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Original Article

Development and Quality Assessment of Poshakriti: A Gluten-Free, Multipurpose, Multigrain, Nutritional Flour

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ABSTRACT

Background: Growing awareness of the health-nutrition interface and demand for convenient yet wholesome foods is rising. Traditional Indian diets, influenced by Ayurvedic principles, emphasize balanced combinations of cereals, pulses, and spices. **Objectives:** Building on this knowledge, a novel gluten-free, millet-rich multigrain flour, *Poshakriti*, was developed to meet contemporary nutritional and lifestyle needs. **Materials and Methods:** *Poshakriti* was formulated using selected cereals (rice, finger millet, sorghum), pulses (green gram, red lentil, soybean, moth bean), and spices (cumin, coriander, black pepper, dry ginger, cinnamon, fenugreek). Two batches-roasted and unroasted-were prepared. Standard AOAC methods were employed to evaluate proximate composition, mineral profile, dietary fibre, total phenolic content, antioxidant activity, fatty acid composition, protein digestibility, glycemic index, gluten content, and microbial load. Accelerated stability testing of the roasted variant was conducted. **Results:** Roasted flour demonstrated superior stability with lower moisture (8.4%) and acid value (0.2 mg NaOH/100 g). It exhibited high protein (18.04 g/100 g), dietary fibre (13.2 g/100 g), essential minerals (calcium, iron), and beneficial mono and poly unsaturated fatty acids. Functional attributes included enhanced protein digestibility (80%), significant antioxidant activity, high phenolic content (750 mg GAE/100 g), and low glycemic index (28). Both variants were completely gluten-free and microbiologically safe, outperforming the commercial flour in most parameters. The roasted variant remained stable throughout the nine-month study. **Conclusion:** *Poshakriti* represents nutritionally superior, gluten-free, and versatile ready-to-cook flour. Its favorable nutritional and functional properties highlight its potential as a convenient functional food for promoting metabolic health and addressing contemporary nutritional challenges.

Keywords: Finger Millet, Functional Food, Low Glycemic Index, Millets, Ragi, Roasted Grains.

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INTRODUCTION

The growing awareness of the health-nutrition interface has created opportunities for the development of novel food products. Today's wellness-conscious consumers continually explore food choices that are both wholesome and palatable. Our dietary practices are influenced by cultural heritage, social context, and individual tastes, creating diverse options (Jayasinghe *et al*., 2025). There is a renewed appreciation for culturally rooted ingredients and traditional dietary patterns. Along with health and nutrition, 'convenience' has become an important expectation among today's consumers. In fast-paced modern lifestyle, there is a growing preference for foods that are nutritionally wholesome yet quick and easy to prepare. A variety of 'ready-to-cook' premixes available even in intrinsically traditional Indian market are proof of this (Rathee *et al*., 2018). However, this category continues to evolve with changing consumer preferences. Hence, continuous development of improved and diverse options is essential. The great influence of Ayurveda on Indian culinary practices is evident and can also be harnessed along contemporary needs (Chitrakar *et al*., 2025).

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Whole grain-based foods and diverse combinations of cereals, pulses, and millets offer practical strategies to meet evolving nutritional needs. Indian dietary traditions inherently incorporate such nutrient-rich and palatable combinations, reflecting a long-standing emphasis on balanced nutrition. Thus, beyond their popularity, traditional foods are receiving growing scientific attention due to their nutritional and functional potential.

Multigrain flours composed of cereals and pulses are integral to traditional diets across South Asia and are valued for their balanced macronutrient composition and micronutrient density. For example, *Thalipeeth* (unleavened savory pancake) is a regional speciality from Maharashtra state of India. Its main ingredient, Bhajani, is a spiced multigrain flour. It has also been studied for ingredient standardization and process optimization based on functional, textural, and organoleptic properties (Arya and Gaikwad, 2017). Other than traditional recipes, various multigrain flours are also available in market and are increasingly popular.

