

Restriction of Melamine in Milk and Dairy Products – Limits & Test Methods

In view of the recent incidents discovering the presence of **Melamine** in milk and dairy products, to protect the safety and health of the general public, the Hong Kong Government has amended the **Harmful Substance in Food Regulation (Cap. 132 AF)**¹ with publication in the Gazette on 23 September, 2008 and came into operation on the day of the gazettal to restrict the melamine levels (see **Table 1A**) in food.

Table 1A – Restriction of Melamine Levels in Hong Kong¹

Product	Regulatory Limit
Milk, any food intended to be consumed principally by children under the age of 36 months	≤ 1 mg/kg
Any food intended to be consumed principally by pregnant or lactating women	≤ 1 mg/kg
Other food	≤ 2.5 mg/kg

On 7 October, 2008, the Chinese government has issued a joint Public Notice No. 25 of 2008² for the temporary measures restricting the melamine levels in milk and dairy products (see **Table 1B**). On the same day, the **AQSIQ** (General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China) and **SAC** (Standardization Administration of the People's Republic of China) jointly published a new national standard **GB/T 22388-2008**³ for the **Determination of Melamine in Raw Milk and Dairy Products**. Both the Public Notice and the new GB standard came into operation on the same date of publication.



Table 1B – Restriction of Melamine Levels in China²

Product	Regulatory Limit
Infant formula	≤ 1 mg/kg
Liquid milk (including raw milk), milk powder, milk powder in any other formulation	≤ 2.5 mg/kg
Other food containing 15% of milk component	≤ 2.5 mg/kg

GB/T 22388-2008 has specified three testing methods (see **Table 2**) for determination of melamine in raw milk, dairy products and any other milk containing products.

Table 2 – Different Test Methods for Determination of Melamine in Milk and Dairy Products³

Test Method	Limit of Quantitation	Application	
		Quantitative Analysis	Qualitative Analysis
Method 1: HPLC-UV or HPLC-DAD	2 mg/kg	✓	---
Method 2: LC-MS/MS	0.01 mg/kg	✓	✓
Method 3: GC-MS			
a) GC-MS	0.05 mg/kg	✓	✓
b) GC-MS/MS	0.005 mg/kg	✓	✓

¹ Harmful Substances in Food (Amendment) Regulation 2008: http://www.cfs.gov.hk/english/whatsnew/whatsnew_fstr/files/harmful_substances_melamine_e.pdf

² 五部门联合公告2008年第25号: <http://www.sac.gov.cn/templet/default/ShowArticle.jsp?id=4557>

³ 中华人民共和国国家标准批准发布公告2008年第13号(总第126号): <http://www.sac.gov.cn/templet/default/ShowArticle.jsp?id=4555>

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