

# International Journal of Advanced Multidisciplinary Research (IJAMR)

ISSN: 2393-8870

www.ijarm.com

Coden: IJAMHQ(USA)

## Research Article

SOI: <http://s-o-i.org/1.15/ijarm-2-12-1>

## Organoleptic and Nutritional evaluation of linseed flours blended traditional Snack products

Dr. Manju Jaiswal\* and Dr Renu Verma\*\*

\* Professor in Home Science, M.L.B. Govt. Girls P.G. (Auto) College, Bhopal, Madhya Pradesh, India

\*\*Asst. Prof. in Foods and Nutrition M.L.B. Govt. Girls P.G. (Auto) College, Bhopal, Madhya Pradesh, India

Corresponding Author : [charuchandra2003@yahoo.com](mailto:charuchandra2003@yahoo.com)

### Abstract

#### Keywords

Linseed,  
food ingredients,  
anti cancer agents,  
osteoporosis,  
Diabetes and prostetic  
hypertrophy.

Linseed is a magic oil seed having lot of quality nutrients, functional and medicinal properties. So their incorporation in prevailing food ingredients is a great challenge and opportunities to develop the technologies of ready to eat foods. It contains about 6% mucilage which resides in seed coat and about 25% of protein together with wax, resin, sugar, phosphates, sterols, colour, pigments like carotenoids and xanthophylls, vit B12 thiamine, riboflavin and niacin etc. The lignin of flax contains secoisolariciresinol-diglucoide (SDG) is belong to a group of plant substance known as phytoestrogens a natural anti cancer agents, which have beneficial effect against breast cancer and prostate cancer. It also beneficial of osteoporosis, Diabetes and prostetic hypertrophy. They are richest source of soluble fiber play a role on lowering blood cholesterol. Linseed contains phytic acid and linamarin from which acetone and hydrocyanic acid are released by an auto enzyme Linamerase, which is highly toxic. However, this toxicity may be reduced processing by heat treatment, autoclaving and water extracting. Therefore, after roasting linseed flour can be used for blending with traditional flour to enhance the nutritional quality under the value addition technique and also developed the medicinal properties in daily dietary foods.

### Introduction

Linseed is a magic oil seed having lot of quality nutrients, functional and medicinal properties. So their incorporation in prevailing food ingredients is a great challenge and opportunities to develop the technologies of ready to eat foods. It contains about 6% mucilage which resides in seed coat and about 25% of protein together with wax, resin, sugar, phosphates, sterols, colour, pigments like carotenoids and xanthophylls, vit B<sub>12</sub> thiamine, riboflavin and niacin etc.

The lignin of flax contains secoisolariciresinol-diglucoide (SDG) is belong to a group of plant substance known as phytoestrogens a natural anti cancer agents, which have beneficial effect against breast cancer and prostate cancer. It also beneficial of osteoporosis, Diabetes and prostetic hypertrophy. They are richest source of soluble fiber play a role on lowering blood cholesterol.

Linseed contains phytic acid and linamarin from which acetone and hydrocyanic acid are released by an auto enzyme

Linamerase, which is highly toxic. However, this toxicity may be reduced processing by heat treatment, autoclaving and water extracting.

Singh and Puinia (1979) were observed and the results of various investigation revealed that heat treatment was more effective than aqueous treatment in reducing antinutritional factors in linseed. Therefore, after roasting linseed flour can be used for blending with traditional flour to enhance the nutritional quality under the value addition technique and also developed the medicinal properties in daily dietary foods.

The present attempt had carried out on Linseed flour incorporated products aimed at to enhance the nutritional and functional quality of traditional foods.