Building on this traditional knowledge, we developed a novel multigrain flour, *Poshakriti*, to offer improved features. Unlike *Bhajani, Poshakriti* offers greater culinary versatility and can be used to prepare roti, gruel, upma, and other dishes. Although several commercial multigrain flours and traditional *Bhajani* formulations are available, most are wheat-based, lack standardization, and rarely subjected to comprehensive scientific evaluation of their nutritional and functional properties. However, *Poshakriti* was formulated as a gluten-free, millet-rich product with a distinctive addition of spices. It was rationally formulated by selecting complementary cereals, millets, legumes, spices, and seeds to achieve a balanced nutritional profile while improving protein quality, dietary fibre content, micronutrient density, and functional properties. Beyond its nutritional composition, the formulation was evaluated for multiple parameters, focusing on the effects of roasting on its properties. The objective was to develop a novel ready-to-cook flour that meets modern nutritional requirements while enhancing digestibility, supporting metabolic health, and ensuring optimal storage stability.

The present study therefore describes the formulation, processing, and characterization of this novel flour, prepared through controlled roasting of cereals, pulses, and spices.

MATERIALS AND METHODS

The present work was carried out in two stages. In first stage, the formulation was developed by careful selection of ingredients and preparation of the flour. While in second stage, it was evaluated for its physico-chemical, nutritional and other characteristics.

Stage 1. Development and preparation of '*Poshakriti*' flour

Selection of ingredients

As mentioned before, the aim was to prepare a multi-grain flour with gluten free ingredients. Thus, cereals (unpolished rice, finger millet, sorghum), pulses (green gram, red lentil, soybean, moth bean), and spices (cumin, coriander, black pepper, dry ginger, cinnamon, fenugreek) were selected for their nutritional value and palatability. The whole ingredients were procured from authentic suppliers and cleaned to remove foreign matter, if any. The proportions of the 13 ingredients were optimized to achieve a balanced nutritional profile, desirable functional properties (binding capacity, texture, etc.), and sensory acceptability. Table 1 presents an overview of ingredients and their proportions.

The formulation comprised of cereals (43.47%) and legumes (32.61%), reflecting a balanced distribution of carbohydrates and proteins. The spices comprised of 23.92% proportion. Two identical batches were prepared, one of which was subjected to the roasting procedure.

Roasting procedure

Each cereal and legume was roasted separately at controlled temperatures ranging from 80^{o}C to 200^{o}C with continuous agitation until a light brown color, crisp texture, and characteristic pleasant aroma were achieved. Spices were also roasted separately but at milder temperatures, ranging from 50-100^{o}C to preserve their volatile oils. All roasted ingredients were cooled to ambient temperature.

Blending and Size Reduction

The roasted ingredients were blended in fixed proportions, milled to a fine powder, and sieved through a 60-80 mesh to obtain a homogeneous multigrain flour. An identical procedure was applied to the batch comprising unroasted ingredients.

Analytical Evaluation of *Poshakriti* flour

Proximate and Functional Analysis

Both the batches were subjected to tests viz., moisture content, ash value, acid value, protein content, fat content, carbohydrate content, dietary fibre content, mineral content, and total phenolic content using standard AOAC and spectrophotometric methods (Cuniff, 2016; Singleton and Rossi, 1965). The antioxidant activity was also evaluated. Protein digestibility was assessed using an *in vitro* enzymatic method. Microbial load was evaluated using plate count techniques.

Stability Study

Accelerated stability testing was conducted at 45^{o}C and 75% relative humidity for nine months (15 days equivalent to one month) for roasted variant only. Moisture content, acid value, and microbial load were monitored periodically.

Comparative analysis

The comparison of flours prepared from roasted and unroasted ingredients was carried out based on their physico-chemical, nutritional and functional analysis. Additionally, a commercially available multigrain flour was included to enhance the scope of comparison. The final analysis focused on comparative interpretation of observed values across these three samples.

