TeamWork

Product development

LEGISLATION, HYGIENE AND APPLIED MICROBIOLOGY FOR FOOD SAFETY

Applied Microbiology
[**Prof. Fasolato**]

FOOD Hygiene
[**Prof. Balzan**]

Group's Units

n groups, 4 People per group divided in 8 products/cases

- Hazards
- HACCP/SOP
- Solving specific problems

Same groups

Same initial idea

Different areas of development

Fasolato: Microbiology

Balzan: Hygiene/Legislation

- Teamworking→active learning **+ 15pts (Teamwork from 0-15)**

Team work presentation/report

Team Responsibilities: We will provide you one specific case of food product

1.Company Overview:

- Provide a brief description of the company, including its location and the food supply chain involved.

2.Product Description:

- Specify the product name, ingredients, and include a brief recipe or directions for preparation.
- Outline the intended use of the product and consumer categories (e.g., ready-to-eat or raw).



Team work presentation/report

3. Process Description:

- Describe key aspects of the preparation processes, highlighting important steps and principles involved.
- Select and check applicable activities related to food processing, such as curing, custom processing, or smoking for preservation.

4.Food Flow Diagram:

- Create a written flow diagram that outlines the steps from receiving the product to serving it.

5.Shelf Life Analysis:

- Define the maximum storage time for the product based on different methods.
- Discuss factors that affect shelf life, such as pH and water activity.
- Labeling; allergens ecc



Team work presentation/report

7. **Hazard Analysis:**
    - Research and describe the hazards associated with the product, identifying the most probable hazards and their impact on safety.
    - Identify potential points Hazards and specify control measures for critical parameters (e.g., temperature, water activity, pH).
    - How to solve the problem
8. **Considerations on Emerging issues/Predictive Microbiology:**
    - Discuss emerging issues related to the product, its processing, and economic implications.
    - Explore technological advancements and their challenges,
    - Ethical aspects, sustainability and communication
    - identify predictive microbiology tools that may apply to the product.

After the first active learning session, we will provide you with a specific module and format



Team work calendar

Date	Session focus	Team activity / expected output
19 Oct	Product, company and supply chain	Company overview, product description, intended use, target consumers and preliminary supply chain
26 Oct	Process description and flow diagram	Identification of production steps and preliminary flow diagram
At home	Shelf-life	Expected shelf-life, storage conditions and supporting information
13 Nov – online	Project checkpoint	Review of the work completed and guidance for the next steps
24 Nov	Hazard analysis – Part I	Identification of biological, chemical and physical hazards
1 Dec	Hazard analysis – Part II	Completion of hazard analysis and preliminary control measures
15 Dec	Final considerations	Integration of sections, discussion and final considerations
20 Dec–10 Jan	Moodle submission	Submission of one report per group
11 Jan	Team presentations	Final group presentation

Team work evaluation

- Team work presentation – 12 minutes/group
- 1 -2 questions/group by lectures or classmates

0-15 points

All these activities contribute to the final mark:

- Lecturers evaluations (presentation + report; may be different between lecturers)
- Self-evaluation

Self evaluation

Self-evaluation

Each member of the team evaluate other member and his/herselves

using the rubrica present in Moodle

Final Mark calculation

- Average between:
- Oral presentation points
- Written report points

- **Final score = Final Exam's points** (If you want 30 as final score, you need a high mark here). 30L=32 final score

- **0-15 pts (Teamwork: 0-14 credit + or – 1 or 0 self evaluation) plus the other credits (15 final exam + bonus 2)**
- **Two different evaluations Balzan and Fasolato**

Team work report

Report templates:

- **19 Oct:** initial report template
- **After 13 Nov:** complete report template
- **11 Jan:** final submission

Company·YYYYY¤	**HACCP·Plan¶ Report·title,·product· name¶ xxxxxxxxx¤**	Issued:¤
		Issued·by:¤
		Reviewed:¤
		Next·review:¤
		Page·xx·of·xxx¤

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Members·of·the·Team¶

Name·¤	Job·Title·or·Description¤
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¤	¤
¤	¤
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¤	¤
¤	¤

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1·Establishment·Information·and·the·food·supply·chain·(max·700·words)¶

Briefly·describe·the·company·in·few·lines,·where·is·located·and·a·short·description·of·food·supply·chain.· Food·Supply·Chain·and·Market,·nodes·of·production·and·receiving·materials…¶