### Materials and Methods

Wheat flour and gram flour based laddo and papdi were prepared with blending of roasted linseed flour and compared

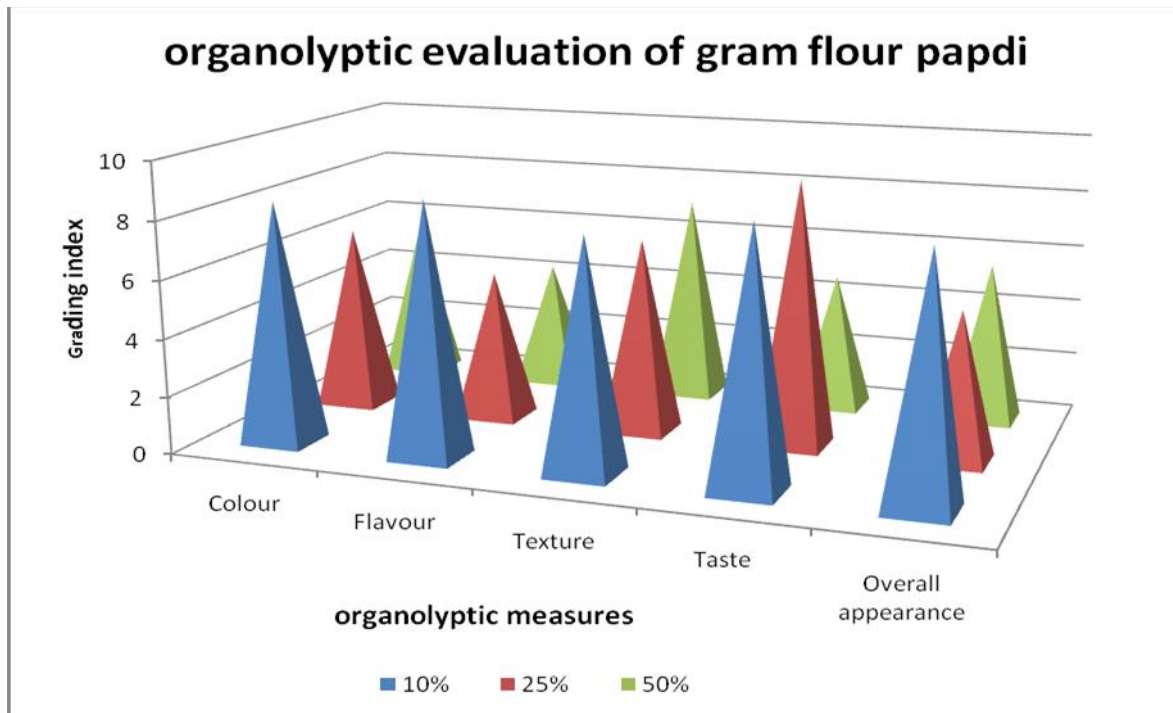
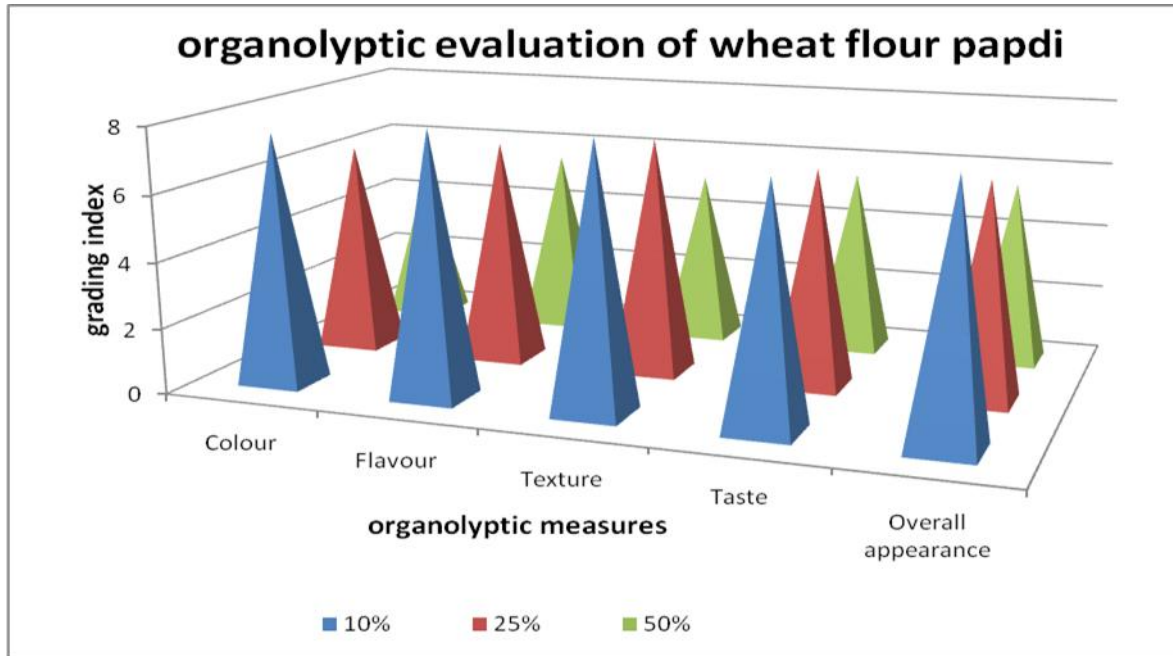
with control sample. Each recipe was prepared by incorporating the roasted linseed flour at three level i.e.10%, 25% and 50%.

