

OCCUPATIONAL QUALIFICATION STANDARDS

Fruit and vegetable processor, Level 4, the initial occupational qualification

The occupational qualification standards for the initial occupational qualification of **Fruit and vegetable processor, level 4 forms** a basis for compilation of vocational secondary education and continuing education and for awarding the initial occupational qualification. The title of the initial occupational network is indicated on the school leaving certificate/academic transcript.

The initial occupational qualification is obtained upon completion of a nationally recognized curriculum meeting this occupational qualification standard. The indication of obtaining the initial occupational qualification entered in the leaving certificate/academic transcript certifies that the person has received the training and has a readiness to commence operation on the relevant occupational qualification.

Title of the occupational qualification	Estonian Qualifications Framework (EQF) level
Fruit and vegetable processor , Level 4, initial occupational qualification	4

Part A

DESCRIPTION OF WORK

A.1 Description of Work

The owner of the initial occupational qualification of **fruit and vegetable processor** level 4, is a skilled employee who finds employment in fruit and vegetable processing enterprises, in shops producing fruit and vegetable products on the site, on farms, etc. The main activity of a fruit and vegetable processor is the execution of various work operations in processing fruit and vegetables, working with machines and equipment, their cleaning, washing and disinfection; maintenance of his or her workplace, ensuring quality production and food safety during all work operations.

A.2 Work units

The initial occupational qualification for **fruit and vegetable processor, level 4**, consists of six mandatory and one optional work unit.

MANDATORY WORK UNITS

A.2.1 Cleaning and processing of raw fruit and vegetable materials

- 1.1 Receiving and sorting of fruits and vegetables according to the need on the basis of size, color, ripeness, or any other indicator determining the quality and the preservation according to the requirements.
- 1.2 The primary processing of raw material of fruits and vegetables.
- 1.3 Cleaning, peeling and post-purification of different types of fruits and vegetables.
- 1.4 Removal of seed chambers, cores, stones and seed cells.
- 1.5 Chopping, slicing and cutting of fruits and vegetables.
- 1.6 Pureeing of fruits and vegetables and preparing juice wort.

A.2.2 Fast freezing of fruits and vegetables

- 2.1 Feeding of fruits and vegetables into a fast freezing line or equipment.
- 2.2 Monitoring of the work of a fast freezing line and adjustment of modes.
- 2.3 Packaging of frozen fruits and vegetables.

A.2.3 Salting, souring and pickling of fruits and vegetables

- 3.1 Preparation of coating solutions or brine, determining of the concentration of brine.
- 3.2 Souring of different vegetables.

A.2.4 Manufacturing of fruits and vegetable products

- 4.1 Heat treatment of fruits and vegetables or fruit and vegetable products.
- 4.2 Pre-treatment of raw materials for the manufacture of raw salads, chopping raw materials and mixing of salads.
- 4.3 Packaging salads.
- 4.4 Preparation of fruit and vegetable preserves.
- 4.5 Upon canning and vacuum packaging, checking the air tightness of packaging and industrial pasteurization or sterilization of cans.
- 4.6 Packaging of fruit and vegetable products into more commonly used sales and transportation packaging.
- 4.7 Labeling, preservation and storage of fruits and vegetables in sales and transport packaging.

A.2.5 Washing and disinfecting in the fruit and vegetable industry

- 5.1 Manufacture of washing and disinfectant solutions for the central system and for manual washing.
- 5.2 Waste management and collection.
- 5.3 Washing route planning for containers, pipes and packing machines and the selection of correct detergents and washing modes.
- 5.4 Washing and disinfection of hand-washable line parts.
- 5.5 Assessment of the cleanliness of wash results prior to the commencement of the work and recording of the survey results.
- 5.6 The daily maintenance, washing and disinfection of production facilities.

A.2.6 Handling of technological equipment for manufacture of fruit and vegetable products

- 6.1 Planning for the operation of the equipment and of the product sequence.
- 6.2 Checking the mixing, processing, bottling, packaging lines, and other lines.
- 6.3 Starting and setup of the equipment.
- 6.4 Assessment of the quality of the work of the device.
- 6.5 Distinction of the error messages of the device.
- 6.6 Recording and documentation of error messages.
- 6.7 Shutdown of the device.
- 6.8 Daily maintenance of the device.

THE SELECTED WORK UNIT

A.2.7 Provision of service and sales work

- 7.1 The creation of positive customer contact.
- 7.2 Identification of customer needs.
- 7.3 Presentation of the products to the customer.
- 7.4 Termination of the service situation.
- 7.5 Selling and settlement.

A.3 Working environment and the specificity of the work

The work of a fruit and vegetable processor is related to long-term work in a forced position (standing, sitting, lifting, etc.). He or she comes into contact with raw materials and materials that can cause allergies (e.g., disinfection materials, some horticultural and agricultural products, etc.). The work may be partly seasonal and require working in shifts and, if necessary, also at the weekends and public holidays.

