

BACKGROUND

In your role as the Process Engineer on the Innovation Launch team for the Shelf to Table Dinner Company, it is your job to ensure that the processing conditions at start-up match the validation conditions from your testing protocol to ensure food safety and product quality.

For this product new product development, you have a combination of both fresh and frozen meat ingredients into your recipe. Based on the provided handling specifications (**SPECIFICATION #1 AND SPECIFICATION #2**) for both types of meat, please answer the following questions.

QUESTION #1

At the start of your shift, you check the production records and discover that a combination of fresh and frozen meat have been left out on the manufacturing line between the grinding operation and the retort operation while the line was not running from 8:00 AM CST to 11:30 AM CST due to mechanical issues on your case packer at the end of the line.

Based on this information, you expect your finished product to have the following implications:

- a) Loss of product ingredient shelf life
- b) Microbial Food Safety Risk, Incorrect finished product color
- c) Incorrect product texture, product refreezing
- d) Loss of product ingredient shelf life, microbial food safety risk and incorrect product texture
- e) Incorrect finished product color

After discovering the mix of fresh & frozen meat had been left on the line from 8:00 AM to 11:30 AM CST, you begin an investigation as to the cause of your down time and critical actions taken to remedy the situation. Your investigation takes 37 minutes to complete, making the time 12:07 PM CST. The team is ready to start the line again and is looking for direction from you on what to do with the product that has been left out on the line.

Continue to refer to SPECIFICATION #1 AND SPECIFICATION #2

QUESTION #2.

What do you advise the team to action based on the fresh and frozen meat handling instructions in your process specification?

- A) Evaluate the product for microbial food safety risk
- B) **Scrap the materials left on the line**
- C) Refreeze the materials left on the line to use another day
- D) Continue with the products on the line into production without further intervention.
- E) Check the finished product color for verification

You are now focused on the filling unit operation and its adherence to the process specification (**SPECIFICATION #3**). Based on the quality check data noted in **DATA SET #1**, please answer the following question.

QUESTION #3:

Based on the data collected on fill weight, which of the following statements is true:

- a) 1 sample from every shift was measured as over the specified fill weight limit
- b) All samples from Shift 1 were within the fill weight specification
- c) All samples from Shift 2 were within the fill weight specification
- d) No samples were within the weight tolerance specified
- e) Shift 1 and Shift 2 had defects versus the specification but the sample on Shift 3 was within the tolerance for weight.

You are supporting the Packaging R&D function this week for the Shelf to Table Dinner Company. In this function, it is your responsibility to ensure that the packaging materials for this launch are aligned with those specified during your qualification process and visually match the concept your marketing team aligned with the customer.

QUESTON #4:

You have two cans on the table in front of you (**Can A and Can B**). These two samples were provided to you by the operations lead to align which packaging raw materials should be used at start-up. Based on **the Specification #4** in the provided specification set, please choose which response to provide to the Operations Lead.

- a) Can A and Can B are identical and the operations team is able to use any of these materials.
- b) **Can A matches the specifications and those are the materials that should be used for start-up.**
- c) Can B matches the specifications and those are the materials that should be used for start-up.
- d) Neither of these are the correct start-up materials.
- e) There is not sufficient information provided to conclude which set of materials should be used in production.

With this new launch, it will be critical for your team to track consumer complaints to understand if there are reoccurring issues that can be attributed to certain production times or production lines. An element to tracking this data is the production information that you've designed to be printed on each can at the end of the line.

QUESTION #5:

Based on **SPECIFICATION #5** and **CAN A** at your stations, which statement not true:

- a) This product was produced in 2023.
- b) The product was produced on the 15th week of the year
- c) This can was produced in the plant that utilizes the site code KKC and production line FC.
- d) This product was produced on a Sunday.
- e) **None of these statements are true.**