR FOOD ADDITIVES (CAC/GL 36-1989)

Deletion of amylases(INS 1100 i, ii, iii, iv, v, vi), proteases(INS 1101 i, ii, iii, iv, v, vi)and lipases(INS 1104)

10. Amylases (INS 1100 i, ii, iii, iv, v, vi), proteases (INS 1101 i, ii, iii, iv, v, vi), lipases (INS 1104) are not justified for use as food additives since they fall outside the scope of the definition for food additives. These substances have no activity in final food (flour and bakery products) because the production process typically includes heat inactivation of the enzyme in order to terminate the process when the desired effect is obtained.

11. In compliance with table 3 of GSFA, amylases (INS 1100 i, ii, iii, iv, v, vi), proteases (INS 1101 i, ii, iii, iv, v, vi) and lipases (INS 1104) could be used in broad food categories in accordance with GMP. In some of these FC activity enzymes could be manifested.

12. Amylases (INS 1100 i, ii, iii, iv, v, vi), proteases (INS 1101 i, ii, iii, iv, v, vi) and lipases (INS 1104) are digestive enzymes. They have been broadly used in therapy of digestive tract diseases. However in case of systematic use of digestive enzymes with food there could be imbalance in digestive process:

- Decrease production of endogenic digestive enzyme
- Change of Michaelis constant, from which depend of enzymatic reaction rate in the digestion of food
- Violation allosteric control of enzyme activity
- Hormone imbalance which are for supervising production of digestive enzyme responsible in the human organism.

13. For example, changing quantity of lipase and amylase could lead to imbalance of endocrine function of pancreas and lowering organism tolerance into glucose. It should be noted that:

- As producers of these food additives permitted microorganisms with modified DNA
- Volumes of enzymes production and food produced with help of enzymes are constantly increased.

14. Produced by GM microorganisms enzymes could have different characteristics from enzymes elaborated in digestive tract:

- Another optimum of temperature and pH for enzyme activity
- Different enantiomers could have different type of enzyme activity.

15. For example, the possibility of negative influence of food additive lipase (in case its use in a higher concentration) showed in:

- WHO Food Additives Series: 71, World Health Organization, Geneva, 2015, p.27-37;

- Safety evaluation of certain food additives World Health Organization, Geneva, 2012.-p.39-51;
- Safety evaluation of certain food additives World Health Organization, Geneva, 2012.-p. 51-63;
- Sixty-first report of the Joint FAO/WHO Expert Committee on Food Additives, WHO 2004, 15-20.