

1. Module details

Module name

**POST MIX AND DAIRY PRODUCTS &
REFRIGERATION SYSTEMS**

Nominal duration

Half module

It is anticipated that students will achieve the competencies specified in 18 to 20 hours.

Module codes

NR045

Discipline code

0703320

2. Module purpose

To provide the student with the knowledge and skills to install, service and maintain soft drink dispensing, soft ice cream making and milk storage equipment.

3. Prerequisites

NR012 - System Control
NR011 - Installation

4. Relationship to competency standards

This module provides some of the knowledge and skills underpinning competence in the following standards:
- Electrical Contracting Industry Award Standards Refrigeration.
Stream Units: 5.2, 5.4, 5.5, 5.6, 5.7, 6.2, 7.3, 8.3, and 9.3.

5. Content

1. Dispensing application
 - name various types of post mix dispensers, soft ice cream dispenser and milk vats, plate cooling
 - list typical applications
 - commercial considerations
2. Operating cycle
 - type
 - water quality, sludge, scale, contaminants
 - operating temperatures
 - water nozzles, ball float
 - storage temperatures
 - location
 - refrigeration systems
3. Responsibilities under the Act
 - regulators and standards
 - cleaning
 - electrical and water requirements
 - condensate and drainage points
4. Installation requirements:
 - electrical
 - water supply
 - drainage

6. Learning outcome details

Learning outcome 1

Assessment criteria

Learning outcome 2

Assessment criteria

Learning outcome 3

Assessment criteria

Learning outcome 4

Assessment criteria

- refrigeration service, fault find, maintenance requirements

On the completion of this module, the learner will be able to:

Name and describe the different types of post mix, soft ice cream making and dairy cooling equipment and their application.

1.1 Identify typical post mix, soft ice cream makers, milk vats and plate cooling.

1.2 List typical applications for post mix, soft ice cream makers and milk vats.

Describe the operating principles, features of post mix beverage dispensers, methods of producing soft ice cream and types of milk vats.

2.1 Describe the operating principles of typical post mix, soft ice cream makers, milk vats and plate cooling.

2.2 List special features of components used in post mix, soft ice cream makers, milk vats and plate cooling.

Demonstrate knowledge of relevant codes and regulations for the installation of post mix, soft ice cream makers and milk vats in commercial premises.

3.1 Describe considerations for the location and installation of post mix, soft ice cream makers and milk vats, plate cooling in commercial premises.

3.2 List statutory water and hygienic requirements for post mix, soft ice cream makers, milk vats and plate cooling.

Install, service and maintain post mix, ice cream makers and milk vats in accordance with statutory and manufacturer's requirements.

4.1 Demonstrate skills required in fault find, set and adjust controls, replace parts on a typical post mix, soft ice cream makers, milk vats and plate cooling.

4.2 Describe possible causes of consumer complaint for poor quality product.

4.3 Construct a service/maintenance chart listing procedures to be followed - daily, monthly and yearly.

4.4 Identify cleaning procedures for various components.

7. Assessment Strategies

Short answer questions.
Written tests.
Practical test.

Normally learning and assessment will be conducted in a workshop and classroom environment.

8. Module Delivery Strategies

Delivery strategies must be suitable for both theoretical and/or practical learning and module purpose.

It is recommended that learning and assessment be facilitated in a holistic manner, which may require a learning outcome sequence other than that indicated in the body of this module.

Also, an integrated theory/practice approach should be used where students learn by practical exercises through research and workshop reports.

9. Resource Requirements

A range of post mix and dairy products refrigeration systems and measuring equipment. Resources should be sufficient for students to carry out practical exercises on an individual basis.

Useful references include:

- Australian refrigeration and Air Conditioning Volumes I & II, A CR & D Project Trust Publication
- Dossat, R., J., Principles of Refrigeration, Second Edition, SI Version, John Wiley and Sons, New York, Latest Edition
- Ashare Handbook, Refrigeration Systems and Applications., SI Version, ASHRAE, Atlanta.

10. Occupational health and safety requirements

Learners must be made aware of all relevant OH&S issues in all situations and are required to demonstrate safe working practices at all times.

All work areas must comply with current OH&S legislation.