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DEVELOPMENT AND EVALUATION OF VITAMIN D AND CALCIUM RICH PRODUCTS USING DIFFERENT COOKING TECHNIQUES

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Introduction - *In India, Vitamin D and Calcium deficiency prevails about 70-100% in the general population, yet it is the most under-diagnosed and under-treated nutritional deficiency. It is widespread irrespective of age, gender, race and geography and also due to various socioreligious and cultural practices. Diets that are deficient in calcium tend also to be deficient in vitamin D because a single food, milk, is the principle dietary source of both these nutrients. This study proposes to develop value added products, its acceptability and evaluation.*

Aim: *The study aims to develop a value added vitamin D and calcium rich product from sundried Mushroom powder, Ragi flour and Chia seeds and to assess the effect of various cooking techniques on Vitamin D and Calcium levels.*

Methodology: *The process involves procurement of Mushroom powder followed bysun drying of mushroom to develop dry powder. Different products were developed by incorporating ushroom powder,ragi flour and chia seeds such as Muffins (Baking), Mathri (Frying), Parantha (Direct-heat), Jawa (Boiling) and Ragi-Banana Pancakes (Direct-heat) which involvesvarious cooking techniques. Sensory evaluation was done using 9 point Hedonic scale and Composite scale on 100 subjects. The proximate analysis of developed value added product was done for nutritional value (energy, protein, fat and CHO), ash, moisture, vitamin D and calcium content. Statistical analysis was done using SPSS Version 21.*

Result – *Retention of Vitamin D and Calcium content in various cooking techniques shows a remarkable value of 72.67% and 22.81% in Muffins, 72.09% and 51.50% in Parantha, 82.56% and 11.21% in Pancakes, 88.37% and 24.75% in Jawa, 86.05% and 71.62% in Mathri, respectively.*

Conclusion– *Among various cooking techniques, highest values of retention of Vitamin D is in Jawa (Boiling) whereas highest values of Calcium is in Mathri (Frying)*

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