



# **Iodine Content in Infant Formulae**

**Trade Consultation Forum**

**Centre for Food Safety  
28 September 2012**



# Purpose

- Briefs Members on the recent incident on the low iodine content in certain infant formulae



# Infant Formula Definition

- Codex: a breast-milk substitute specially manufactured to satisfy, by itself, the nutritional requirements of infants during the first months of life up to the introduction of appropriate complementary feeding
- In Hong Kong, it usually refers to formula products for infants 0-6 months
- Local retail market ~40 brands, ~60 infant formula products



# Iodine

- An essential nutrient used for the synthesis of thyroid hormones by the thyroid gland
- Diet is the major source of iodine intake for humans
  - Marine fish and marine algae are naturally relatively rich in iodine
  - Also present in milk
  - Small amount present in local tap water ( $\sim 10 \mu\text{g/L}$ )
  - Not detected in bottled distilled water
- For formula-fed infants, before the introduction of complementary food (normally at around 6 months), infant formula is their only food source of dietary iodine



# The Survey

- Since May 2012:
  - Embarked on a 2-year survey on nutritional composition of infant formulae available in local market
  - Testing benchmark: Codex Standard for Infant Formula and Formulas for Special Medical Purposes Intended for Infants (Codex Stan 72-1981)
    - Prescribes levels of energy + 33 essential nutrients
- At present
  - No specific legislation governing nutritional composition (including iodine) of infant formulae
  - Section 54 of Cap. 132:
    - Covers all food including infant formula
    - All food for sale must be fit for human consumption



# Initial Findings (1)

- 1st round testing: May-July 2012
  - End July 2012: preliminary results available
  - Risk assessment: Infants fed solely on 2 formulae concerned, the provided iodine content will be less than 1/3 of WHO iodine intake recommendation of  $15 \mu\text{g/kg BW/day}$ 
    - According to instructions provided by manufacturers on label
    - Taking into account iodine content in tap water ( $\sim 10 \mu\text{g/L}$ )
  - may affect thyroid functioning → potential impact on brain development

