

**NOTICE 832 OF 2001****SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

In accordance with regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

**BEVERAGES**

Registered by NSB 06, Manufacturing, Engineering and Technology, publishes the following unit standards-based qualifications for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purposes of the qualifications, and the titles and specific outcomes of the unit standards upon which qualifications are based. The full qualifications and unit standards can be accessed via the SAQA web-site at [www.saqa.co.za](http://www.saqa.co.za). Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar street, Brooklyn, Pretoria.

Comment on the qualifications and unit standards should reach SAQA at the address *below and no later than 12 May 2001*. All correspondence should be marked **Standards Setting – SGB for Higher Education and Training** and addressed to

The Director: Standard Setting and Development  
SAQA  
*Attention: Mrs S. Vasuthevan*  
Postnet Suite 248  
Private Bag X06  
Waterkloof  
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or faxed to 012 – 346 5812



**SAMUEL B.A. ISAACS**  
**EXECUTIVE OFFICER**

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**NATIONAL CERTIFICATE IN FOOD AND BEVERAGE PACKAGING**

**FIELD:** MANUFACTURING, ENGINEERING AND TECHNOLOGY

**SUB-FIELD:** MANUFACTURING AND ASSEMBLY

**NQF LEVEL:** 3

**CREDITS:** 120

**PURPOSE:**

A qualifying learner will be able to operate and perform basis maintenance on an automated beverage packaging equipment and machinery with in a beverage packaging environment.

Note: The fundamental and core components of this qualification are generic to the food and beverage sector. The elective component is specific to the beverage industry however other unit standard titles have been included from the Food Standard Generating Body.

**RATIONALE:**

The typical learner identified to benefit from this qualification will be a person operating equipment on automated food and beverage packaging line. At present there is no such qualification and this qualification will fill a priority identified by the Food and Beverage SETA sector skills plan. This qualification will provide the basis for further learning in packaging management. This qualification will improve the effectiveness and productivity of the beverage manufacturing process in South Africa and thus provide an impetus for improved global competitiveness

## Qualification Matrix

Component	Standard Title	Level	Credit	Total
<b>FUNDAMENTAL</b>	Communication	3	20	
	Mathematical literacy	3	16	<b>36</b>
<b>CORE</b>	Demonstrate understanding of Occupational Health & Safety, environmental legislation and procedures relevant to the beverage processing environment*	2	5	
	Demonstrate understanding of the principles of science and technology that relate to the beverage processing environment	3	4	
	Demonstrate understanding of food safety, health and hygiene procedures including HACCP in the beverage processing environment	3	8	
	Demonstrate understanding of quality control and continuous improvement techniques in a manufacturing environment	3	12	
	Demonstrate understanding of continuous first-line operation maintenance (including lubrication, hand skills and hand tools)	3	8	
	Demonstrate understanding of basic business principles and supply chain management (including customer orientation)	1	5	
	Apply basic computer skills (Registered)	1	2	<b>44</b>
<b>ELECTIVE</b>	Operate Filling process on a Food and Beverages Automated Packaging Line	3	18	
	Operate Labelling Process on a Food and Beverages Automated Packaging Line	3	12	
	Operate Washing Process on a Food and Beverages Automated Packaging Line	2	10	
	Operate Closing Process on a Food and Beverages Automated Packaging Line	2	8	
	Operate Packaged Product Pasteurising Process on a Food and Beverages Automated Packaging Line	2	8	
	Operate Unpacking Process on a Food and Beverages Automated Packaging Line	2	8	
	Operate the Inspection and Coding Process on a Food and Beverages Automated Packaging Line	2	12	

Component	Standard Title	Level	Credit	Total
<b>ELECTIVE</b>	Operate the Shrink-wrapping Equipment on a Food and Beverages Automated Packaging Line	2	12	
	Operate Packing Process on a Food and Beverages Automated Packaging Line	2	8	
	Operate and control aseptic forming, filling and sealing of containers for food products *	3	18	
	Autopack and palletise food containers manually*	1	2	
	Control and maintain packaging line hoppers *	1	3	
	Operate and control the tamperproof sealing of already filled and closed containers*	2	2	Minimum required 40
	* Please note that these unit standards have been submitted to SAQA by the Food Manufacturing SGB			<b>120</b>

## UNIT STANDARDS FOR NATIONAL CERTIFICATE FOOD AND BEVERAGE PACKAGING

### Unit Standards Titles at NQF Level 2

1. Operate washing process on a food and beverages automated packaging line
2. Operate closing process on a food and beverages automated packaging line
3. Operate packaged product pasteurising process on a food and beverages automated packaging line
4. Operate the unpacking process on a food and beverages automated packaging line
5. Operate the inspection and coding process on a food and beverages automated packaging line
6. Operate shrink-wrapping equipment on a food and beverages automated packaging line
7. Operate packing process on a food and beverages automated packaging line

