



Australian Government

**Assessment Requirements for
FBPOPR3024 Operate and monitor an
extrusion process**

Release: 1

Assessment Requirements for FBPOPR3024 Operate and monitor an extrusion process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.

Performance Evidence

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

There must be evidence that the individual has operated and monitored an extrusion process to produce at least one batch of product to meet product specifications, including:

- applying safe work practices
- applying food safety procedures to work practices
- checking moisture content of output
- taking corrective action in response to typical faults and inconsistencies in line with operating procedures.

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 each part of the process, including the purpose and methods used to achieve each stage of the extrusion process
- basic operating principles of equipment used for the extrusion process, including:
 - main equipment components
 - status and purpose of guards
 - equipment operating capacities and applications
 - the purpose and location of sensors and related feedback instrumentation
- good manufacturing practices (GMP) relevant to work task
- services required for the extrusion process, and action to take if services are not available
- the flow of the extrusion process and the effect of outputs on downstream processes
- quality characteristics of extruded output, including required characteristics of mass or blend to be extruded, including:
 - gelatinisation and viscosity
 - dimensions, texture and hardness of extruded product

- moisture content
- effect of variation in inputs and/or services on process performance
- operating requirements and parameters, and corrective action required where operation is outside specified operating parameters, including the effect of variation in key variables, including:
 - throughput and work input at each stage of the process
 - effect of time and temperature
 - barrel pressures and temperatures at each zone
- typical equipment faults for the extrusion process and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems, including:
 - screw and barrel assembly wear
 - die plate configuration and wear
 - wear of conditioner paddles
 - extruder knife condition
- methods used to monitor the extrusion process, including inspecting, measuring and testing as required by the process
- inspection or test points (control points) in the process and the related procedures and recording requirements
- common causes of variation in the operation of the extrusion process, and corrective action required
- contamination/cross-contamination and food safety risks related to the extrusion process, and related control measures
- health and safety hazards and controls relevant to the operation of the extrusion process
- requirements of different shutdowns as appropriate to the process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage
- isolation, lock-out and tag-out procedures and responsibilities required for the operation of the extrusion process
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the extrusion process, including waste/rework collection and handling procedures related to the process
- basic operating principles of process control, including the relationship between control panels and systems and the physical equipment
- cleaning and sanitation procedures required for extrusion equipment
- procedures to track traceability of product
- procedures to ensure biosecurity requirements are met.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- a food or feed processing workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - extrusion and related equipment and services
 - personal protective clothing
 - ingredients/blend/mass to be extruded
 - 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 specifications, control points and processing parameters
 - documentation and recording requirements and procedures.

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>