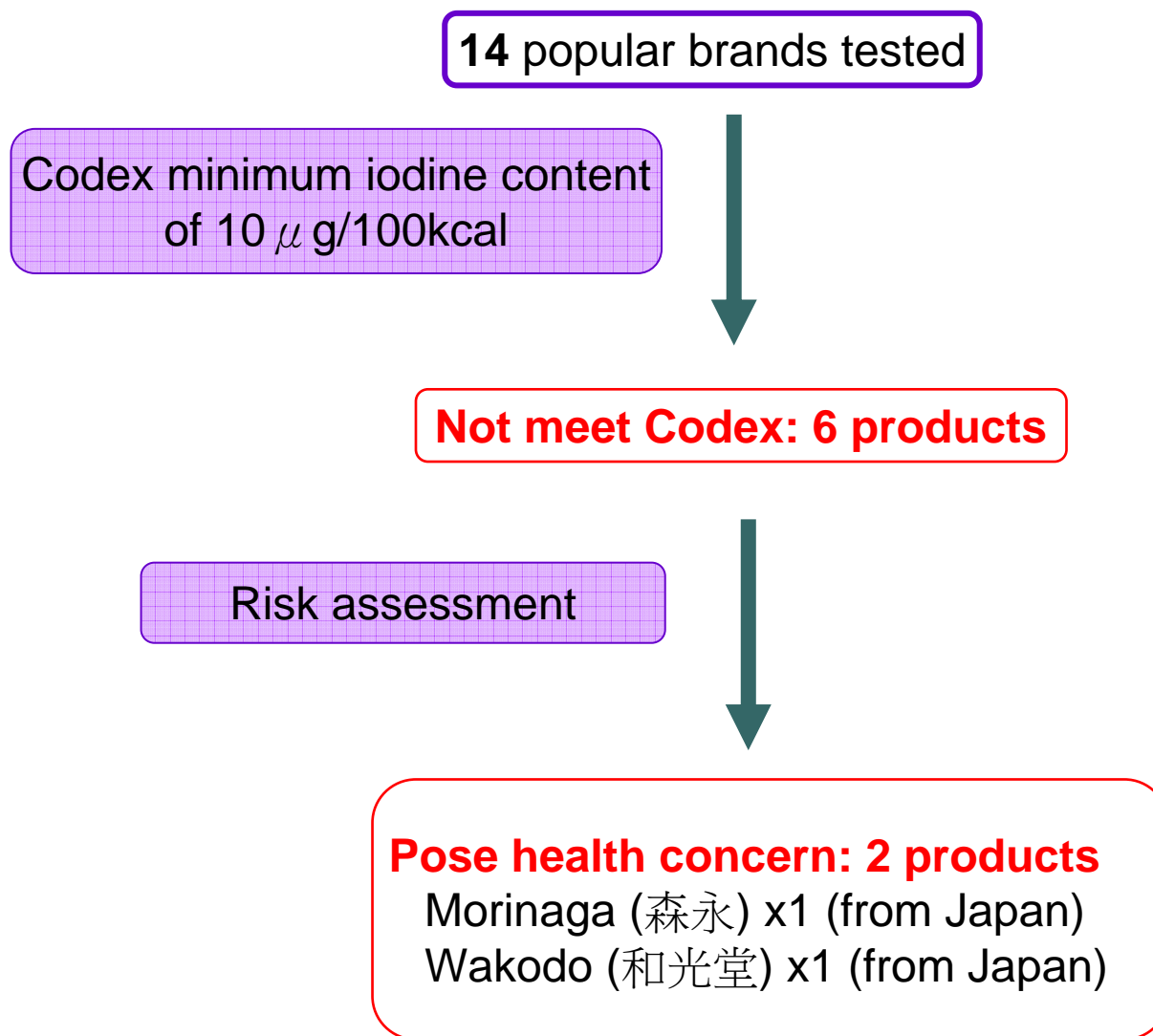


## Initial Findings (2)

- Further testing + more comprehensive risk assessment + consultation with medical professionals specialised in pathology, endocrinology & paediatrics
  - ➔ Government decided to adopt a prudent course of action
  - ➔ Test results announced on 8 Aug 2012



# Summary of Initial Findings







# Follow-up Measures - CFS

- **Trade:** informed of results
- **Relevant importers:** asked to stop sale of the 2 products concerned and initiate recall
- **Parents:** advised to stop feeding their infants with these products and switch to other infant formulae with adequate iodine content if breastfeeding is not feasible
- **Hotlines:** provide information to concerned parents and handle any related enquiries from the public
- **Dedicated website:**
  - FAQs regarding iodine in infant formula, iodine levels in selected infant formulae available in Hong Kong
  - Test results announced



# Follow-up Measures - DH

- **Hotline:** to provide health advice
- **Thyroid function test:** provided for infants 1-8 months who had been taking the infant formulae with low iodine content
  - 112 infants had blood samples taken for a thyroid function test at DH's designated clinics
  - Only 2 blood samples' TSH outside reference range
    - Not due to iodine deficiency
    - Referred to HA paediatric specialist clinic for follow-up

(As at 27 August 2012)

