



Australian Dairy Authorities'  
Standards Committee

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# **MINIMUM SAMPLING GUIDELINES FOR DAIRY PRODUCTS**

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## 1. Scope

These guidelines apply to all dairy manufacturers, producing for the domestic market and in some cases the export markets. (See Export Control (Processed Food) Orders).

The guidelines relate to microbiological status and where necessary the chemical status of final product and assume that the manufacturing plant has a Hazard Analysis and Critical Control Point (HACCP) plan that meets regulatory requirements. These guidelines are structured to verify the efficacy of the operating HACCP system, provide a compliance/non-compliance decision with stipulated end-point food standards. The standards listed are domestic (Australian Food Standards Code) and export (Export Control (Processed Foods) Orders).

The guidelines also provide sampling intensity after non-compliance or failure is detected against the nominated microbiological or chemical criteria.

## 2. AQIS Export Requirements

The testing requirements for dairy product that is to be exported are contained in schedule 4 of the Export Control (Processed Food) Orders.

The testing and sampling programs in these guidelines may not meet the minimum testing required under the Export Control (Processed Food) Orders.

If product is being manufactured for export or could be exported the testing requirements under Schedule 4 of the Export Control (Processed Food) Orders should be followed to ensure export-testing requirements are met.

Sampling frequency nominated in these guidelines may also be applied at establishments processing for export and verifying their compliance with requirements of Schedule 4 of the Export Control (Processed Food) Orders. In some cases tests against specific requirements of importing countries may have to be carried out.

## 3. Application

The guidelines will be used by company auditors (in-house and third party); regulators and market access negotiators to ensure that production meets stated standards.

The sampling should be conducted by company staff during production, and analysis conducted in a suitably accredited laboratory.

## 4. Purpose

These guidelines will:

- define minimum sampling for microbiological attributes that will verify the effectiveness of an establishments HACCP system;
  - provide regulatory bodies with confidence that standards are being met;
  - provide national uniformity across dairy product sampling and testing;
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- Assist designers of HACCP systems to include minimum sampling (as recommended in the guide) in HACCP plan, and so create consistency in determination of appropriate minimum testing for HACCP system verification.

## 5. Definitions

### Accredited Laboratory

Laboratory registered with NATA and accredited to perform the analysis.

Or

Licensed/certified by regulatory Authority and participating in a recognised laboratory comparison program.

### Batch / Lot

Dairy product of a particular product line made or packed under essentially the same conditions. Ordinarily from a particular preparation or package unit and during a particular time usually not exceeding 24 hours.

### Equivalent Method

Analytical method that has satisfactorily undergone the Standards Australia 'Guide to determining equivalence of food microbiology test methods'.

### Product Line

General category of dairy product for which minimum guidelines apply. Eg hard cheese or liquid milk. There are 14 product lines covered by these guidelines.

### Post Pasteurisation Additions

Condiments, flavouring etc. added to a product after pasteurisation. These additions could contaminate the pasteurised product and may require special testing to determine safety.

### Representative Sample

The random selection of items or units of product representative of a batch/lot to provide sufficient sub-samples required for analysis.

### Risk Level

All products have been categorised into two risk levels.

- **High Risk** for products that have no inherent characteristics that limit the growth of pathogens; and
- **Low Risk** for products that because of inherent characteristics (eg low pH) restrict the growth of pathogens, or are considered low risk based on empirical evidence. (Eg. Cream)

### Sampling Plan

The statement of the sample size or sizes to be taken from a batch/lot and the associated acceptance and rejection criteria. The number of sub-samples (n) is stipulated in methodology.

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*Definitions continued...*

### **Standard Method**

Australian standard method or other standard method (eg. IDF, AOAC, ISO) accepted by the relevant Authority (State Authority, AQIS) for the analysis concerned

### **Samples per Month**

The minimum samples that must be done based on risk.

### **Tests**

The tests that must be done on each product as listed in the guidelines.

## **6. Minimum Sampling Requirements**

### **High Risk**

- One sample per product line.
- Every two weeks.

### **Low Risk**

- One sample per product line.
- Every month.