And after their preparation it was organoleptically evaluated by the panel of ten judges using nine point Hedonic scale. The products were chemically evaluated for proximate parameter viz. protein, fat, moisture and ash, the techniques suggested by AOAC.

## Results and Discussion

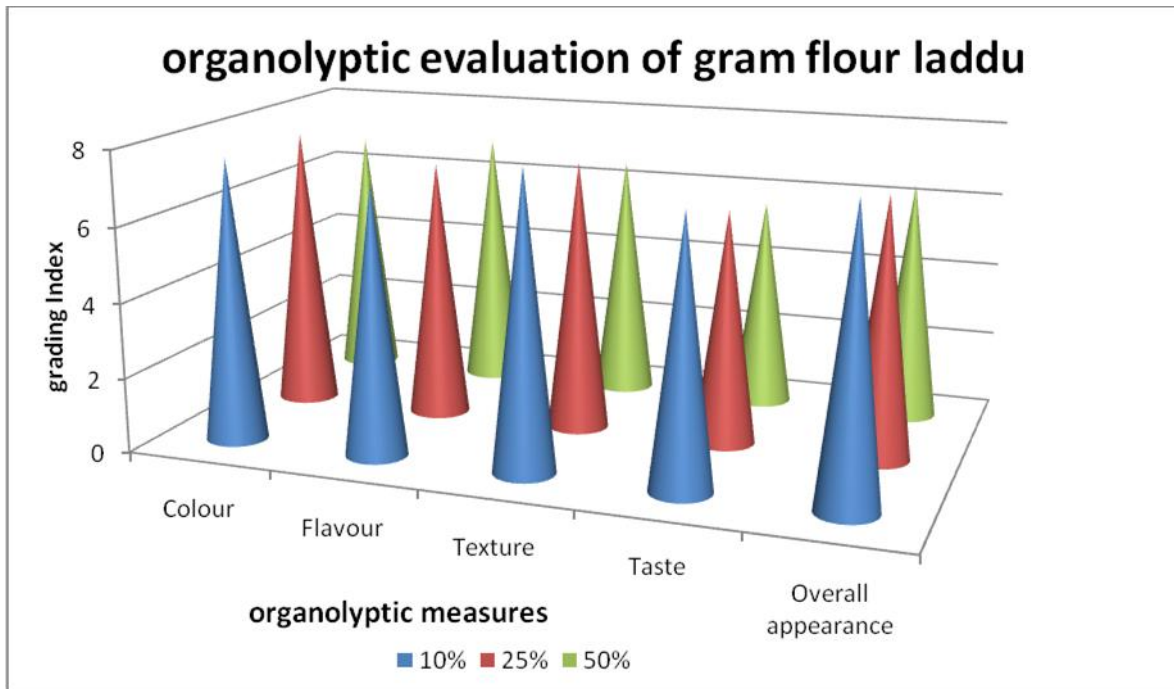
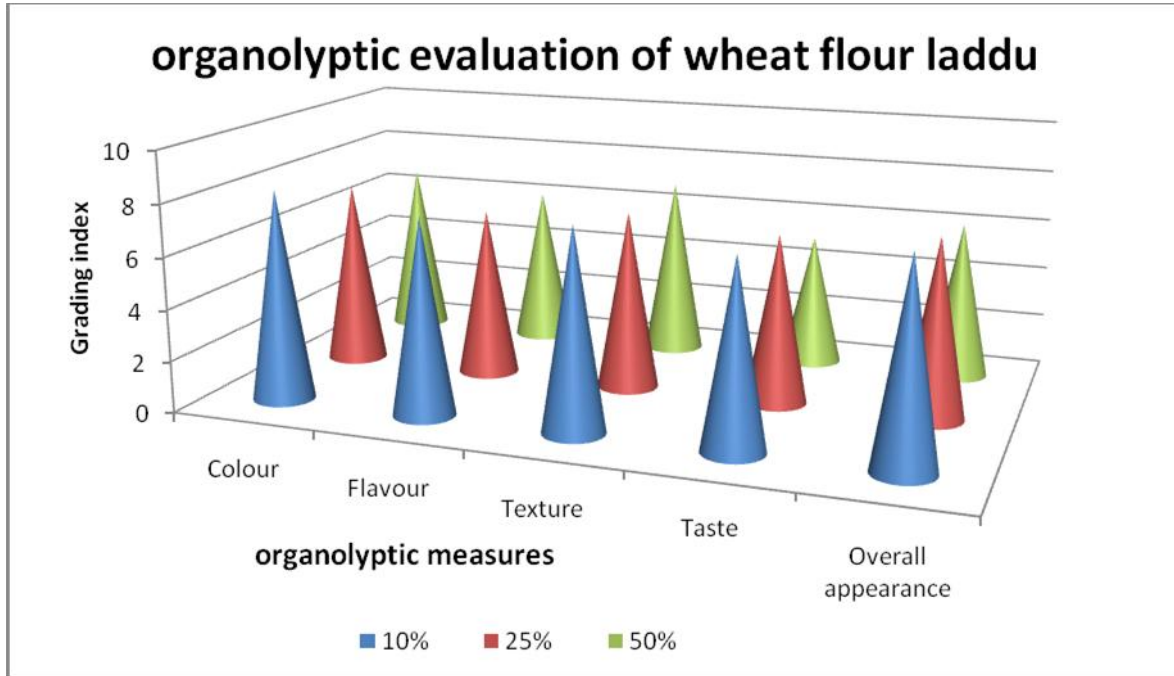
In present study, the organolyptic evaluation of the food prepared by blending with linseed flour revealed that all the developed food products were organolaptically acceptable at different level. The control sample (no incorporation) had highest mean scores from organoleptic evaluation and appearance, i.e. colour, texture, taste, flavour and over all acceptability in both types of laddo and papdi.

