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Dry - Fermented Sausage

Sausage group

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Outline:

1. Introduction
2. Materials & Methods
3. Results
4. Discussion
5. Conclusion
6. Further comments

Types of sausages

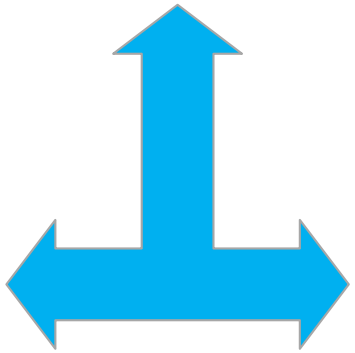
- ❑ Fresh sausages
- ❑ Cooked sausages
- ❑ Cooked and smoked sausages
- ❑ **Dry fermented sausages**
- ❑ Semi-Dry sausages

When, where did it originate and Why ?

The Mediterranean Sea – Italy, Spain, and Portugal – over 2,500 years ago.

Understanding Dry Fermented Sausage

Fermentation



Drying

Objectives

- Food safety
- Flavor Development
- Shelf Life Extension

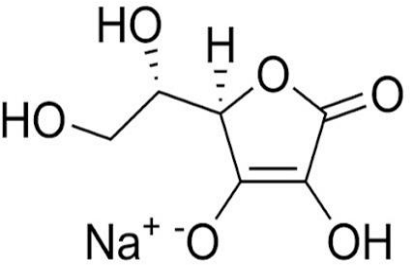
Material and methods: 3 types of batches.

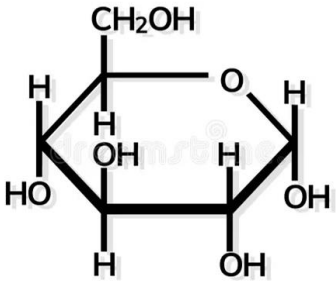
A. **Without starter**

B. **With starter**

C. **With starter and without dextrose**

	A	B	C
Meat (g)	860	860	860
Water ice (g)	100	100	100
NO2 salt (g)	10	10	10
Salt / NaCl (g)l	15	15	15
Ascorbate (g)	0,5	0,5	0,5
Dextrose (g)	10,5	10,5	-
Ground pepper (g)	2	2	2
Starter (50g/200kg)	-	+	+





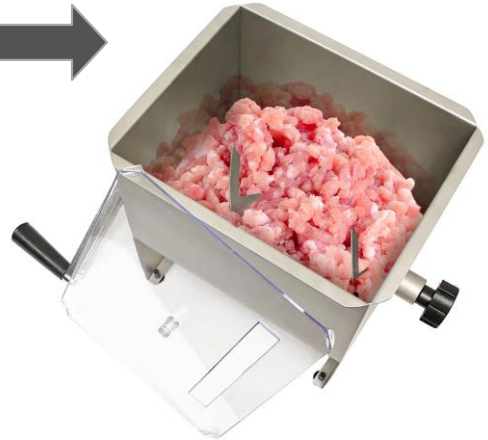
Material & Methods: Procedure

- **Meat preparation**
  Grind turkey meat, mix with spices and cure ingredients
- **Fermentation**
  Inoculate with starter cultures and allow to ferment for 2-3 days
- **Drying & Curing**
  Hang sausage to dry and cure for 1-2 week in a controlled environment.