## **7. Product Sampling**

A representative sample should be taken from a batch/lot using procedures per Australian Standards Method AS1166-1992 for the sampling of dairy products.

Sub-samples from the same product line can be composited for testing. If the results of a composited sample exceed the microbiological limit, all products from the composited sample would be subject to the clearance testing in Section 9.

## **8. Minimum Testing Guidelines**

As per Attachment 1

The table in attachment 1 details the testing guidelines for bacteriological criteria. For some products chemical tests will be essential for determining food safety and these tests must also be included in the testing required in the HACCP program. **The test would include pH for yoghurt and phosphatase for milks, cheese and cream.**

**Note:** The guidelines in Attachment 1 should be seen as the minimum sampling and testing that will be required and would only apply to small production runs (less than 1000Litres/day). For larger factories testing requirements would be determined in consultation with Regulators.

## **9. Testing Laboratory**

The testing done to meet the minimum guidelines must be carried out in an accredited laboratory as per definition.

## **10. Clearance Testing for Product found to exceed microbiological or chemical limits**

When a product fails the standards in attachment 1 the product line that failed to meet the standard must be sampled and tested until five consecutive batches meets the standards. The product should be tested against all the specifications in attachment 1, even if only one microbiological specification was exceeded.

If a dairy product fails the Listeria test the clearance procedures per the Listeria Manual apply and if milk powder fails the Salmonella test the clearance procedure per the Salmonella Manual apply.

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## Attachment 1

### MINIMUM TESTING GUIDELINES FOR DAIRY PRODUCTS

Product Line	Risk Level	Test	Standard
All products with post pasteurisation additions	High	Testing requirements to be determined in consultation with SDA based on the types of ingredients.	
<b>Pasteurised Liquid Milk</b>	High	E. coli*	Not exceeding 1cfu/mL
		L.monocytogenes	Not detected in 25g
<b>UHT</b>	Low	No requirements – not a food safety issue	
<b>Cheese</b> Moisture < 40% pH < 5.0	Low	CPS	Not exceeding 100cfu/g
		E.coli	Not exceeding 10cfu/g
<b>Soft Cheese</b> Moisture ≥ 40% pH ≥ 5.0	High	CPS	Not exceeding 100cfu/g
		E.coli	Not exceeding 10cfu/g
		L.monocytogenes	Not detected in 25g
<b>Powdered Infant Formula</b>	High	SPC	Not exceeding 100 cfu/g
		Coliforms	Nil in 1g
		Salmonella	Nil in 25g
		B.cereus	Nil in 1g
		CPS	Nil in 1g
<b>Dried Milk Powder</b>	High	Salmonella	Not detected in 25g
<b>Butter</b>	Low	E.coli	Not exceeding 10cfu/g
<b>Dairy Dips</b> Dips with a pH of < 4.5 see section 8	High	E.coli	Not detected in 0.1g
		L.monocytogenes	Not detected 25g
<b>Dairy Desserts</b>	High	E.coli	Not exceeding 10cfu/g
		CPS	Not exceeding 100cfu/g
		L.monocytogenes	Not detected in 25g
<b>Ice Cream</b>	Low	E.coli	Not exceeding 10cfu/g
		L.monocytogenes	Not detected in 25g
<b>Ice Cream Mix</b>	High	E.coli	Not exceeding 10cfu/g
		L.monocytogenes	Not detected in 25g
<b>Sweetened Condensed Milk</b>	Low	No requirements – not a food safety issue	
<b>Cream</b>	Low	E.coli*	Not exceeding 10cfu/g
		L.monocytogenes	Not detected in 25g
<b>Raw Milk Products</b>	High	Campylobacter	Nil in 10mL
		Coliforms	Not exceeding 100cfu/mL
		E.coli	Not exceeding 10cfu/mL
		L.monocytogenes	Nil in 25mL
		Salmonella	Nil in 25mL
		SPC	Not exceeding 150,000 in 1mL

- Alternative testing scheme providing comparable or greater confidence can be used. eg. Based on Coliform testing and further testing for E.coli if >10cfu/ml is acceptable.