The results obtained from the analyses and tests were presented in a descriptive manner as observed values. No inferential statistical tests were applied, as the objective was to develop and characterize the nutritional, physicochemical, functional, and safety attributes of the formulation.

RESULTS

The present work aimed to develop a nutritious, multi-grain, gluten-free flour that is convenient and versatile. Ingredients were selected with this as a primary consideration. For comparison, a commercial multigrain flour was selected. This marketed flour had the ingredient composition as- Wheat (90.9%), Soya (5.2%), Chana (0.5%), Oat (1.4%), Maize, and Psyllium Husk (1.1%). All the ingredients were unroasted in this flour.

The results obtained from various assessments and their comparative analyses are presented as follows:

Physicochemical Properties

As depicted in Table 2, the roasted *Poshakriti* flour showed better stability, as indicated by its lower moisture content and acid value, along with the presence of volatile oils that enhance functional quality. The unroasted flour exhibited higher moisture and acidity, suggesting comparatively lower stability. The reference commercial multigrain flour showed a higher acid value and lacked bioactive components such as volatile oils, indicating lower functional quality.

Proximate Composition

The proximate composition from Table 2 shows that both roasted and unroasted variants of *Poshakriti* flour had comparable carbohydrate content to the reference commercial multigrain flour. However, they exhibited considerably higher protein and fat content, contributing to greater nutritional density. The sugar content was lower in both *Poshakriti* variants, indicating a healthier profile. Consequently, both formulations demonstrated a higher energy value, with the unroasted variant being the highest.

Dietary Fatty Acids Profile

The fatty acids profile from Table 2 indicates that both *Poshakriti* flour variants contained higher levels of MUFA and PUFA, including oleic and linoleic acids, compared to the reference commercial multigrain flour, where these were absent. Although saturated fat content was slightly higher, the presence of beneficial unsaturated fatty acids reflects a healthier lipid composition. Overall, the developed flours demonstrated superior nutritional quality.

Functional and Nutritional Attributes

The functional and nutritional evaluation as presented in table showed that both *Poshakriti* flours had slightly higher dietary fiber content compared to the reference commercial multigrain flour. They also exhibited high antioxidant activity and total phenolic content, which were absent in the commercial sample. Additionally, protein digestibility was considerably higher in the developed flours, highest being in roasted variant. Notably, both variants demonstrated a low glycemic index, in contrast to the higher value observed in the commercial flour. Overall, the developed flours showed enhanced functional and nutritional attributes.

Mineral Composition

The mineral composition analysis in Table 3 showed that both *Poshakriti* variants were rich in essential minerals, including calcium, magnesium, potassium, phosphorus, and zinc, which

Table 1: Composition of *Poshakriti* flour: ingredients and their percentage proportions.

Sl. No.	Ingredient	Latin Name	Percentage (%)
		Cereals	
1.	Rice	*Oryza sativa*	14.49
2.	Ragi	*Eleusine coracana*	14.49
3.	Jowar	*Sorghum bicolor*	14.49
		Legumes	
4.	Green gram	*Vigna radiata*	14.49
5.	Red lentil	*Lens culinaris*	7.25
6.	Soybean	*Glycine max*	3.62
7.	Moth bean	*Vigna aconitifolia*	7.25
		Spices	
8	Cumin	*Cuminum cyminum*	3.62
9.	Coriander	*Coriandrum sativum*	7.25
10.	Black pepper	*Piper nigrum*	2.90
11.	Dry ginger	*Zingiber officinale*	3.62
12.	Cinnamon	*Cinnamomum verum*	2.90
13.	Fenugreek	*Trigonella foenum-graecum*	3.62

were not reported in the reference commercial multigrain flour. Additionally, the iron content was substantially higher in the developed flours. Overall, the *Poshakriti* formulations demonstrated a superior mineral profile and enhanced nutritional value, without additional fortification needs.