Slicing

Chopping

Mixing



Stuffing

Material & Methods

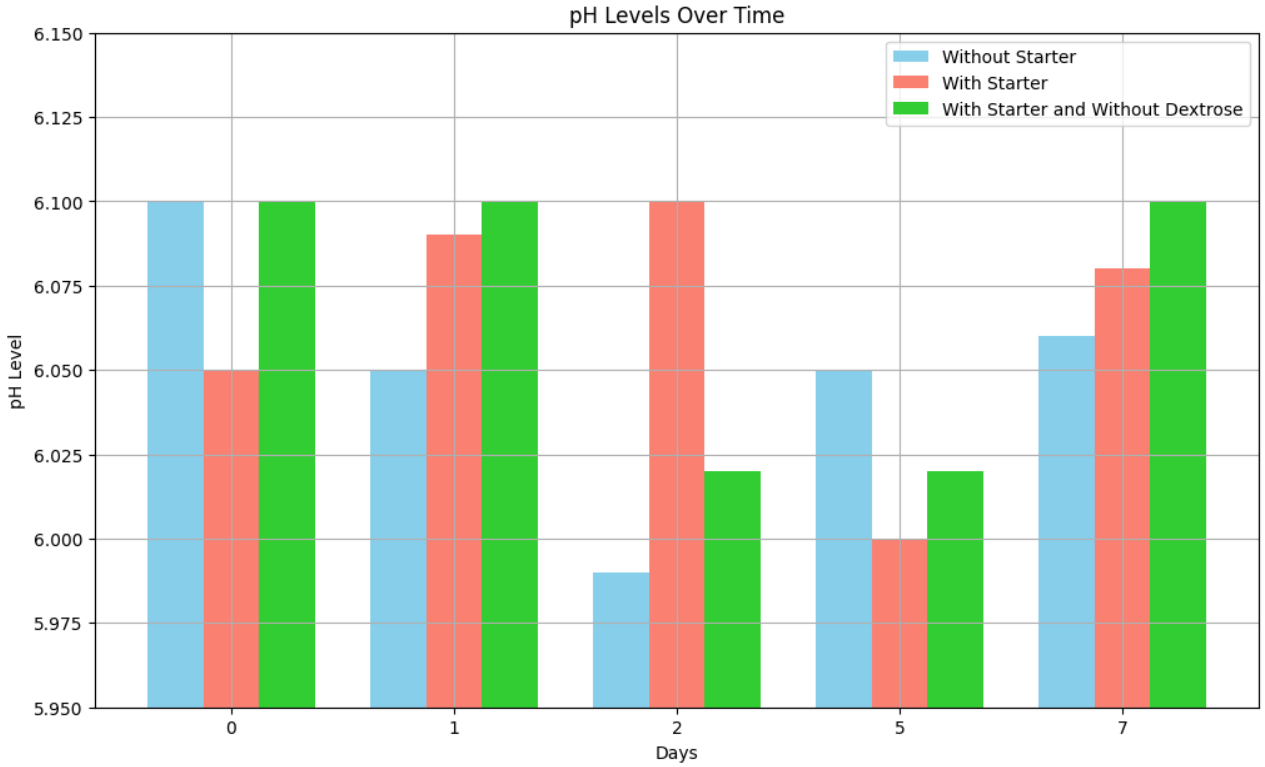
Refrigerator

Day 0 22°C and RH 90%
Day 1 4°C
Day 2 and followings days 8°C

Laboratory scale

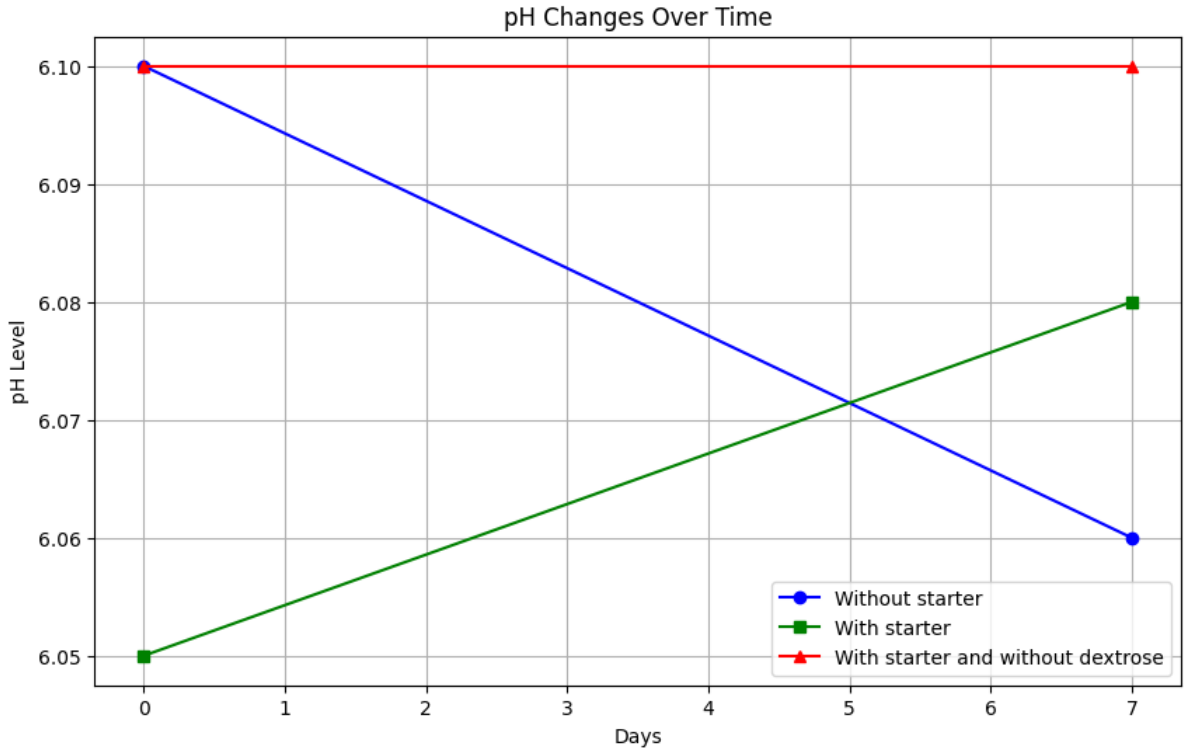
