



Food Processing - FP

Exam Question 09: Increased Protein Degradation

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Link to Git repo.: https://github.com/DanishUnicorn/fp_exam_2025



0.1 Question 09

0.1.1 Situation

You are the manager of a medium-sized Danish co-operative dairy plant in Northern Jutland and suspect an increased protein degradation occurring in your milk.

0.1.2 Your task

Map out the reasons for this and determine which methods to use to prove that this is happening.

0.1.3 Advice

Explain the possible reasons for protein degradation occurring in milk and which proteins are susceptible, and the consequences for this proteolysis in selected products. List the methods which you would use to determine this and what actions you would take to prevent it occurring in the dairy plant and at the farm level.

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2 Synopsis

2.1 Introduction

2.2 Milk Composition

[1]

2.3 Protein Degradation

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2.3.1 Reasons for Protein Degradation

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2.3.2 Susceptible Proteins

sd

2.4 Consequences of Proteolysis in Milk Products

2.4.1 Cheese

2.4.2 Yogurt

2.4.3 Butter

2.4.4 Ice Cream

2.4.5 Whey

2.5 Methods

2.5.1 Determining Protein Degradation

2.5.2 Preventing Protein Degradation

2.5.2.1 Dairy Plant Level

2.5.2.2 Farm Level

2.6 Conclusion

Bibliography

- [1] Aili Wang et al. “Development of protein-enriched biscuit based on oat-milk byproduct fortified with chick-pea flour”. In: *Lwt* 177 (2023), p. 114594.