A.4 Work equipment

The basic work equipment of a fruit and vegetable processor are the machinery and equipment used in the food industry (including information technology hardware and software) and various cutting tools.

A.5 Personal characteristics necessary for the work: aptitude and personality traits

The occupational qualification requires tolerance to routine and environment (heat, cold, humidity, odors, etc.).

A.6 Professional training

Traditionally, working as food processors are people who have vocational or whose professional skills have been acquired through practical work

A.7 The most common job titles

Fruit and vegetable processor, fruit and vegetable handler

A.8 Regulations for operating in the occupational qualification



Euroopa Liit
Euroopa Sotsiaalfond



Eesti tuleviku heaks



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Working in food handling requires a medical certificate in accordance with the Food Act.

Part B

COMPETENCY REQUIREMENTS

B.1. Structure of the occupational qualification

For certification of this occupational qualification is needed certification of the mandatory competencies B.2.1-B.2.6 and B.2.8 (transversal competency). It is also possible to select and certify the additional competency B.2.7.

B.2 Competencies

MANDATORY COMPETENCIES

B.2.1 Cleaning and processing of raw fruit and vegetable materials	ECT Level 4
<u>Performance indicators:</u>	
<ol style="list-style-type: none"> 1) Receives and sorts the vegetables according to the need by the size, color, sort, ripeness or other indicator, determines the quality and maintains the fruit and vegetables in accordance with the requirements; 2) Performs first processing (washes, de-freezes, de-sulphites and sulphites) the fruit and vegetable raw materials, taking into account the fruit and vegetables preservation requirements, the requirements of technological instructions and using the required equipment and their modes; 3) Cleans, peels and post-cleans the fruits and vegetables on the basis of the fruit and vegetable species; 4) Separates the seed chambers (pumpkin) and cells (pome fruit), cores (cabbage), stones (plums, and other stone fruits) etc., taking into account the kinds of fruits and vegetables; 5) 6) Chops, slices and cuts the fruits and vegetables, taking into account the kind of fruits and vegetables and the requirements of the technological instructions; 7) Purees the fruit and vegetables and prepares the juice wort, taking into account the kind of fruits and vegetables and the requirements of the technological instructions. 	
<u>Knowledge:</u>	
<ol style="list-style-type: none"> 1) Types of fruits and vegetables; 2) Methods for cleaning and primary processing of fruits and vegetables; 3) The types and operating principles of the machinery and equipment used for primary processing of raw food materials. 	
<u>Assessment method(s):</u> Practical work and an interview.	
B.2.2 Fast freezing of fruits and vegetables	ECT Level 3
<u>Performance indicators:</u>	
<ol style="list-style-type: none"> 1) Places the prepared fruits and vegetables onto the fast freezing line or equipment, taking into account the kinds of the fruit or vegetable; 2) Monitors the work of the fast freezing line in accordance with instructions, if necessary, adjusts the fast freezing line, taking into account the requirements of the technological instructions; 3) Packages the frozen fruit and vegetables, taking into account the requirements of technological instructions and packaging and labeling. 	
<u>Knowledge:</u>	
<ol style="list-style-type: none"> 1) Types of freezing lines and their principles of operation; 2) Fast freezing modes. 	

Assessment method(s): Practical work and an interview.

B.2.3 Salting, souring and pickling of fruits and vegetables

ECT Level 4

Performance indicators:

- 1) Prepares a special or an ordinary brine or a brine with additions, determines the concentration of the brine, using the brine concentrator and salting containers, taking into account the kind of vegetable (cucumbers, etc.);
- 2) Sours the vegetables (cucumbers, cabbage, etc.) manually or mechanically in accordance with the recipe provided in the technological instructions, following the fermentation, storage conditions and temperatures; and taking into account the kind of the vegetables (cucumbers, cabbage, etc.).

Knowledge:

- 1) Methods of salting, souring and pickling of fruit and vegetables.

Assessment method(s): Practical work and an interview.