**Chart: Organolyptic evaluation of snack preparations incorporated with roasted linseed flour.**



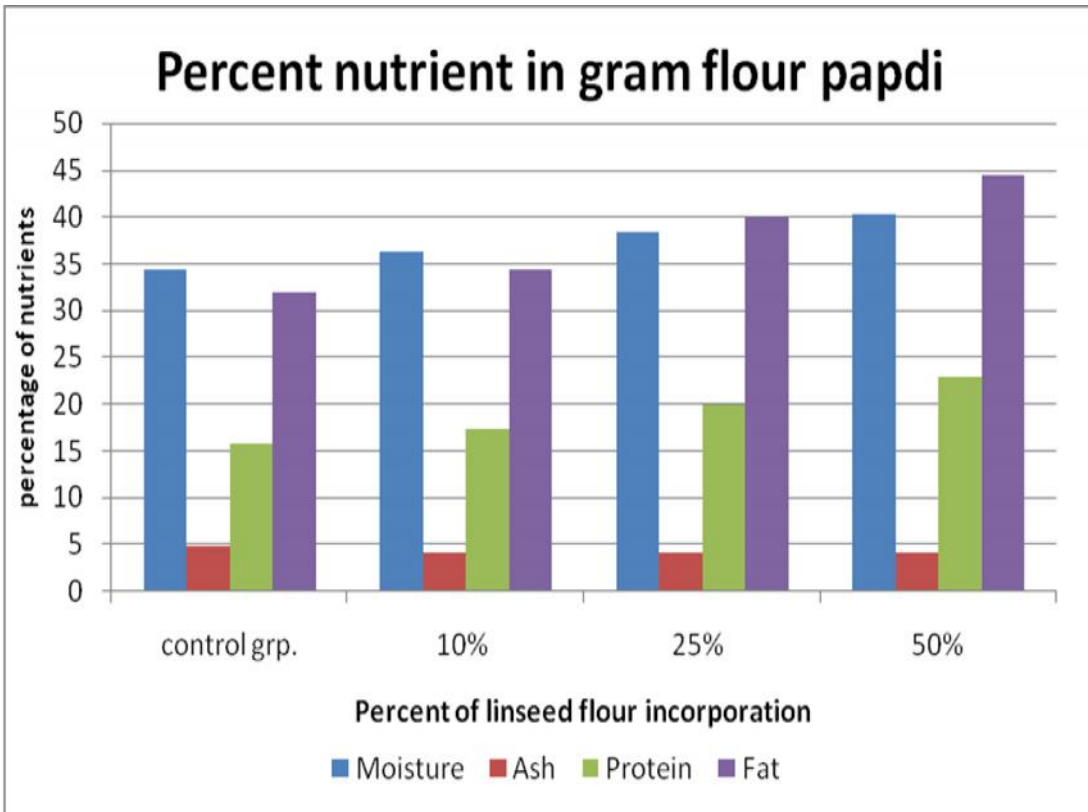
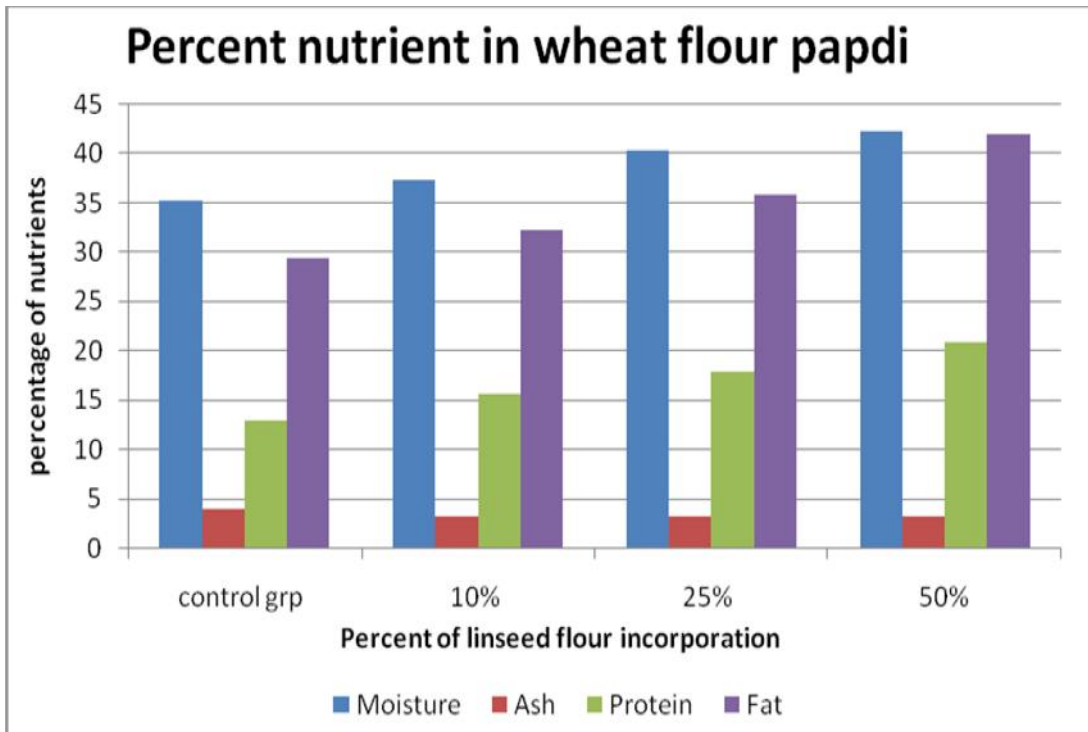
It was observed that 10% linseed flour supplemented papdi of both wheat flour as well as gram flour showed highest

