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Studies on Preparation of Buns Fortified with Germinated Horse Gram Flour

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Abstract

The horse gram is a cheapest source of protein, calcium and iron. Further the germination of horse gram seeds can reduce the anti-nutritional factors. The germination was carried out by washing, soaking (8 h), germination period (24 h), and oven drying (50ºC) and ground into four in hammer mill. The effect of germination on chemical characteristics of horse gram was found significant decrease (P > 0.05) in protein, carbohydrate, fat and significant increase (P < 0.05) in moisture and ash content. Further value added product (buns) was prepared incorporation of (5%, 10%, 15% and 20%) with germinated horse gram four (GHF) by straight dough method. The sensory evaluation of buns was carried out by a panel of ten trained using 9-point Hedonic scale. The sensory quality of bun were significantly decreased (P > 0.05) for higher level of GHF and significantly increased (P < 0.05) for low level of GHF. The buns prepared by incorporation of GHF up to 10% were acceptable without affecting organoleptic quality.

Keywords:

Introduction

Materials and Methods

Preparation of GHF

Preparation of buns forti ed with GHF

Determination of chemicals characteristics of horse gram and germinated horse gram seeds

Organoleptic evaluation

Statistical analysis

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Results and Discussion

10.1 - 10.40% 2. - 3.10 (24) (3). 26.50 - 26.1%. (5 10% 15%) (20%). (20%) (0.05)

References

1. Kadam SS, Salunkhe DK (1985) Nutritional composition, processing, and utilization of horse gram and moth bean. Crit Rev Food Sci Nutr 22: 1-26
2. Borade VP, Kadam SS, Salunkhe DK (1984) Changes in phytates phosphorus and minerals during germination and cooking of horse gram and moth bean. Plant Foods Human Nutr 34: 151-157.
3. Pomeranz Y (1970) Protein-enriched bread. CRC Critical Reviews in Food Technol 1: 453-478.
4. Sawant RR (2007) Preparation of value added extruded product by using germinated horse gram four. M. Tech. Thesis, College of Food Technology. Marathwada Krishi Vidyapeeth, Parbhani, Maharashtra, India.
5. AOAC (2000) Offcial Methods of Analysis (17th Edn.), Offcial Methods of Analysis of Association of Offcial Agricultural Chemists International, Gaithersburg, MD.

6. Amerine MA, Pangborn RM, Roessler EB (1965) Principles of sensory evaluation of food. Academic press, New York.

7. Snedecor GW, Cochran WG (1989) Statistical Methods, 8th ed. Iowa State University Press, Ames, IA.

8. Ismail S, Wankhede DB, Syed HM, Kulkarni AS, Fayazuddin M (2003) The effect of germination on the changes in protein, free amino acid and in vitro