<table>
<thead>
<tr>
<th>Title</th>
<th>Prepare samples for microbiological tests in the dairy laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>4</td>
</tr>
<tr>
<td>Purpose</td>
<td>People credited with this unit standard are, for milk and/or other dairy products, able to: explain sample preparations for microbiological tests; prepare samples for microbiological tests; and troubleshoot abnormal situations while preparing samples for microbiological tests, in the dairy industry.</td>
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<tr>
<td>Classification</td>
<td>Dairy Manufacturing &gt; Dairy Laboratory Methodology</td>
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<tr>
<td>Available grade</td>
<td>Achieved</td>
</tr>
<tr>
<td>Entry information</td>
<td></td>
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<tr>
<td>Critical health and safety prerequisites</td>
<td>Open.</td>
</tr>
</tbody>
</table>

**Explanatory notes**

1. Performance must be demonstrated and assessed in accordance with organisational requirements.

2. *Organisational requirements* refers to instructions to staff on policy and procedures (including the application of legislation to work site situations) which are formally documented or generally accepted at the work site. This may include legislation; industry standards and methods; national and international standards and methods; standards and methods published in internationally recognised reputable texts; customer/organisation developed methods, standard operating procedures, specifications, manuals, and manufacturer’s information.


4. *Sample preparation* may include but is not limited to preparation for: Anhydrous Milk Fat Products, Butters/Butter Mixes, Caseins, Caseinates, Cheese, Frozen Milk Products, Lactalbumins, Milk Powders, Whey Protein Concentrates, Custards/Desserts/Cream, Fermented Milk/Sour Cream, Milk Based Infant Food, Liquid Milks, Creams/Ice cream mixes, Milk Protein Concentrate. Evidence for a minimum of three preparations is required.
Outcomes and evidence requirements

Outcome 1

Explain sample preparations for microbiological tests performed on milk and/or other products.

Evidence requirements

1.1 The principle of the preparation is explained in terms of technology and processes involved.

1.2 Critical stages of the preparation are explained.

Range may include but is not limited to – diluents selection, diluents ratio, diluents pH, diluents temperature, sample size, sample temperature, mixing techniques.

1.3 Variables of the preparation are explained and the process of eliminating variables is described.

Range may include but is not limited to – equipment, apparatus, reagents, sample, technique, contamination, environment.

1.4 Quality assurance of the preparation is explained.

Outcome 2

Prepare samples for microbiological tests on milk and/or other dairy products.

Evidence requirements

2.1 Appropriate procedure for sample preparation is selected.

2.2 Quantities of product and diluent are calculated and measured.

2.3 Product is dispersed and sample taken.

2.4 Samples are prepared in a safe and aseptic manner.

2.5 Equipment is cleaned and stored and samples and waste are disposed of.

Outcome 3

Troubleshoot abnormal situations involving preparation of samples.

Evidence requirements

3.1 Troubleshooting abnormal situations identifies the nature of the problem, uses effective problem solving techniques and reaches a valid solution.
Replacement information

This unit standard and unit standards 21995, 21997 have been replaced by unit standard 29133

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

<table>
<thead>
<tr>
<th>Process</th>
<th>Version</th>
<th>Date</th>
<th>Last Date for Assessment</th>
</tr>
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<tbody>
<tr>
<td>Registration</td>
<td>1</td>
<td>16 December 2005</td>
<td>31 December 2018</td>
</tr>
<tr>
<td>Review</td>
<td>2</td>
<td>17 September 2015</td>
<td>31 December 2018</td>
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Consent and Moderation Requirements (CMR) reference 0022

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.