Gluten and Safety Parameters

The safety and gluten assessment in Table 3 showed that both *Poshakriti* flours were completely gluten-free, unlike the reference commercial multigrain flour. Additionally, all samples exhibited low microbial load within acceptable limits, indicating good microbiological safety.

Stability Study for *Postakriti* flour (roasted ingredients variant)

The stability study indicated in Table 4 shows a gradual increase in moisture content over time, though it remained within acceptable limits, suggesting good storage stability. The acid value remained constant throughout the study period, indicating no development of rancidity. Additionally, the microbial load was Not Detected (ND) at any time point, confirming excellent microbiological safety. Overall, the flour demonstrated good stability under the given storage conditions for nine months.

DISCUSSION

The present study highlights the growing relevance of whole grain-based, multigrain formulations in the context of modern dietary options. Whole grains, particularly regionally important cereals such as sorghum and millets, are now increasingly recognized as "Nutri-cereals" due to their superior content of dietary fibre, micronutrients, and bioactive compounds (Kaur *et al*., 2014). Their inclusion in daily diets offers significant potential in addressing lifestyle-related disorders and nutritional deficiencies.

The formulation of *Poshakriti* aligns with traditional Indian dietary principles, where combinations of cereals, pulses, and millets are consumed as to ensure nutritional adequacy. Such combinations are known to provide complementary amino acid profiles, thereby improving overall protein quality. The selection of ingredients was done to achieve a carbohydrate base with protein enrichment, and functional bioactive components. The higher proportion of cereals ensured energy supply and desirable texture, while legumes contribute to protein quality and amino acid complementarity. The inclusion of spices in a substantial proportion was done to enhance palatability and impart antioxidant, digestive, and preservative properties, supporting both functionality and shelf stability. The roasted variant of *Poshakriti* flour exhibited a nutritionally dense and functionally active profile, providing 432.46 kcal energy, 18.04 g protein,

Table 2: Physicochemical and nutritional properties of roasted and unroasted variants of *Poshakriti* flour and market-available multigrain flour.

Test	*Poshakriti* flour (Roasted ingredients)	*Poshakriti* flour (Unroasted ingredients)	Market-available multigrain flour	Unit
Moisture	8.4	9.6	9.1	%
Total Ash	2	2.8	2.65	%
Acid insoluble ash	0.05	0.09	0.06	%
Acid value	0.2	0.28	0.46	mg NaOH/ 100 g
Alcoholic acidity	0.49	0.613	0.58	%
Uric acid	2.5	3.2	0	mg/100 g
Volatile oil content	1.2	1.56	0	%
Carbohydrate	70.2	70.4	69.8	g/100 g
Protein	18.04	20.2	13.26	g/100 g
Sugar	2.7	2.82	4.85	g/100 g
Total fat	5.9	6.02	1.75	g/100 g
Energy	432.46	442.18	338	kcal
Saturated fat	1.08	1	0.32	g/100 g
Monounsaturated Fatty Acids (MUFA)	2	2.11	0	g/100 g
Polyunsaturated Fatty Acids (PUFA)	2.5	2.62	0	g/100 g
Oleic acid	1.1	1	-	g/100 g
Linoleic acid	2.7	2.85	-	g/100 g

Table 3: Functional and market-available multigrain flour.

Test	*Poshakriti* flour (Roasted ingredients)	*Poshakriti* flour (Unroasted ingredients)	Market-available multigrain flour	Unit
Dietary fiber	13.2	12.8	12.7	g/100 g
Antioxidant activity	75	78	-	mg/100 g
Total phenols	750	765	-	mg GAE/100 g
Protein digestibility	80	78.8	65	%
Glycemic index	28	28	46	-
Calcium	190	189	-	mg/100 g
Magnesium	220	220	-	mg/100 g
Iron	8	7.8	3.6	mg/100 g
Zinc	3.2	3.1	-	mg/100 g
Potassium	1100	1101	-	mg/100 g
Sodium	30	32	-	mg/100 g
Phosphorus	315	316.1	-	mg/100 g
Gluten	0	0	9.2	%
Microbial load	<10	<10	<10	cfu/g

