

The technology of fruit and vegetable processing (IIIrd Year of study, Vth SEMESTER)

Credit value (ECTS) 4

Course category

Specialized discipline (Imposed)

Course holder:

Lecturer Otilia Cristina MURARIU, PhD

Discipline objectives (course and practical works)

During the course is aimed to acquiring and understanding the specific theoretical processing technology for vegetables and fruits, the practical skills application of theoretical knowledge and training the skills to act autonomously to observe, analyze, interpret and provide concrete solutions to the problems of the recovery vegetables and fruits.

Practical work aims to familiarize students with the technological particularities and safety of fruits and vegetables and with the art work in their quality analysis.

Contents (syllabus)

Course (Chapters/subchapters)
1. Raw materials, auxiliary materials and basic operations in the industrialization of fruit and vegetable.
2. Packages used in fruit and vegetable industry.
3. Preservation of fruit and vegetables.
4. Technology of semi – industrialized fruit.
5. Technology of semi – industrialized vegetables.
6. Conservation of fruit and vegetables by dehydrated.
7. Conservation of fruit and vegetable by concentration.
8. Technology of pasteurized and termosterilizate products.
9. Technology of preservation of horticultural products by freezing.

Practical works
1. Description of laboratory equipment and ustensils used in the Laboratory of quality analysis of vegetable products. Sampling methods of the average samples for analysis.
2. Evaluation of the ripening of fruits and vegetables by iodine test.
3. Determination of soluble solids from raw materials, semi – products and finte products by refractometry and aerometric methods.
4. Determination of titratable acidity of horticultural and industrialized products by colorimetric and titration methods.
5. Determination of real acidity bu potentiometric methods.
6. Determination of L- ascorbic acid (vitamin C) of raw materials and food products by titrimetric method.
7. Determination of soluble carbohydrates and vegetable products through chemical <i>Luff – Schoorl</i> method.

8. Determination of sodium chloride in the brine and horticultural food products by argentometry <i>Mohr</i> method.
9. Evaluation of organoleptic proprieties of raw materials and for canned of fruit and vegetables.
10. Sensory evaluation of different varieties of apples based on questionnaires and score sheet.
11. Analysis of catalase activity for potatoes.
12. Determination of moisture and dry matter of the the horticultural food products.
13. Determination of free and total sulfur dioxide in the horticultural products through iodometric Ripper method.
14. Final test of laboratory.

Bibliography

1. Irimia L., 2013. Controlul și expertiza calității legumelor, fructelor și produselor derivate. Ed. "Ion Ionescu de la Brad", Iași.
2. Murariu Otilia Cristina, Irimia Liviu Mihai, Robu Teodor, 2017 - Analiza și controlul calității produselor din legume și fructe, Editura Ion Ionescu de la Brad, Iași.
3. Beceanu D., 2010. Tehnologia produselor horticole. Partea a-I-a. Ed. PIM, Iași.
4. Hulea A., Tașcă Gh., Beratlief C., 1982. Bolile și dăunătorii produselor agricole și hortiviticole după recoltare – prevenire și combatere. Ed. Ceres, București.
5. Păucean Adriana – Tehnologia prelucrării legumelor și fructelor – Îndrumător de lucrări practice, 2006, Ed. Risoprint Cluj.
6. Potec I., Roșu L., Tudor T., Ceașescu M., Anton D., Cotrău A., 1983. Tehnologia păstrării și industrializării produselor horticole. Ed. Didactică și Pedagogică, București.
7. Zdremțan Rodica, 2008 – Conservarea legumelor și fructelor – Îndrumător de lucrări practice, 2008, Ed. univ. Aurel Vlaicu.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Written assessment	75%
Appreciation of the activity during the semester	Written assessment during the semester, verification tests and final laboratory colloquium.	15%
	Course presence	10%

Contact

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