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| **Emerg Lvl 5****Fermentation** | **Liquid fermentation technical skills and theory – elective** |

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| **Kaupae |** Level | 5 |
| **Whiwhinga |** Credit | 10 |
| **Whāinga |** Purpose | To provide ākonga with the ability to apply technical knowledge and theory to the fermentation of liquid food items under observation in a culinary context. |

**Hua o te ako me Paearu aromatawai |** Learning outcomes and assessment criteria

| **Hua o te ako |** Learning outcomes | **Paearu aromatawai |** Assessment criteria |
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| 1. Select and apply fermentation techniques to making liquid food products | 1. Produce fermented liquid food products by applying technical knowledge and theory of fermentation to achieve sensory balance. |
| It is recommended that you can show evidence of different food products. |

**Pārongo aromatawai me te taumata paearu |** Assessment information and grade criteria

*Assessment specifications:*

Performance of all assessment activities must comply with Health and Safety at Work and Food Safety requirements, while maintaining food quality.

The assessment of this skill standard could be conducted in a real or simulated workplace setting.

Assessment should be based on the learner's ability to apply technical knowledge and theory to produce food products using fermentation methods. The assessment should include observation, questioning, and review of physical evidence developed during the process.

Suggested assessment activities:

* conduct a fermentation experiment using various micro-organisms.
* preparing a variety of fermented food.
* troubleshooting a fermentation process.
* conduct a sensory analysis of fermented foods.

***Ngā momo whiwhinga |*** *Grades available*

Achieved

**Ihirangi waitohu |** Indicative content

The learning outcomes of this skills are established with the kaupapa of engaging with technical knowledge and theory to progress development of professional practice.

The principles of kaitiakitanga, manaakitanga, whanaungatanga and kotahitanga are under the rangatiratanga of mana whenua and must underpin all learning in this skill standard.

Learning may cover but is not limited to the following content:

* Applying the theory of temperature and medium control (a deep understanding of the methods of cookery and what is happening in fermentation from a food science perspective) to transform ingredients into food products.
* Applying the theory of sensory analysis to allow for the development of the desired sensory expectations of the food items.
* Applying the theory of nutrition and dietary restrictions for the development of safe to eat dishes.
* Different types of microorganisms involved in fermentation and their roles in the process.
* The factors that influence the fermentation process such as culinary technique, temperature, pH, and microbial culture.
* The impact of different fermentation techniques on the final product, such as wild fermentation vs. controlled fermentation.
* The safety considerations when fermenting food and the risk of spoilage or contamination.

**Rauemi |** Resources

Legislation relevant to this skill standard may include but is not limited to:

* + Food Act 2014
  + Health and Safety in Employment Act 2015.

Applicable procedures found in the following:

* + establishment performance guidelines and standards.
  + equipment manufacturer’s procedures and specifications.
  + Government and local body legislation.

Definitions

* *Sensory expectations* refer to the anticipated experiences and perceptions that individuals have about the sensory aspects of food. These expectations involve the senses of sight, smell, taste, touch, and even hearing.
* Technical knowledge in this context covers the practice of controlling the degree of fermentation and sensory balance.
* Theory in this context means an ability to explain the effect of different fermentation methods to create a balanced sensory experience.

**Pārongo Whakaū Kounga |** Quality assurance information

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| **Ngā rōpū whakatau-paerewa |** Standard Setting Body | Ringa Hora Services Workforce Development Council |
| **Whakaritenga Rārangi Paetae Aromatawai |** DASS classification | Service Sector > Hospitality > Cookery |
| **Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga |** CMR | 0112 |

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| **Hātepe |** Process | **Putanga |** Version | **Rā whakaputa |** ReviewDate | **Rā whakamutunga mō te aromatawai |** Last date for assessment |
| **Rēhitatanga |** Registration | <type here> | [dd mm yyyy] | [dd mm yyyy] |
| **Arotakenga |** Review | <type here> | [dd mm yyyy] | [dd mm yyyy] |
| **Kōrero whakakapinga |** Replacement information | N/A | | |
| **Rā arotake |** Planned review date | [dd mm yyyy] | | |

Please contact Ringa Hora Services Workforce Development Council [qualifications@ringahora.nz](mailto:qualifications@ringahora.nz) to suggest changes to the content of this skill standard.