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Popular Article

## Nutritional Composition and Value-Added Products of Pea Pod

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Pea (*Pisum sativum* L.) is a winter season crop grown in many parts of the world. It is third most popular rabi pulse of India after chick pea and lentil. India is second largest producer of green peas after China (Jatin and Singh, 2020). Peas can be grown in both frost-hardy and cold-climate environments. There are two types of peas: green pea marketed as fresh or canned, and dried yellow peas. Pea waste formed in great amounts during industrial processing cause significant environmental issues and can emit toxic gases. Unsustainable waste disposal may also represent high economic costs since they have a direct impact on production profitability (Mousa *et al.*, 2021). About 35%-40% of solid waste (green pea peels or pea pods) is generated, after removal of peas from their pods. Therefore, many approaches are required to convert these wastes into useful products with high nutritional value. Such approaches include reusing pea peel wastes as animal ration and using their bioactive compounds as natural additives in food cosmetics and pharmaceutical applications. Pea pods have immense health benefits; they are an outstanding source of nutrients like vitamins, minerals, and dietary fiber (Hanan *et al.*, 2020).



### **Nutritional Composition of Pea Pod:**

Pea pods have a good source of nutrients like proteins, vitamins, minerals, and dietary fibre and other micronutrients that have a great health benefit. It has a low-calorie, low -fat and cholesterol-free. It contains dietary fiber (43.87 %) protein (10.8-13.37%), micro nutrient (Iron: 1.2mg per 100 g, copper: 0.06-1.08mg per 100g, zinc: 0.16-0.92mg per 100g), Vitamin-C (23%), Vitamin K (7%) and minerals (0.10%). **Health Benefits of Pea Pod:**

- Green pea pod are naturally full of flavanols, carotenoids, vitamin C and antioxidants, which reduces the probability of heart attacks, modify cardiometabolic risks and various heart-related diseases due to their ability to protect cells from damage.
- It improves carbohydrate and lipid metabolism because oligo-fructo-saccharide inhibits hepatic triacylglycerol.
- It has shown promising anti-hyperlipidemic effects to reduce the risk of diabetes, including oxidative stress levels and prevent organ damage, namely liver, kidney and testis.
- Pea pod which are high in fibre, seem to help reduce the effects of some types of cancer, especially colon and rectal cancer.
- It can also improve infant nutrition by complementing the properties of high-fibre prebiotic lignans and improves the efficacy and safety of crop bioaugmentation and mineral bioavailability approaches.
- It normalizes intestinal function, increases the number of lactobacilli and bifidobacterial (Kumari and Deka, 2020).

### **Value-added products of Pea Pod: -**

1. Development of Gluten-free nutrient Rich Rusk: -Rusk is a bakery product made from wheat flour and Suji. It has a slightly sweet taste and is considered a sign of tea and milk. The following methods were used in the preparation of gluten-free rusk – all the ingredients were weighed and carefully mixed with a sieve, so that all the ingredients were evenly mixed. Activate the yeast by adding water and sugar. After mixing, the ingredients are kneaded into smooth dough and allowed to proofing for 20 to 30 minutes. The dough was



then formed into a mold and placed in buttered loaf for final processing, followed by baking at 220°C for 20 min. The baked product was cooled, cut evenly and placed on a baking sheet, baked again at 90-100°C until the product reached the end point of brownish crisp (Sakpal *et al.*, 2018).

2. Instant Pea Soup Powder- One of the traditional cuisines that considerably meets nutritional needs and doubles as an appetizer is soup. The amount and variety of immediate and ready-to-eat foods available to consumers has significantly increased as a result of the fast-paced modern lifestyle and the rise in solitary living. Due to their beneficial effects on health, items high in fibre are receiving more and more attention in all food forms. By limiting the absorption of oil, dietary fibre lowers blood cholesterol levels and helps to regulate blood sugar (Hanan *et al.*, 2020). Biscuits- Biscuits in particulate are inexpensive and may be kept at room temperature for a long time. Today's consumer wants to eat foods that support their idea of a balanced, healthy diet. Manufacturer and researchers from all over the world are attempting to substitute unhealthy chemicals and add therapeutic value to them. In order to increase the nutritional content of biscuits, it is utilized as a potential dietary fiber supplement (Garg, 2015).
3. Cracker - Snack foods are consumed extensively and are available everywhere. Both adults and kids enjoy eating these items, especially in between meals. Crackers are thin, crisp wafers that are often produced with yeast from unsweetened, unleavened dough. Stronger flours than those used to make cookies are utilized to make crackers. Consumer demand for innovative snacks with practical uses and possible health benefits is rising. By including healthy grains veggies, and dairy products in your diet, you can create balanced meal. Such foods have a higher nutritive value and provide our bodies with all required calories (Mousa *et al.*, 2021).

## Conclusion

Pea pods are available in bulk, for free and their disposal causes environmental problems. Pea by-products in the form of green pea pods have been found to be a promising low-cost source of fibre that improves the functional properties of products. It is a valuable and inexpensive source of high-quality protein products that play an important role in human



nutrition. Therefore, it can be concluded that underutilized and undervalued pea pods have potential nutritional values that can be harvested for commercial purposes.

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