The Influence of Oregano powder on the chemical, microbiological and sensorial quality of bun-bread

Abdul Mueez Ahmad[1], Hassan Mehmood Sipra[1], Ali Hassan[1]

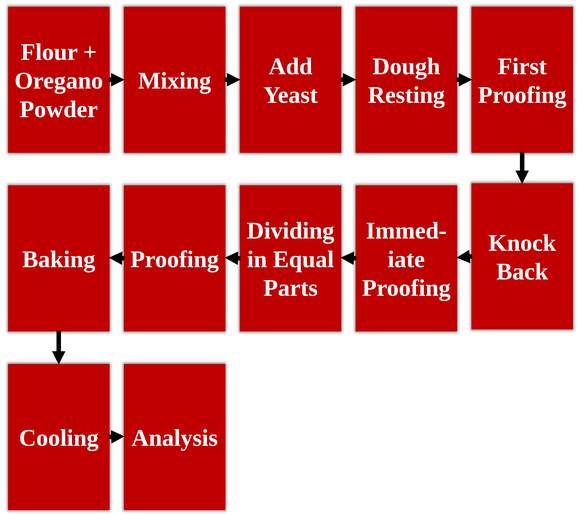
[1]National Institute of Food Science and Technology, University of Agriculture, Faisalabad, 38000, Pakistan.

Introduction

Consumers are increasingly seeking healthier and sustainable food options driving the food industry to explore natural additives that can enhance the nutritional and sensory properties of baked goods. Among the vital components employed in the production of bread are herbs and spices. One such additive is oregano powder, derived from the leaves of the oregano plant (Origanum vulgare). Known for its potent antioxidant and antimicrobial properties, oregano powder has been used traditionally in culinary applications. This study aims to investigate the influence of oregano powder on the chemical composition, microbiological stability, and sensory attributes of bun-bread by incorporating oregano powder at two different concentrations (1.5% and 3% of flour).

Materials And Methodology

Treatment	Oregano Powder
O1.5	1.5%
O3	3%



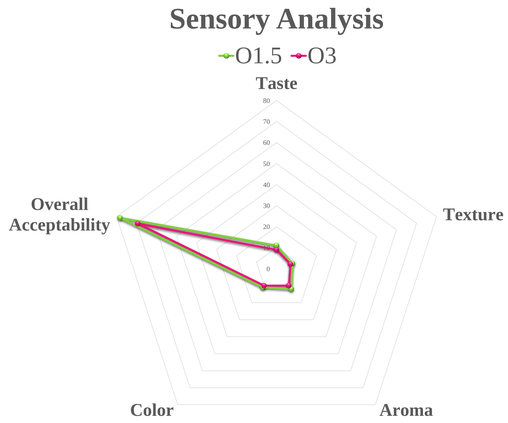
Proximate Analysis
- Moisture
- Protein
- Fat
- Fiber
- Ash
- Carbohydrate

Sensory Analysis
- Color
- Texture
- Aroma
- Taste
- Overall Acceptability

Microbiological
- TPC
- Coliform
- E Coli
- Staphylococcus aureus
- Bacillus cereus
- Salmonella
- Yeast and Molds

Results

Proximate Analysis		
Parameter	**O1.5**	**O3**
Moisture %	35.94	35.93
Crude Protein %	14.68	14.70
Ash %	2.55	2.57
Fat %	2.72	2.73
Carbohydrate	43.42	43.44
Crude Fiber %	0.69	0.70



	O1.5		O3	
	Day 0	Day 7	Day 0	Day 7
TPC	10^3	1.5 x 10^3	10^3	1.5 x 10^3
Coliform	<10	<10	<10	<10
E Coli	<10	<10	<10	<10
S. Aureus	10^2	<100	10^2	<100
B. Cereus	<100	<100	<100	<100
Yeast Mold	2 x 10^3	<10	2 x 10^3	<10
Salmonella	-	-	-	-

Conclusion

The approximate chemical compositions and microbiological stability of the bun-bread were substantially enhanced by the addition of oregano powder to the formulation. As a result, oregano powder may be considered a potential functional ingredient that improves health. Utilizing the optimal amount of oregano powder discovered, more research is required to assess the bun-bread's overall bioactive components, antioxidant activity, colorimetric color, physical characteristics, and rheological characteristics. Therefore, choosing the right amount of oregano powder and other ingredients is essential to creating a nutritious baked good with high antioxidant levels that doesn't compromise the dough's manufacturing qualities or change the desired physical and sensory qualities of the bun-bread.

References

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