mean for their overall acceptability then 25% and 50% respectively.



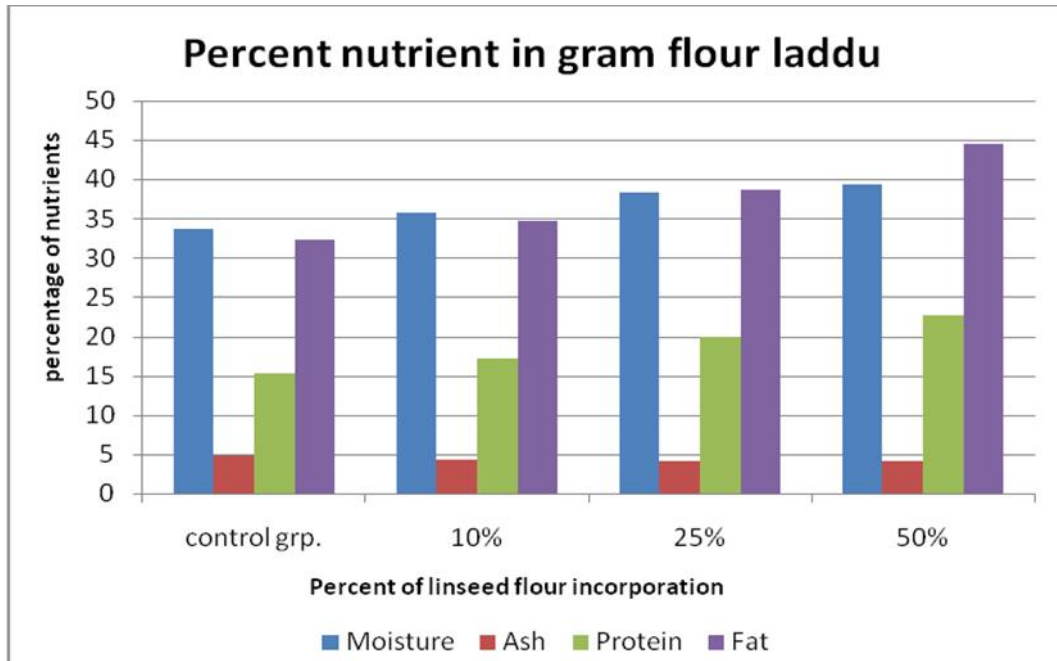
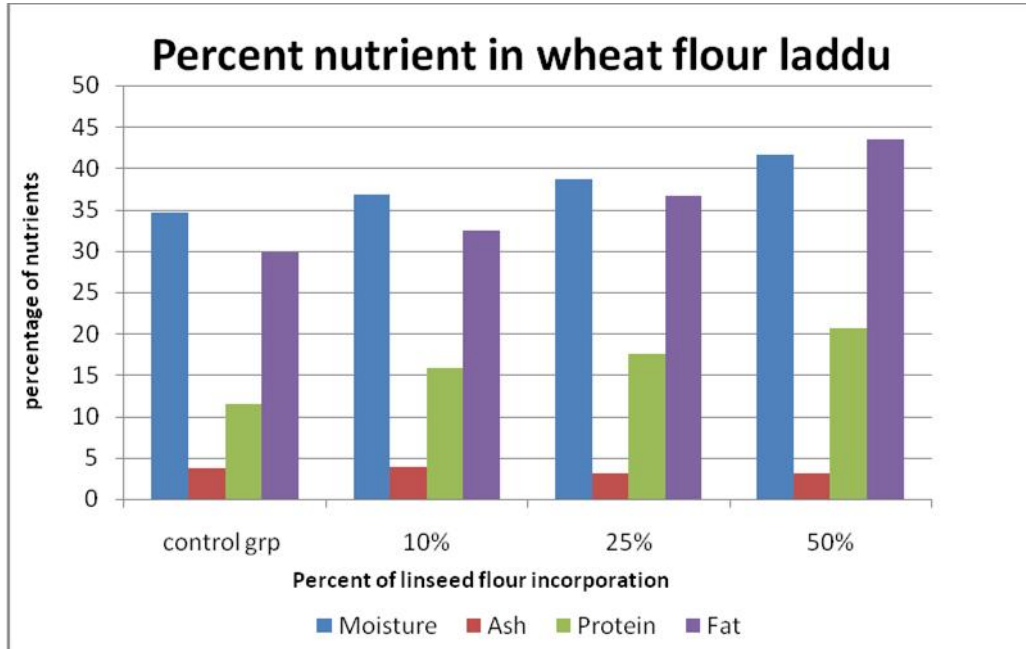
10 % linseed incorporated wheat flour as well as gram flour based laddu were recorded highest overall acceptability followed by 25% and 50% respectively