ph meter

Results and Discussion: ph

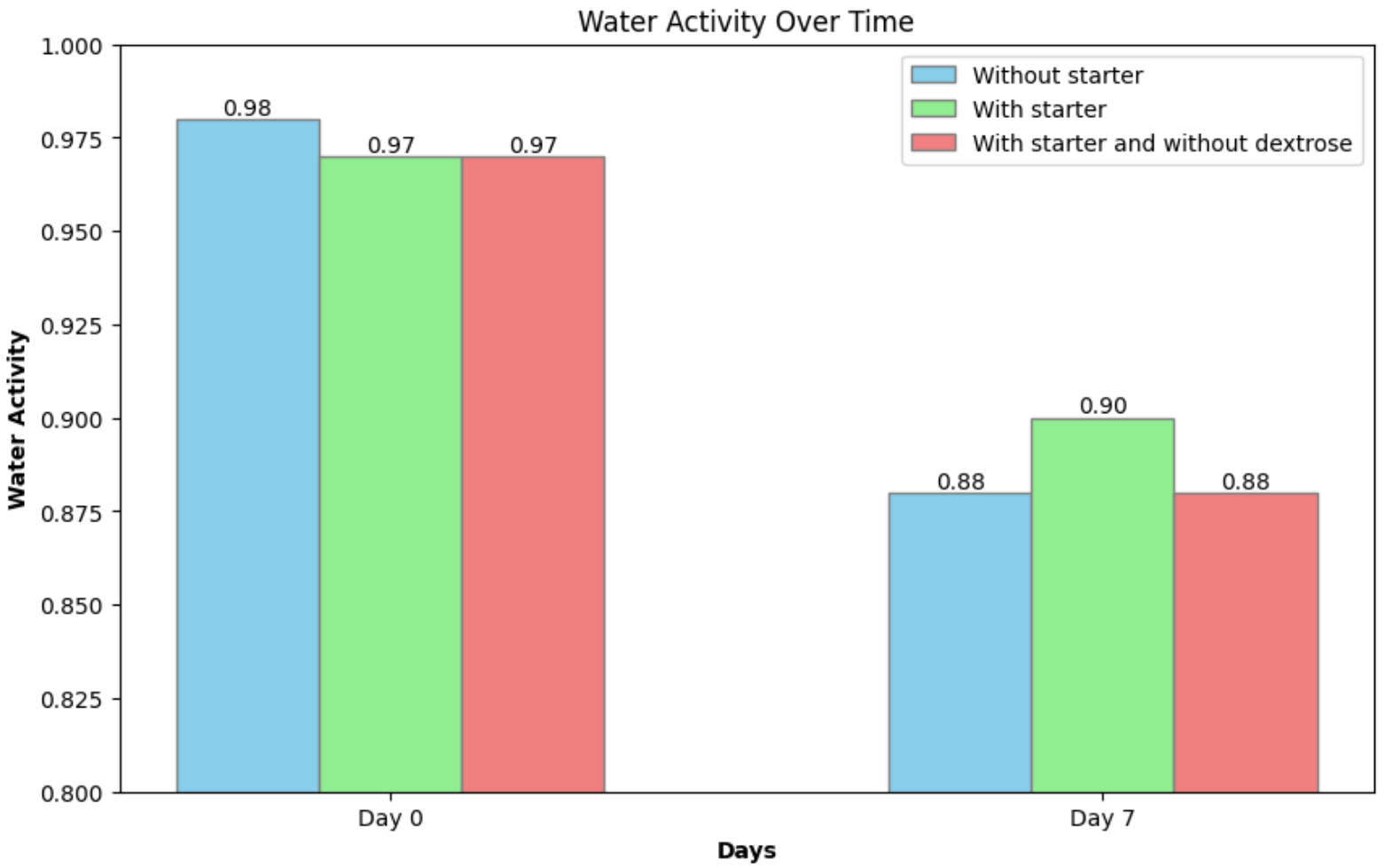


If no starter culture is used then the pH reaches only 4.6–5.

If a starter is used then the pH reached is in the range 4–4.5.