70.2 g carbohydrates, and 13.2 g dietary fibre per 100 g. Also, it contained essential micronutrients including calcium (190 mg), magnesium (220 mg), iron (8 mg), and zinc (3.2 mg). Thereby, this formulation provides approximately 21.6% of daily energy, 36.1% of protein, 19% of calcium, and 50-59.5% of magnesium requirements as per Indian RDA (ICMR-NIN/FSSAI), indicating its strong potential to address both macro- and micronutrient deficiencies. In the present study, the higher protein content observed in both roasted and unroasted variants compared to the commercial flour supports this concept. Additionally, the presence of essential fatty acids (MUFA and PUFA), higher mineral content without artificial fortification, and improved dietary fibre further emphasize the nutritional superiority of the developed formulation. The roasted variant also exhibited important functional properties such as high dietary fibre, low glycemic index (GI=28), good protein digestibility (80%), antioxidant activity (75 µg/100 g), and total phenolic content (750 mg GAE/100 g). Collectively this indicated good support towards achieving glycemic control, gut health, and reduction of oxidative stress and inflammation. The low sugar (2.7 g), low sodium (30 mg), and favorable fatty acid profile (PUFA and MUFA) may contribute to improved cardiovascular and metabolic health. Additionally, its gluten-free nature enhances its suitability for gluten sensitivity and metabolic disorders, irritable bowel syndrome, polycystic ovarian syndrome, etc. (Böhn *et al*., 2015; Moran *et al*., 2013).

Urbanization and industrialization have significantly influenced dietary patterns, increasing reliance on convenience foods. However, many commercially available ready-to-cook products often compromise on nutritional quality due to the use of refined ingredients and lack of functional components. In this context, *Poshakriti* represents a strategic advancement by combining convenience with nutritional richness and functional benefits. The development of such ready-to-cook multigrain mixes addresses the demand for quick yet health-promoting food options. As mentioned before, the unique blend allows versatile usage so, variety of breakfast and lunch items can be prepared. The formulation's affordability and social acceptability may facilitate its role in preventing nutritional deficiencies and mitigating non-communicable disease risk.

Processing methods play a crucial role in determining the nutritional and functional quality of food products. Roasting, as employed in the preparation of *Poshakriti*, significantly influenced the observed results. The improved protein digestibility in the roasted variant (80%) compared to the unroasted variant and commercial flour can be attributed to structural modifications such as protein denaturation and starch gelatinization. These changes enhance enzymatic accessibility, thereby improving digestibility. Similar findings have been reported in earlier studies (Geervani *et al*., 1996; Uppal and Bains, 2012).

Furthermore, roasting is known to reduce anti-nutritional factors such as phytates and enzyme inhibitors present in cereals and legumes, thereby improving nutrient bioavailability (Samtiya *et al*., 2020). It also contributes to desirable sensory attributes through Maillard reactions, enhancing flavor and palatability (El Hosry *et al*., 2025). In the present study, roasting also contributed to improved stability, as indicated by lower moisture content, reduced acid value, and absence of microbial growth over the storage period. These findings are consistent with previous reports which demonstrate that thermal processing

Table 4: Stability study for *Postakriti* flour (roasted ingredients variant).

Parameter	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Unit
Moisture content	8.4	8.38	8.42	8.5	8.51	8.62	8.7	8.75	9.02	%
Acid value	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	mg NaOH/ 100 g
Microbial load	ND	ND	ND	ND	ND	ND	ND	ND	ND	cfu/g

enhances both nutritional quality and shelf life of grain-based products (Boye *et al*., 2009). Additionally, from an Ayurvedic perspective, roasting also called as *Bharjana Samskara* is known to transform the qualities of food, making it lighter (*Laghu*), more digestible, and suitable for enhancing metabolism (*Agni Deepana*) (Wanjarkhedkar and Pathak, 2025). This traditional understanding aligns with the observed improvements in digestibility and stability, thereby providing a scientific basis for classical processing techniques.

