

## **Analysis of Nutritional Composition of Developed Flavour Enhancer using Natural Ingredients with Umami Taste**

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### **Abstract**

The main objective of this study was to determine proximate composition of a flavour enhancer formulated using locally available natural ingredients with umami taste as a replacement for Mono Sodium Glutamate (MSG). Powdered mushrooms, tomatoes, carrots and garlic were used as ingredients. Eight different formulations were formulated with taguchi L8 design. Sensory assessment was carried out to determine the acceptability of the developed product. The study was carried out to determine nutritional profile of the final product. Physicochemical parameters such as moisture, fat, protein, fiber, free fat and mineral content were determined for the developed product according to the Standard AOAC methods. Consumption of a single vegetable in order to get the mouth feel for glutamic acid would not be a long lasting practice as far as the food patterns of Sri Lankan consumers is concerned. Therefore, using a mixture replacing MSG would be a much advanced practice considering the health issues and the addictive behaviour on MSG. Carbohydrate percentage was calculated by using following formula: Carbohydrate % = 100 - (fat% + protein% + ash% + fiber% + moisture %). Free fat content was determined according to the soxhlet extraction method described in Pearson's Chemical Analysis of Food, 9<sup>th</sup> edition. Micro Kjeldhal Method was used to determine the crude protein content of the product. The moisture and crude fiber contents were determined according to the AOAC Official Methods of 925.10 and 978.10 respectively. The gravimetric method was used as per the AOAC Official Method, 923.03 to calculate the total ash content of the product. According to the results carbohydrate, fat, protein, moisture, fiber, ash and energy were 57.8%, 13%, 0.6%, 5.3%, 15%, 20% and 245Kcal/100g, respectively. Along with an intention of replacing the consumption of MSG, the results of this study makes known that formula 767 would be a better combination to develop the said natural flavour enhancer.

**Keywords:** Flavour enhancer, Proximate analysis, Umami

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