



Australian Government

Assessment Requirements for FBPGPS2006

Operate a hydrogenation process

Release: 1

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Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has:

- conducted pre-start checks on machinery used for hydrogenation
- started, operated, monitored and adjusted hydrogenation process equipment to improve the hardness, viscosity, flavour and shelf-life of oils to achieve required quality outcomes
- taken corrective action in response to typical faults and inconsistencies
- completed workplace records in required format
- applied safe work practices and identified work health and safety hazards and controls
- safely shut down equipment
- applied food safety procedures to work practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and basic principles of the hydrogenation process, including a basic understanding of the chemical structure of oil and the effect of hydrogenation on this structure
- basic operating principles of equipment, including:
 - main equipment components
 - status and purpose of guards
 - equipment operating capacities and applications
 - the purpose and location of sensors and related feedback instrumentation
- services required for a hydrogenation process and action to take if services are not available
- the flow of the hydrogenation process and the effect of outputs on downstream edible oils and fats processes

- quality characteristics to be achieved by the hydrogenation process
- quality requirements of oil, catalyst and filter aid as used, and effect of variation on hydrogenation process performance
- operating requirements and parameters, and corrective action required where operation is outside specified operating parameters
- typical equipment faults and related causes, including:
 - signs and symptoms of faulty equipment
 - early warning signs of potential problems
- methods used to monitor the hydrogenation process, including inspecting, measuring and testing as required by the process
- inspection or test points (control points) in the hydrogenation process, and related procedures and recording requirements
- contamination and food safety risks associated with the hydrogenation process and related control measures
- common causes of variation and corrective action required
- work health and safety hazards and controls, including an understanding of the hazards associated with the use of hydrogen
- requirements of different shutdowns as appropriate to the hydrogenation process and workplace production requirements, including:
 - emergency and routine shutdowns
 - procedures to follow in the event of a power outage
- isolation, lock out and tag out procedures and responsibilities
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the hydrogenation process, including waste/rework collection and handling procedures related to the process
- routine maintenance procedures for hydrogenation equipment
- cleaning and sanitation procedures for hydrogenation equipment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective clothing and equipment
 - hydrogenation process and related equipment and services
 - oil, catalyst and filter aid as required for the hydrogenation process
 - sampling schedules, and test procedures and equipment
 - cleaning procedures, materials and equipment
- specifications:
 - work procedures, including advice on safe work practices, food safety, quality and environmental requirements

- information on equipment capacity and operating parameters
- production schedule/batch instructions
- specifications, control points and processing parameters
- documentation and recording requirements and procedures
- relationships:
 - interactions with team members and supervisors.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>