### UNIT STANDARD TITLES AND SPECIFIC OUTCOMES FOR NQF LEVEL 2

**1.Title: Operate washing process on a food and beverages automated packaging line**

- Specific Outcome 1: Prepare and start washing equipment.
- Procedures, preparation and start up of washing equipment
  - Raw material: bottles, crates, trays, barrels, detergent and detergent additives.
- Specific Outcome 2: Operate washing equipment.
- Procedures for monitoring and controlling of washing equipment.
  - Role of the washing process in the packaging of beverages.
  - Statistical techniques for sampling, monitoring and controlling of the quality of the washing process.
- Specific Outcome 3: Shut down washing equipment.
- Procedures for shut down of washing equipment
- Specific Outcome 4: Prepare for and perform changeovers on washing equipment.
- Preparation of and changeover of washing equipment.
- Specific Outcome 5: Perform first line maintenance on washing equipment.
- First line maintenance of washing equipment including lubricants, cleaning materials and basic hand tools.

**2. Title: Operate closing process on a food and beverages automated packaging line**

- Specific Outcome 1: Prepare and start closing equipment:
- Procedures for closing and start up of closing equipment
  - Raw material: bottles, cans cartons, bags, barrels, sachets, pouches, trays, corks, caps, can ends, kids, film, foil and crowns.
- Specific Outcome 2: Operate closing equipment:
- Procedures for the operation of closing equipment.
  - Role of the closing process in the packaging beverages.
  - Statistical techniques for sampling, monitoring and controlling the quality of closing equipment.
- Specific Outcomes 3: Shut down closing equipment:
- Procedures for shut of closing equipment.
- Specific Outcomes 4: Prepare for and perform changeovers on closing equipment:
- Procedures for preparation for and changeover of closing equipment.
- Specific Outcome 5: Perform first line maintenance on closing equipment:
- First line maintenance of closing equipment including lubricants, leaning materials and basic hand tools.

**3. Title: Operate packaged product pasteurising process on a food and beverages automated packaging line**

- Specific Outcome 1: Prepare and start packaged product pasteurising equipment
- Procedures for preparation and start up of packaged product pasteurising equipment
  - Raw material: bottles, cans trays, pouches, barrels bags and detergent additives.
- Specific Outcome 2: Monitor and control packaged product pasteurising equipment
- Procedures for monitoring and controlling of packaged product pasteurising equipment
  - Role of the packaged product pasteurising process in the packaging of beverages.
  - Statistical techniques for sampling, monitoring and controlling the quality of packaged product pasteurising process

- Microbiology and chemistry related to pasteurisation: Pasteurisation Units, Lethal Rate curves, and destruction of micro-organisms.
- Specific Outcome 3: Shut down packaged product pasteurising equipment.
- Procedures for shut down of packaged product pasteurising equipment.
- Specific Outcome 4: Prepare for and perform changeovers on packaged product pasteurising equipment
- Preparation for and changeover of packaged product pasteurising equipment is demonstrated as per standard operating procedure.
- Specific Outcome 5: Perform first line maintenance
- First line maintenance of packaged product pasteurising equipment including lubricants, cleaning materials, water treatment and basic hand tools.

**4. Title: Operate unpacking process on a food and beverages automated packing line**

- Specific Outcome 1: Prepare and start unpacking equipment:
- Procedures for preparation and start-up of unpacking equipment.
  - Raw materials: bottles, cans, crates, cartons, stand alone pouches, trays, bags, barrels, pallets and layerboards.
- Specific Outcome 2: Operate unpacking equipment:
- Procedures for operation of unpacking equipment.
  - Role of the unpacking process in the packaging of beverages.
  - Statistical techniques for sampling, monitoring and controlling the quality of the unpacking equipment.
- Specific Outcome 3: Shut down inspection and coding equipment:
- Procedures for shut down of unpacking equipment.
- Specific Outcome 4: Prepare for and perform changeovers on inspection and coding equipment:
- Preparation for and changeover of unpacking equipment.
- Specific Outcome 5: Perform first line maintenance:
- First line maintenance of unpacking equipment including lubricants, cleaning materials and basic hand tools.

