

Nutritional composition of infant formula

Legislative Proposal Relating to
Formula Products and Foods Intended for
Infants and Young Children under the Age of 36 Months
in Hong Kong

4th Technical Meeting with Trade
(Laboratory Service Providers)

17 October 2013

Codex requirement

- CODEX STAN 72 – 1981 covers **nutritional composition** of infant formula. The level of energy and nutrients shall fall within the range specified by Codex

Codex composition requirement

- Compositional requirements
 - Essential composition (energy + 33 nutrients (i.e. “1+33”))
 - Energy
 - Protein, Carbohydrates
 - Total fat, Linoleic acid, α -Linolenic acid
 - 13 Vitamins
 - 12 Minerals and trace elements
 - 3 Other substances (Choline, Myo-Inositol, L-Carnitine)
 - Optional ingredients
 - Taurine
 - Total nucleotide
 - DHA
 - Fluoride

- Detailed requirements of certain nutrients

Detailed requirements of certain nutrients by CODEX STAN 72 – 1981

- Amino acid
- Lauric and myristic acid, trans fatty acid, eurcic acid
- Phospholipids
- Ratio of linoleic to α -linolenic acid
- Vitamin E in relation to PUFA
- Ratio of calcium to phosphorus
- Taurine (if added)
- Ratio of DHA:AA; EPA:DHA (if DHA is added)
- Fluoride

Nutrient	Consideration
Lauric and myristic acids	Potential negative effects on serum cholesterol and lipoprotein concentrations
Erucic acid	No known nutritional benefit for infants; observation in animals have indicated potential myocardial alterations
Trans fatty acid	No known nutritional benefit for infants; may affect essential fatty acid metabolism, lipoprotein metabolism and potential impairment of early growth
Vit E : PUFA	To take into account the increase Vit E requirement with increased no. of double bonds in dietary fatty acid supply
Taurine	Taurine is a major constituent of bile salts and is abundant in foetal and neonatal human brain. No need for mandatory addition. Recommendation indicated a safe level of optional addition
DHA: AA; EPA: DHA	Safety of levels/ratio deviated from the recommendation has not been adequately demonstrated. Inappropriate intake amount /ratio may affect metabolism of fatty acids (which might eventually have impact on body functions, e.g., renal function, blood coagulation and immunological reactions)
Fluoride	Risk of dental fluorosis for high intake

Definition of nutrients

- Definition of nutrients have been discussed in the 2nd Technical Meeting with Laboratory Service Providers held on 15 March 2013
- Definition can be checked from the powerpoint presentation uploaded on the CFS dedicated website for the legislative proposals

Way forward

- We are considering to include nutritional composition requirements and detailed requirements of some nutrients of infant formula in the proposed regulation
- If considered necessary, detailed requirements of nutrients that do not include in the proposed regulation will appear in the form of trade guideline as recommendations

Nutrition labelling of infant formula

- According to CODEX STAN 72 – 1981, fluoride should not be added to infant formula. Its level should not exceed 100 µg/100 kcal or 24 µg/100 kJ in the infant formula prepared ready for consumption
- Aus/NZ requires infant formula having exceeding level of fluoride to bear some sorts of warning statements to remind consumers on the risk of dental fluorosis

For comments and discussion