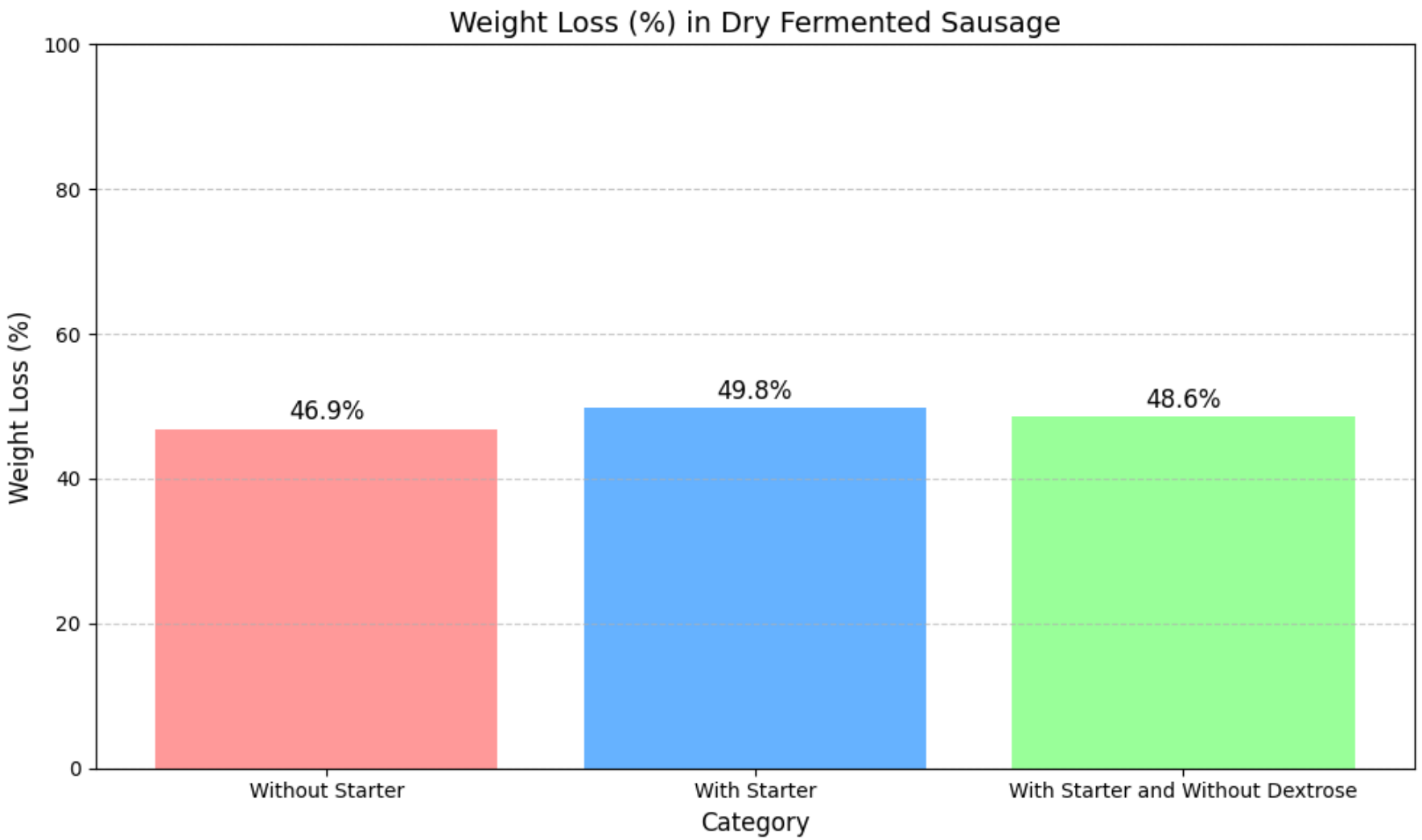


Results and Discussion: water activity



Normal aw for sausage:
0.87 - 0.90

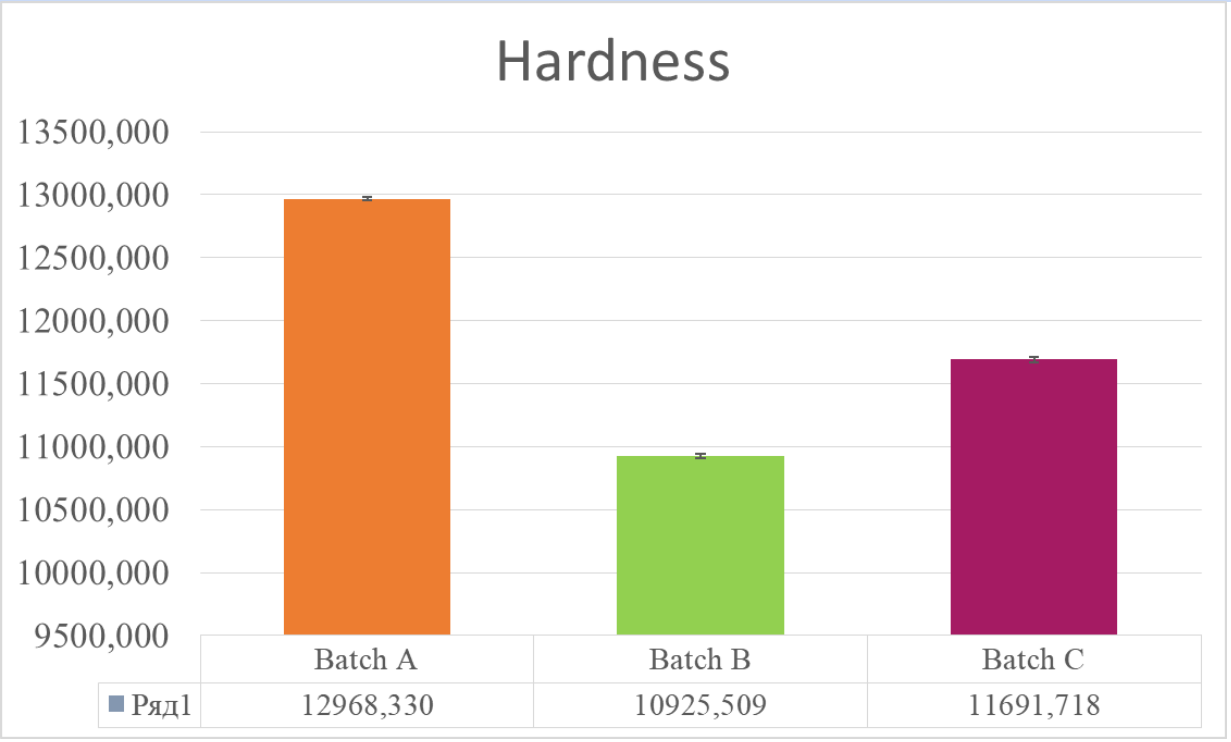
Results and Discussion: weight

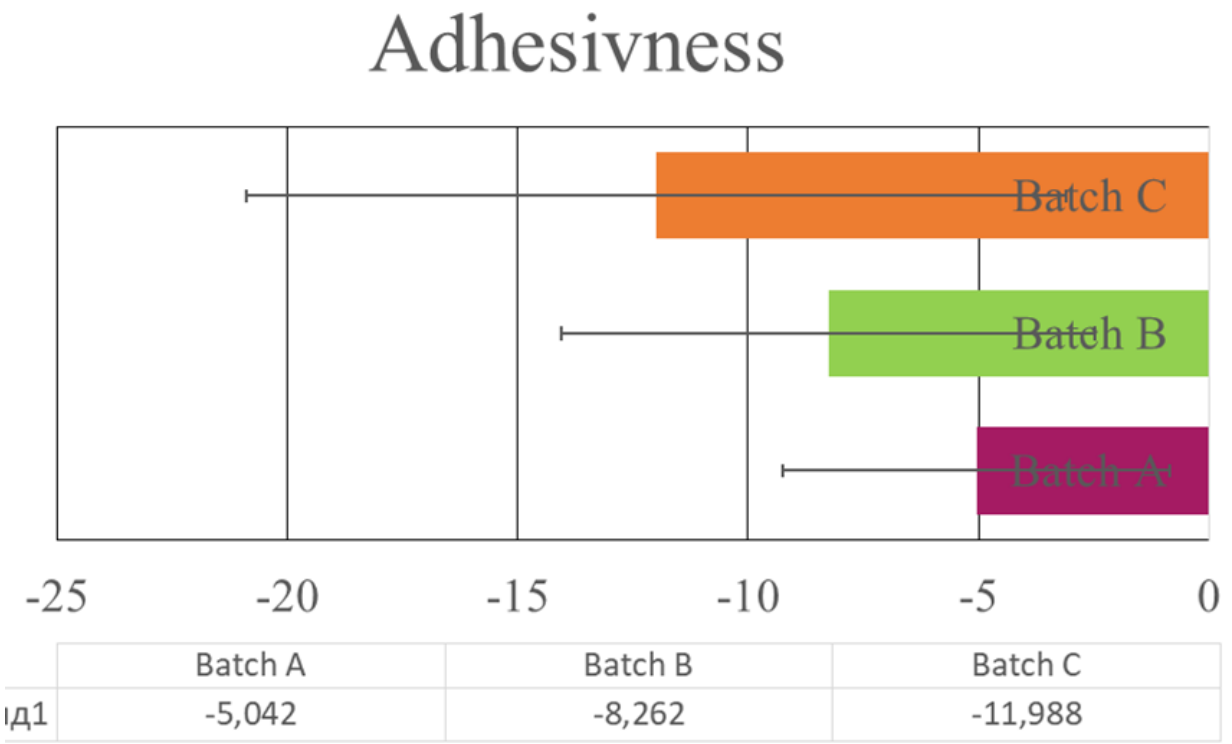


Results and Discussion: Color

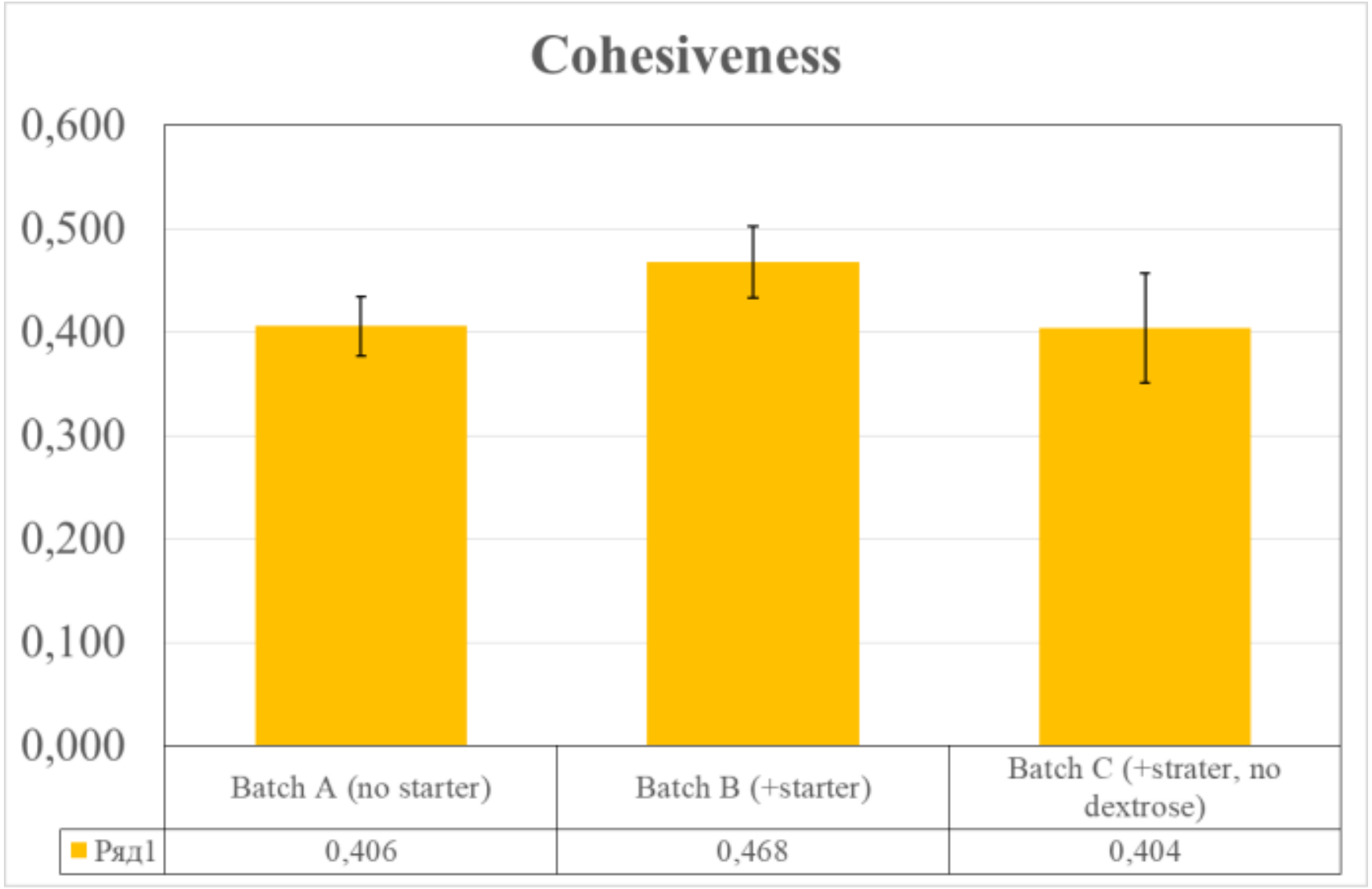
	without starter	with starter	with starter and without dextrose
L*	48.15	50.28	48.67
a*	7.64	8.09	8.63
b*	31.24	30.53	29.20

Results: texture





Results: texture



Conclusion

1.pH value

It is known from the conducted experiments that the pH indicator of the product is not stable, it rises in some cases and falls in some cases. Based on these data, we can assume that the starters did not work. The main reason for this may be that the heat level was not implemented in accordance with the established norms.

2. Water Activity

From the above results, it is known that in our experiments, water activity has changed significantly compared to the control, and in this case, we can consider that the NaCl added to the product has shown its activity.

3. Textures

In the experiments carried out in Textura, the accuracy of the experiments in many cases was high, and in some cases the accuracy level was very low. we can assume that the main reasons for this were the result of non-compliance with normative rules.

Thank you so much for Jorge Ruiz Carrascal and Alberto González-Mohino Jiménez andto sharing knowledge!!!

Thank you for your attention!