From a functional perspective, the developed flour exhibited high antioxidant activity and phenolic content, along with a low glycemic index. These attributes are particularly important in the prevention and management of metabolic disorders such as type 2 diabetes and cardiovascular diseases (Sarkar *et al*., 2022). The inclusion of millets and pulses, along with functional spices, may contribute synergistically to these effects through modulation of glucose metabolism, oxidative stress, and inflammation (Al-Habsi *et al*., 2025). The scope of the present study was confined to the formulation development and laboratory-based evaluation of *Poshakriti*. Thus, the health benefits inferred from the nutritional composition require validation through human clinical studies. Further, fortification with additional functional ingredients such as probiotics, prebiotics, or plant proteins can be explored to further enhance its nutritional value.

The increasing prevalence of lifestyle diseases-including obesity, diabetes, cardiovascular disorders, and certain cancers-has been strongly associated with shifts toward refined and energy-dense diets. In contrast, diets rich in whole grains and functional ingredients have been shown to play a preventive role. In this context, *Poshakriti* serves as a functional food that integrates traditional wisdom with modern nutritional science, offering both preventive and supportive health benefits in a delicious way.

CONCLUSION

The present study demonstrated that a carefully designed multigrain, gluten-free flour-*Poshakriti*- prepared using controlled roasting can serve as a nutritionally superior, functionally enhanced, and convenient food product. By bridging traditional dietary practices with modern processing and evaluation methods, *Poshakriti* represents a promising approach toward addressing contemporary nutritional challenges.

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None

ABBREVIATIONS

AOAC: Association of Official Analytical Chemists; **GAE:** Gallic Acid Equivalent; **GI:** Glycemic Index; **ICMR-NIN:** Indian Council of Medical Research - National Institute of Nutrition; **MUFA:** Monounsaturated Fatty Acids; **PUFA:** Polyunsaturated Fatty Acids; **RDA:** Recommended Dietary Allowance.

CONFLICT OF INTEREST

The author declare that there is no conflict of interest.

SUMMARY

The study details the development of *Poshakriti*, a gluten-free multigrain flour designed for modern nutritional needs using traditional Ayurvedic principles. By blending roasted cereals, pulses, and spices, the flour achieves high protein (18.04%) and dietary fiber (13.2%) while maintaining a low glycemic index (28). The roasting process significantly improved protein digestibility and storage stability compared to unroasted and commercial variants. The final product is a nutrient-dense, versatile, and shelf-stable functional food suitable for addressing metabolic health and nutritional deficiencies.

REFERENCES

Al-Habsi, N., Al-Khalili, M., Haque, S. A., Al Akhzami, N., Gonzalez-Gonzalez, C. R., Al Harthi, S., & Al Jufaili, S. M. (2025). Herbs and spices as functional food ingredients: A comprehensive review of their therapeutic properties, antioxidant and antimicrobial activities, and applications in food preservation. Journal of Functional Foods, 129, 106882. https://doi.org/10.1016/j.jff.2025.106882

Arya S., & Gaikwad S. (2016). Optimization of Ingredients and Process Formulations on Functional, Nutritional, Sensory and Textural Properties of Thalipeeth: Indian Multigrain Pancake. *Journal of Food Processing and Preservation, 41*(4), e12993. https://doi.org/10.1111/jfpp.12993

Böhn, L., Störsrud, S., Liljebo, T., Collin, L., Lindfors, P., *et al.* (2015). Diet low in FODMAPs reduces symptoms of irritable bowel syndrome as well as traditional dietary advice: a randomized controlled trial. *Gastroenterology, 149*(6), 1399-1407.e2. https://doi.org/10.1053/j.gastro.2015.07.054

