

## Series N° 3

### Exercise 1:

A local manufacturer of raw milk cheese wishes to export its products internationally, specifically to Japan and the European Union. An importer requires ISO 22000 certification and compliance with the Codex Alimentarius.

1. What is the hierarchy and the difference in legal scope between: national regulations (e.g., a ministerial decree), the Codex Alimentarius, and the ISO 22000 standard?
2. Is the Codex Alimentarius strictly mandatory at the national level? Justify its actual role in international trade.
3. If a non-conformity is detected on the national market, which regulatory text will the authorities (veterinary services or fraud control) apply as a priority?

### Exercise 2:

A company launches a cereal bar with the following claims: "*Organic, fair trade, preservative-free*", packaged in recycled cardboard. Unfortunately, a customer reports the presence of a hard plastic fragment in the product.

1. Classify each of the elements below into one of the quality components studied in class (Health/Safety, Nutrition, Service, Ethics, Technology, etc.):
  - "Organic" claim
  - "Fair trade" claim
  - "Preservative-free" claim
  - Recycled packaging
  - Plastic fragment
2. Does the presence of plastic constitute a purely **regulatory** failure or an **ethical/deontological** one? Justify your answer.

### Exercise 3:

You are testing a batch of **frozen ground beef patties**. Sampling plan for *E. coli*: **n = 5, c = 2, m = 10 CFU/g, M = 100 CFU/g** (3-class plan).

**Results (CFU/g): 5 – 12 – 85 – 150 – 30**

1. Classify each result (satisfactory, acceptable, unsatisfactory).
2. Is the batch accepted or rejected? Justify.
3. If one sample had **> 100 CFU/g**, what would you decide?
4. Why is this a 3-class plan and not a 2-class plan? (Answer: hygiene indicator, not pathogen)

### Exercise 4:

A batch of smoked salmon is analyzed. The result drops: presence of *Listeria monocytogenes* in 25 g. The problem is that the batch has already been shipped and delivered to 4 local supermarkets and 2 restaurants in the city.

1. Based on your Sanitary Control Plan (PMS) course, explain the fundamental difference between a **withdrawal** and a **recall**. Which of these two procedures must you imperatively trigger here?
2. What information from your **traceability** system (upstream and downstream) must you consult urgently?
3. Can the restaurant owner who already served part of this batch to their customers last night be sanctioned? On what legal basis (obligation of result / hygiene package)?

#### **Exercise 5:**

A manufacturer wants to launch an "ultra-fresh" orange juice with a 30-day shelf life (Use-By Date) in the refrigerator. They absolutely want to preserve the taste of the fresh fruit and its vitamins, without adding chemical preservatives.

1. Is classical sterilization (canning) suitable for these specifications? Why?
2. Is classical pasteurization possible? If so, which time/temperature combination?
3. Would adding preservatives (E200-E299) be legal? Ethical? Compliant with the request?

#### **Exercise 6:**

A newly hired Quality Manager discovers that a batch of deli meats contains a nitrite level (preservative additive) 15% higher than the authorized regulatory limit. His Production Director tells him: *"It's a small weighing error. Decrease the doses for the next batch, but we validate and sell this one, the company cannot afford to lose this money."*

1. What are the penal and administrative risks for the company if it knowingly markets this batch?
2. As a future executive in Food Quality and Safety, what does your **deontology** dictate in this situation?
3. Write a brief response (firm but professional) that the Quality Manager must give to his director, proposing a solution for managing the non-compliant batch.