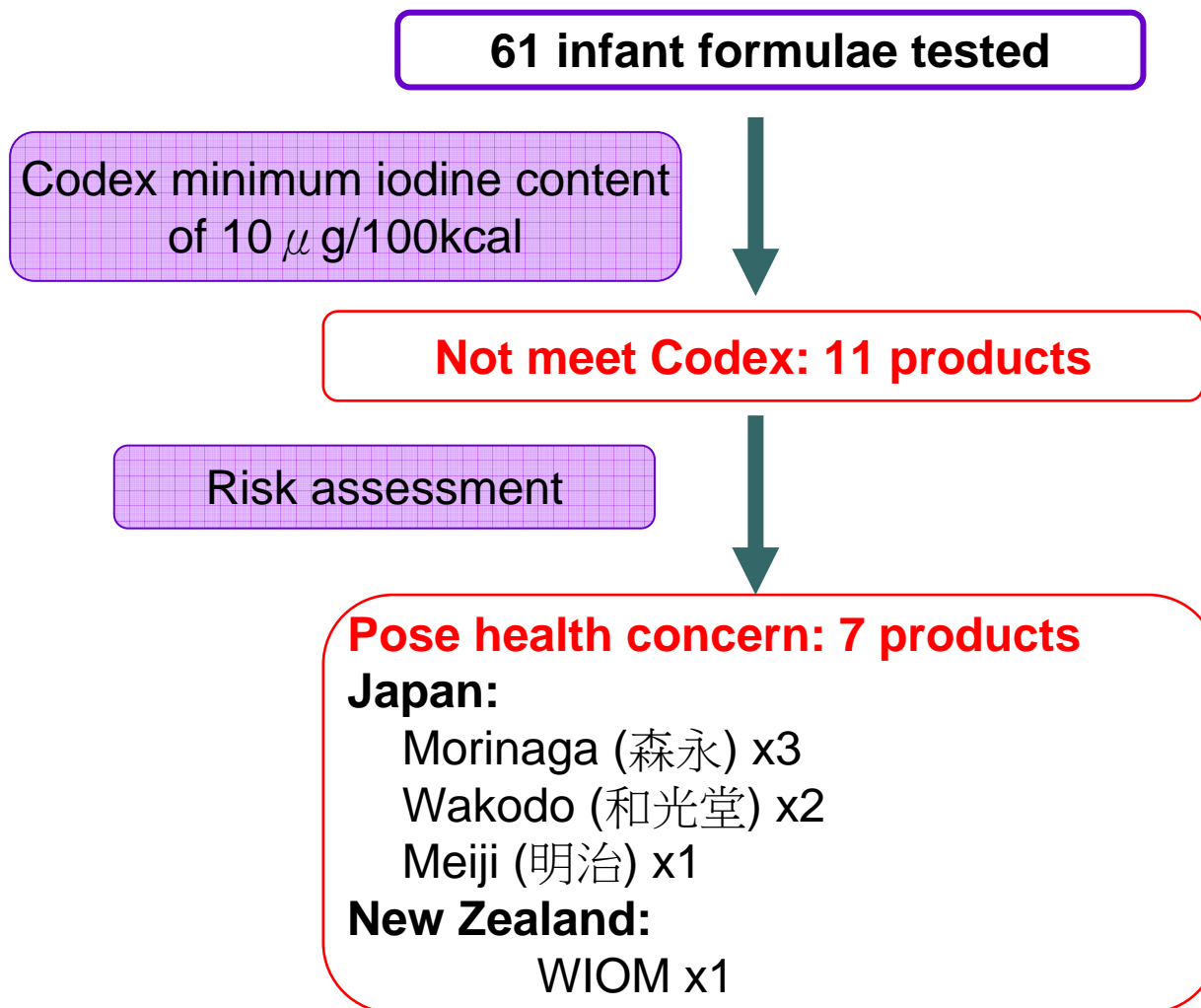


# Further Testings

- As at 25 September 2012, 7 products have health concerns
  - **Parents** bought the affected products: advised to switch products
  - **Trade**: to stop selling the products concerned immediately



# Summary of Latest Results





# Way Forward (1)

- Infant formula products :
  - As at 25 Sept 2012:  
61 products has been tested on iodine content
  - CFS will continue to keep in view infant formulae available in the market and will conduct tests when untested products are found
  - Results to be announced ASAP when tests are completed



## Way Forward (2)

- CFS continue testing nutritional composition (Codex standard) in infant and follow-up formulae available in local market
  - **End 2012:** to complete tests on remaining 32 nutrients + energy in infant formula
  - **First half 2013:** to complete tests on follow-up formulae
  - Release test results in phases
  - Appropriate follow-up actions will be taken promptly if findings indicate potential health concern for infants
- Government will expedite its work to **formulate regulatory proposals** regarding formulae and food for infants and young children

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