Boye, J., Zare, F., & Pletch, A. (2010). Pulse proteins: Processing, characterization, functional properties and applications in food and feed. *Food Research International, 43*(2), 414-431. https://doi.org/10.1016/j.foodres.2009.09.003

Chitrakar, M., Harit, M. K., Pawar, V., & Bhapkar, V. (2025). Development and Evaluation of Ready-to-Cook Premix of Modified Ashtaguna Manda- An Ayurvedic Nutraceutical Appetizer. *International Journal of Ayurvedic Medicine, 16*(2), 493-499. https://doi.org/10.47552/ijam.v16i2.5681

Cunniff, P., Horwitz, W., & Aoac International. (2000). Official methods of analysis of AOAC International. 2, Food composition, additives, natural contaminants. Arlington, Va.

El Hosry, L., Elias, V., Chamoun, V., Halawi, M., Cayot, P., *et al.* (2025). Maillard Reaction: Mechanism, Influencing Parameters, Advantages, Disadvantages, and Food Industrial Applications: A Review. *Foods, 14*(11), 1881. https://doi.org/10.3390/foods14111881

Geervani, P., Vimala, V., Pradeep, K. U., & Devi, M. R. (1996). Effect of processing on protein digestibility, biological value and net protein utilization of millet and legume based infant mixes and biscuits. *Plant foods for human nutrition (Dordrecht, Netherlands*), *49*(3), 221-227. https://doi.org/10.1007/BF01093218

Jayasinghe, S., Byrne, N. M., & Hills, A. P. (2025). Cultural influences on dietary choices. Progress in Cardiovascular Diseases, 90, 22–26. https://doi.org/10.1016/j.pcad.2025.02.003

Kaur, K. D., Jha, A., Sabikhi, L., & Singh, A. K. (2014). Significance of coarse cereals in health and nutrition: a review. *Journal of food science and technology, 51*(8), 1429-1441. https://doi.org/10.1007/s13197-011-0612-9

Moran, L. J., Ko, H., Misso, M., Marsh, K., Noakes, M., *et al.* (2013). Dietary composition in the treatment of polycystic ovary syndrome: a systematic review to inform evidence-based guidelines. *Journal of the Academy of Nutrition and Dietetics, 113*(4), 520-545. https://doi.org/10.1016/j.jand.2012.11.018

Rathee, R., Rajain, P., & Kuchhal, A. (2018). Ready-to-eat products: Perspective of working women. *International Journal of Management, Technology and Engineering*, *8(7)*, 5985-6000.

Samtiya, M., Aluko, R. E., & Dhewa, T. (2020). Plant Food Anti-nutritional Factors and Their Reduction Strategies: an Overview. *Food Production, Processing and Nutrition, 2*(1), 6. https://doi.org/10.1186/s43014-020-0020-5

Sarkar, D., Christopher, A., & Shetty, K. (2022). Phenolic Bioactives From Plant-Based Foods for Glycemic Control. Frontiers in Endocrinology, 12. https://doi.org/10.3389/fendo.2021.727503

Singleton, V. L., & Rossi, J. A. (1965). Colorimetry of Total Phenolics with Phosphomolybdic-Phosphotungstic Acid Reagents. *American Journal of Enology and Viticulture, 16*(3), 144-158. https://doi.org/10.5344/ajev.1965.16.3.144

Uppal, V., & Bains, K. (2012). Effect of germination periods and hydrothermal treatments on *in vitro* protein and starch digestibility of germinated legumes. *Journal of food science and technology, 49*(2), 184-191. https://doi.org/10.1007/s13197-011-0273-8

Wanjarkhedkar, P., & Pathak, Y. V. (2024). Therapeutic Nutrition in Ayurveda. CRC Press. https://doi.org/10.1201/9781003345541

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