**5. Title: Operate the inspection and coding process on a food and beverages automated packaging line**

- Specific Outcome 1: Prepare and start inspection and coding equipment:
- Procedures for preparation and start-up for inspection and coding equipment.
  - Raw materials: bottles, cans, crates, pouches, bags, barrels, boxes, cartons, trays, pallets, ink and bar-coding strips.
- Specific Outcome 2: Operate inspection and coding equipment:
- Procedures for operation of inspection and coding equipment.
  - Role of the inspection and coding process in the packaging of beverages.
  - Statistical techniques for sampling, monitoring and controlling the quality of the inspection and coding equipment.
- Specific Outcome 3: Shut down inspection and coding equipment:
- Procedures for shut down of inspection and coding equipment.
- Specific Outcome 4: Prepare for and perform changeovers on inspection and coding equipment:
- Preparation for and changeover of inspection and coding equipment.
- Specific Outcome 5: Perform first line maintenance:
- First line maintenance of inspection and coding equipment including lubricants, cleaning materials and basic hand tools.

**6. Title: Operate shrink-wrapping equipment on a food and beverage automated packaging line**

- Specific Outcome 1: Prepare and start shrink-wrapping equipment:
- Procedures for preparation and start-up of shrink-wrapping equipment.
  - Raw materials: Shrink-wrapping material (branded and unbranded).
- Specific Outcome 2: Operate shrink-wrapping equipment:
- Procedures for the operation of shrink-wrapping equipment.
  - Role of the shrink-wrapping process in the packing of beverages.
  - Statistical techniques for sampling, monitoring and controlling the quality of shrink-wrapping equipment.



- Specific Outcome 3: Shut down shrink-wrapping equipment:
- Procedure for the shut down of shrink-wrapping equipment.
- Specific Outcome 4: Prepare for and perform changeovers on shrink-wrapping equipment:
- Preparation for and changeover of shrink-wrapping equipment including lubricants, cleaning materials and basic hand tools.
- Specific Outcome 5: Perform first line maintenance:
- First line maintenance of shrink-wrapping equipment including lubricants, cleaning materials and basic hand tools.

**7. Title: Operate packing process on a food and beverages automated packaging line**

- Specific Outcome 1: Prepare and start up packing equipment
- Procedures for preparation and start up of packing equipment
  - Raw materials: bottles, cans, bags, pouches, barrels, trays, foils, film, crates, cartons, pallets, stretchwrapping, layerboards and glue.
- Specific Outcome 2: Operate packing equipment.
- Procedures for the operation of the packing equipment.
  - Role of the packing process in the packing of beverages.
  - Statistical techniques for sampling, monitoring and controlling quality of packing equipment.
- Specific Outcome 3: Shut down packing equipment.
- A procedure for shut down of packing equipment is demonstrated as per standard operating procedure.
- Specific Outcome 4: Prepare for and perform changeovers of packing equipment.
- Preparation for and changeover of packing equipment is demonstrated as per standard operating procedure.
- Specific Outcome 5: Perform first line maintenance.
- First line maintenance of packing equipment including lubricants, cleaning materials and basic hand tools.

**Unit Standards Titles at Level 3**

1. Operate Filling process on a Food and Beverages Automated Packaging Line
2. Operate Labelling Process on a Food and Beverages Automated Packaging Line

**1. Title: Operate filling process on food and a beverage automated packaging line**

- Specific Outcome 1: Prepare and start filling equipment:
- Procedures for preparation and start up of filling equipment.
  - Raw material: bottles, cans, barrels, bags, trays, pouches, sachets, and in process product.
- Specific Outcome 2: Operate filling equipment:
- Procedures for operating of filling equipment.
  - Role of the filling process in the packaging of beverages.
  - Statistical techniques for sampling, monitoring and controlling the quality of the filling process.
- Specific Outcome 3: Shut down filling equipment:
- Procedures for shut down of filling equipment.
- Specific Outcome 4: Prepare for and perform changeovers on filling equipment:
- Preparation for and changeover of filling equipment.
- Specific Outcome 5: Perform first line maintenance:
- First line maintenance of filling equipment including lubricants, cleaning material, cleaning chemicals and basic hand tools.

**2. Title: Operate labelling process on a food and beverages automated packing line**

- Specific Outcome 1: Prepare and start labelling equipment:
- Procedures for preparation and start up of labelling equipment.
  - Raw materials: bottles, cans, bags, barrels, trays, labels, foil, glue, pouches and cases.
- Specific Outcome 2: Operate labelling equipment:
- Procedures for the operation of labelling equipment.
  - Role of the labelling process in the packing of beverages.
  - Statistical techniques for sampling, monitoring and controlling of the quality of the labelling equipment

- Specific Outcome 3: Shut down labelling equipment:
- Procedures for shut down of labelling equipment.
- Specific Outcome 4: Prepare for and perform changeovers on labelling equipment:
- Preparation for and changeover of labelling equipment
- Specific Outcome 5: Perform first line maintenance on labelling equipment:
- First line maintenance of labelling equipment including lubricants, cleaning materials and basic hand tools.