B.2.4 Manufacturing of fruit and vegetable products

ECT Level 4

Performance indicators:

- 1) Cooks (boils, fries, sautés, blanches, pasteurizes, bakes, etc.) fruits and vegetables or fruit and vegetable products, monitoring the temperature, the operation of the processing equipment, the requirements of the technological instructions (boiling, pasteurization or frying modes) and occupational safety requirements;
- 2) Preprocesses the raw materials for the preparation of raw salads, chops the raw materials and mixes salads according to the recipe, using the necessary equipment;
- 3) Packages the salads, using appropriate packaging equipment, observing the storage and quality requirements of raw salads;
- 4) Prepares fruit and vegetable preserves (juices and juice products, sauces and marinades, fruit and vegetable cans and jars with coating solution, dinner containers, dinner containers with meat, salads, containers for infants and children, jams, marmalades, jellies, compotes, etc.) using the appropriate equipment, following the requirements of the technological instructions of the recipe, the technical description and the requirements of preservation;
- 5) Upon canning and vacuum packaging, checks the air tightness of the packaging, taking into account the quality requirements; pasteurizes or sterilizes the containers industrially, following the requirements of technological instructions and safety requirements;
- 6) Packages the fruit and vegetable products into more commonly used sales packages (glass jars, polymeric material packaging, plastic packaging, vacuum packaging, etc.), using the necessary equipment;
- 7) Labels, preserves and stores the fruit and vegetable products in sales and transport packaging, taking into account the quality requirements.

Knowledge:

- 1) Types and principles of operation for breading, blanching and frying equipment;
- 2) Types and methods of manufacture of fruit and vegetable products;
- 3) Quality indicators of fruit and vegetable products;
- 4) Types of packaging and packaging methods of fruit and vegetable products;
- 5) Quality requirements for packaging, labeling and storage of fruit and vegetable products.

Assessment method(s): Practical work and an interview.

B.2.5 Washing and disinfecting in the fruit and vegetable industry	ECT Level 4
<p><u>Performance indicators:</u> Taking into account the company's operating procedures and production hygiene requirements:</p> <ol style="list-style-type: none"> 1) Prepares washing and disinfectant solutions for central washing systems and manual washing, using concentrated detergents; 2) Handles and collects the waste, taking into account the sorting requirements (animal or vegetable waste); 3) For the washing of containers, pipes and packing machines, prepares a washing route and selects the correct washing mode (circulation time and temperature); 4) Washes and disinfects hand washable parts of the line (container measurement glasses, sample taps, worktops, pipe connections, etc.); 5) Assesses the washing results visually prior to the commencement of the work and records the observation result; 6) On a daily basis maintains washes and disinfects the production facilities, ensuring their cleanliness. <p><u>Knowledge:</u></p> <ol style="list-style-type: none"> 1) The basics of food hygiene and food safety, the principles of self-check and HACCP and their applications; 2) Safety file requirements; 3) Principles of central washing systems; 4) Causes and consequences of physical, chemical and microbiological contamination; 5) Production hygiene requirements, types, properties and methods of detergents and disinfectants. <p><u>Assessment method(s):</u> Written task, practical work and an interview.</p>	
B.2.6 Handling of technological equipment for the manufacture of fruit and vegetable products	ECT Level 4
<p><u>Performance indicators</u></p> <ol style="list-style-type: none"> 1) Plans the time of operation of the device and the sequence of products, taking into account the technological instructions of the specific work and other given instructions; 2) Checks the working order of the mixing, processing, bottling, packaging and other lines and their compliance with the work operation, taking into account the requirements of the given instructions; 3) Configures the device into the working order according to the requirements of the technological instructions of the specific work and starts it according to the requirements of the given instructions; 4) Assesses the quality of the work of the device, checking the compliance of the product with the quality requirements of the technological instructions; 5) Manages the error messages of the device and responds to them within the limits of his or her expertise; 6) Records and documents the error messages and repair work, taking into account the company's work organization and completing the prescribed documents; 7) Shuts down the device in accordance with the given instructions; 8) Adjusts and cleans the device on a daily basis, taking into account the company's work procedures and the standards of food hygiene and safety requirements. <p><u>Knowledge:</u></p> <ol style="list-style-type: none"> 1) Characteristics and types of raw food materials; 2) Technological processes of different raw food materials; 3) The basics of food hygiene and food safety, the principles of self-check and HACCP and their applications; 	

- 4) Basics of biochemistry and microbiology;
- 5) The work, the principles of day to day maintenance and the technological capabilities of the equipment used in the food industry (including electronic scales, pressure equipment, refrigeration equipment, etc.);
- 6) Packaging materials used in the food industry and the types of packaging;
- 7) The fundamentals of management of energy resources (electricity, water, cold water, effluents, etc.);
- 8) Types and usage principles of measurement and checking instruments.

Assessment method(s):

Written task, practical work and an interview.