¶

2·Product·details·(max·700·words)¶

Provide·the·product·name,·list·of·ingredients,·recipe/instructions,·and·a·description·of·the·production· process.·Include·any·additional·scientific·documentation·required·by·regulatory·authorities·and·legislation,·

Products that needs an update



Product description
Liquid Whole Egg Carton and Shipping Package

Problem: S. Typhimurium in eggs intended to be processed
Information

Made from farm fresh eggs
Kosher and Halal certified
Ready to use, easy to store, with easy to pour spout or twist cap
With citric acid to guarantee extended shelf life
Pasteurized and homogenized for food safety and consistency

Store at 1-4°C (34-39°F).
Do not freeze.
Use within 2–3 days of opening.
Refrigerate after opening.
Always check the Best Before date indicated on the carton or case.

https://www.eggsolutions.com/foodservice/liquid-eggs/

Products that needs an update



Product description

Frozen Fully Cooked Chicken Patties

Problem: *Clostridium perfringens* outbreaks (5 human cases in two countries)

Product Details

Tyson® Fully Cooked Chicken Patties are a delicious addition to any meal. These breaded chicken patties are seasoned to perfection. Heat these fully cooked chicken patties in the oven or microwave to create a delicious meal that is ready to eat in less than 30 minutes.

- One 26 oz. package of Chicken Patties
- All-natural, minimally processed chicken raised with no added hormones or steroids
- Breaded and seasoned to perfection
- 0 grams of trans fat per serving
- Fully cooked and ready-to-eat
- Resealable bag for easy storage

https://www.kroger.com/p/tyson-frozen-fully-cooked-chicken-patties/0002370001450?fulfillment=PICKUP

Products that needs an update





Product description

Sprouts, organic, broccoli

Problem: *E. coli SHIGA* cases after in-house consumption and preparation (2 human cases – women in two cities)

Broccoli sprouts are full of healthy vitamins and antioxidants. The sprouts have a mild taste and are perfect as a garnish with any kind of dish. Delicious in creamy sauces, soups and salad dishes.

- Weight: 25 g
- Made in the Netherlands

Instructions for use

To grow sprouts, use a sprouting dish. Spread the seeds sparingly over the grid and fill the germination dish with water up to the height of the grid. Top up the water daily if necessary. For best results, place the sprouting dish at room temperature in a fairly well-lit spot. After about two weeks, the sprouts are ready to eat.

https://www.dille-kamille.com/sprouts-organic-broccoli-00018025.html

Products that needs an update

ROYAL GREENLAND
SALMON, COLD-SMOKED
SLICED, VACUUM, 10 X 180G, FROZEN



Product description

Salmon Cold-Smoked

Problem: *Recall due to positive samples of Clostridium botulinum in product*

PRODUCT

This product belongs to our branded "Starter and Lunch" range of good quality seafood, ready to use for an easy and delicious serving.

Cold-smoked salmon, sliced

PACKAGING

The product is laid out on a foil-coated carton board and vacuum packed in plastic foil.

Solid packaging that preserved the product well

Attractive brand design that stands out on the shelf

INGREDIENTS

Salmon (**fish**), salt, acidity regulator (E262). Smoked

Products that needs an update



Product description

Milky Way Chocolate Flavored Spread

Problem: *Recall due to positive samples of Salmonella; in product and plant*

Ingredients

Fractionated Partially Hydrogenated Palm and Rapeseed Oil, Sugar, Lactose, Skim Milk Powder, Cocoa Powder Processed with Alkali, Less than 2% - Calcium Carbonate, Cocoa Powder, Soy Lecithin, Natural and Artificial Flavors, Magnesium Oxide, Thiamine Mononitrate (Vitamin B1), Alpha-Tocopherol Acetate (Vitamin E), Caramel Powder (Dextrin, Gum Acacia, Natural and Artificial Flavors), Riboflavin (Vitamin B2), Cyanocobalamin (Vitamin B12). (Traces: Peanuts).

Products that needs an update



Product description

Semi soft cheese Gorgonzola

Problem Listeria: *3 hospitalization in 2 years- Epidemiological link with the company by sequence of strains collected in official samples*

PDO Gorgonzola is a cheese made from cow's milk with a raw and soft paste . Gorgonzola is probably one of the most famous Italian cheeses in...

- **This product is: PGI - PDO - SLOW FOOD**
- **GLUTEN FREE**
- **PRODUCT FOR VEGETARIANS**
- **PERISHABLE**