Chart II : Chemical evaluation of snack preparations incorporated with roasted linseed flour.



All the developed products were chemically evaluated for proximate parameter i.e., protein, fat, ash and moisture .It

was visible that all parameters increase with an increase in linseed flour incorporation.



.Again it shows that all parameters increase with an increase in linseed flour incorporation.

## Conclusion

It is concluded that all the developed food products were organoleptically acceptable at different level .The most accepted product was recorded 10% linseed flour blended products i.e. gram flour based papdi (8.4) followed by wheat flour based laddu (7.8).then gram flour based laddu(7.7) and wheat flour based papdi(7.6) respectively.

In the above preparation, all the proximate composition viz. Moisture, Ash, Protein, Fat were increased with supplementation .50% supplemented products had highest proximate parameters followed by 25%, 10%. But 10% incorporated product were found most acceptable.

## References

- Bicchi, C.; Binello, A. and Rubiolo, P. (2000). Determination of Phenolic diterpene antioxidants in rosemary with different methods of extraction and analysis. *Phytochem Anal*, **11** : 236-242.
- Chopra, Bagchi and Ganguli (1939). *I.J. of Vet Sci.* (1934). I, 61 (Wealth of India, 1963, pp. 128).
- Dr. Fletcher Rob. (1995). January “linola new flaxseed breed low in alpha-linolenic acid”, from the Australian New Crops News Letter, Issue No.3.
- Ermakov, A.I. (1965). Group, varietal and individual characteristics of oil percentage in flax seeds. *Trudy Prikt Bot. Genet. Steck*, 37 : 5-26
- Naqvi, P.A.; Rai, M. and Vasishtha, A.K. (1987). “Varietal Correlation between different quality components in linseed”. *J. of the Oil Technologists Assoc. of India* (1987) 19 (3) 66-69 (En, 6, ref.) HBTI, Kanpur, India, FCA 1990, Vol. 43, No.7.
- w.w.w.goolge.com. P,7 WHO reports~Omega-3 fatty acids and antioxidants in Human Health.

\*\*\*\*\*

Access this Article Online	
	<b>Website:</b> <a href="http://www.ijarm.com">www.ijarm.com</a>
	<b>Subject:</b> <a href="#">Food &amp; Nutrition</a>
<b>Quick Response Code</b>	

### How to cite this article:

**Manju Jaiswal and Dr Renu Verma. (2015). Organoleptic and Nutritional evaluation of linseed flours blended traditional Snack products. International Journal of Advanced Multidisciplinary Research 2(12): (2015): 1–6.**