OPTIONAL COMPETENCIES

B.2.7 Provision of service and sales work	ECT Level 4
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Performance indicators:

- 1) Creates positive customer contact, is ready to service and actively communicates with the customer directly using the means of communication;
- 2) Identifies the customer's needs and advises the customer, independently resolves the customer's problems related to using the service within the limits of his or her area of responsibility;
- 3) Introduces the products to the customer, using appropriate service methods and techniques, based on the customer's needs and the company's service organization;
- 4) Completes the service situation in a positive way, in order to continue the customer contact;
- 5) Settles with customers using a variety of tools and types of payment (cash, cards, invoices);

Knowledge:

- 1) Basics of customer service and sales;
- 2) Principles of service psychology;
- 3) Principles of service methods and techniques;
- 4) The assortment, quality standards, compositions, nutritional value, taste characteristics, uses, storage conditions, and best before dates of products;
- 5) Principles of provision of services and organization of sales;
- 6) Basics of cash register work;
- 7) Basics of entrepreneurship, economics, marketing;
- 8) Principles of packing foods to go;
- 9) Capabilities of word processing and spreadsheet programs.

Assessment method(s): Practical work and an interview.

TRANSVERSAL COMPETENCIES

B.2.11 Transversal competencies of Fruit and Vegetable Processor, Level 4	ECT Level 4
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Performance indicators:

- 1) Monitors and maintains quality and productivity in his or her work, meets and maintains food hygiene and microbiological requirements (cleaning and disinfection of hands, clothing, equipment etc.);
- 2) Uses his or her work surface for its intended use and keeps it organized;
- 3) Calculates and monitors the consumption of raw materials and the additional materials, organizing his or her work rationally, using the tools, materials, time, energy, and other resources sparingly and minimizing defective products;
- 4) Follows the recipes and uses the technological documentation purposefully;
- 5) Is responsible for the results of his or her work;

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- 6) Understands the work and functions of the organization's various departments/work lines, recognizes his or her role in the production chain; demonstrates an understanding of how one problem is a part of the major system;
- 7) Notifies the responsible person of the work organizational deficiencies or of the circumstances interfering with the work, asks relevant questions and makes proposals for improvement within his or her competence; cooperates;
- 8) Evaluates risk factors in production and takes steps to mitigate the risks and eliminate the threats, by following the working environment and safety requirements and using personal protective equipment and safe working practices;
- 9) Provides emergency assistance in case of an accident, calls for professional help and informs the Production Manager or the employer of the accident;
- 10) Uses in his or her work the Estonian language at level B2 and English or Russian at level B1 (see Annex 1 "Descriptions of the language skill levels").

Knowledge:

- 1) Occupational qualification-related legal requirements - statutory requirements for food and food handling;
- 2) Classification and properties of nutrients;
- 3) Nutritional biochemistry;
- 4) The standard documentation requirements set for the industry;
- 5) Economics (basics of cost accounting);
- 6) Conditions for storage, packaging and transport of products;
- 7) Storage requirements and marking principles of products;
- 8) Basics for the formation of the buying-in price and the cost price;
- 9) The basics of food hygiene and food safety, the principles of self-check and HACCP and their applications;
- 10) Principles of ergonomics;
- 11) Principles of customer service;

Assessment method(s):

Transversal competencies are assessed in an integrated way with the other competencies provided in the occupational standards.

Part C

GENERAL INFORMATION AND ANNEXES

C.1 Information for preparation and approval of the occupational standard and on the awarding body and a reference to the location of the occupational standard in the classifications	
1. The marking of the occupational standard in the occupational qualification register	11-16052013-3.9/5k
2. The occupational qualification standard compiled by: the names of people and organizations	<p><u>The Working Group:</u> Veiko Pak, <i>Ants Pak's Kadarbiku Farm</i> Helgi Žukovits, <i>AS Põltsamaa Felix</i> Mall Toom, <i>Tartu Vocational Training Centre</i></p> <p><u>Experts:</u> The Bank, the Veterinary and Food Board Ülo Kivine, <i>Tere AS</i> Jüri Kuuskaru, <i>Rakvere Lihakombinaat AS</i> Tarmo Laht, <i>AS A.Le.Coq</i> Helgi Lunina, <i>Estonian Fishermen's Association</i> Ülle Parbo, <i>Innove SA</i> Sirje Potisepp, <i>Estonian Food Industry Association</i> Tarmo Tappo, <i>Saku Brewery</i> Merle Truupõld, <i>Tartu Vocational Training Centre</i></p>
3. Occupational qualification standard approved by	Professional Council of Food Industry and Agriculture
4. Professional Council Decision No.	19
5. Date of Professional Council Decision.	16.05.2013
6. Occupational standard valid until (date)	15.05.2018
7. Occupational standard version number (1-n)	5
8. Reference to the Classification of Occupations (ISCO 08)	7514 Fruit, vegetable and berry processors
9. Reference to the European Qualifications Framework (EQF)	4
C.2 Occupational title in a foreign language	
In English: Fruit and vegetable processor (Greenstuff processor, Greens processor)	
In Russian: Обработчик плодоовощей	
C.3 Annexes	
Annex 1 Language skill levels descriptions	
Annex 2 Computer skills (ECDL/ICDL)	