

DEVELOPMENT AND NUTRITIONAL ANALYSIS OF IDLI PREMIX FOR MENOPAUSAL WOMEN BY INCORPORATING FLAX SEEDS

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Abstract—Menopause is a natural ageing process that marks the end of women's reproductive years when body starts running out of eggs, hormone levels fluctuate and cycle become unpredictable. Flax seeds are high in lignans which are natural phytoestrogen, replicates female estrogen within the body and helps to reduce menopausal symptoms like hot flashes and mood swings. The present study was carried out to study the nutritional and antioxidants potential of flax seeds and products were developed by incorporating flax seeds. The best variant of recipe was selected by panel members and their nutritional analysis was done. The nutritional composition of flax seeds indicated that it contained moisture (g/100g), ash (g/100g), carbohydrate (g/100g), protein (g/100g), fat (g/100g), crude fiber (g/100g), iron (mg/100g) and calcium (mg/100g) as 6.7, 2.9, 27.16, 20.32, 36.6, 10.1, 2.1 and 154.6 respectively. Phytochemical screening indicated the presence of alkaloids, glycosides, saponins and flavonoids in flax seeds. Antioxidant profile showed that flax seeds contained Vitamin C (mg/100g) and DPPH free radical scavenging activity as 0.61 and 8.4 respectively. Idli premix was developed by incorporation of 5%, 10% and 20% of flax seeds powder showed that idli incorporating 5% flax seeds was most acceptable product. The nutrient analysis of most acceptable product showed that acceptable product was high in protein (g/100g), calcium (mg/100g), iron (g/100g) and vitamin C (mg/100g) as 9.1, 19.16, 9.1, 14.12 respectively when compared to protein, calcium, iron and vitamin C in standard recipe as 5.3, 4.23, 0.66, 11.24 respectively. Thus flax seeds powder possess nutritional and health benefits in reducing menopausal symptoms as they are a good source of antioxidants and phytochemicals & lignans mimic the effect of estrogen in the body.

Keywords: Flax seeds, lignans, estrogen, menopause, idli.