

Banana Peel Powder: An Overview

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SUMMARY

The banana peel reported to have excellent nutritional health benefits against diarrhoea, dysentery, diabetes, cardiac disease, and hypertension, while pomegranate peel was reported to possess antimicrobial activities. The peel powder (60 mesh size) from banana and pomegranate were prepared from their dried peel.

INTRODUCTION

Banana is one of the most common crops grown in almost all tropical countries, including India. It is an abundant and cheap agriculture product. Banana chip and banana fig are the main products from banana flesh produced by a number of small and medium factories located nationwide. As industrial by-products, peels represent about 35-50 g/ 100 g of fruit weight. This resulted in 250 tons of waste from banana peels in India generated each day and these amounts tend to increase annually. The banana peels waste is normally disposed in municipal landfills, which contribute to the existing environmental problems. However, the problem can be recovered by utilizing its high-added value compounds, including the dietary fiber fraction that has a great potential in the preparation of functional foods. Kokum has multiple health and medicinal benefits. The fruits of kokum are an excellent source of antioxidants that prevent to free radicals thereby helps from different diseases. It is also known as cool king of India fruits. Banana peels are a great home remedy for itchy skin. Banana peels contain histamine, lowering nutrients such as magnesium, vitamin C, and vitamin E. Use a banana peel to relieve itching from poison ivy or mosquito bites. Apply the banana skin to the affected area.



Fig. Banana Peel



Fig. Banana Peel powder

Processing of banana peel powder:

Preparation of banana peel powder Banana peel powder was prepared utilizing sun drying, the banana peel dry on sun drying at 40°C for 2 to 3 days. After roasted this material is grinded into a fine powder easier to be worked, the powder then passed through a sieve so that the particle remains same size

Uses

Medicinal

Main Functions of banana peel powder

- Banana powder can be treat inflammatory bowel disease;
- Banana powder can clear away heat and toxic material, dispeling heat from blood to stop bleeding
- Banana powder can lower blood sugar and cholesterin content, lose weight
- Banana powder has the function of anti-bacterial, anti-epithyte, calming, and curing sugar diabetes.

Food

Main Applications of banana peel powder

- Widely applied in food industry as:
- Flavors in seasoning packets for banana puree powder keep the original flavors
- Colors in ice cream, cakes for beautiful pink color of banana puree powder
- Also can be applied in drink mix, infant food, dairy product, bakery, candy and others Product advantages
- Good fluidity and dispersible in water
- Long preservative time than fresh fruit
- Easy for transportation due to powder form
- Made from the seasonal fruit, ensure the freshness and nutrition

Animal Feed

Numerous reports on the feeding of banana peels to livestock have been published since the 1960s. Chemically, peel constitutes around 80 % water, which means 10 kg will supply only 2 kg nutrients. This is however comparable to maize silage. These could replace fodder or silage in cattle feed. Similar to silage or maize fodder, banana peels are low in protein (around 8%). Hence if peels are a major part of diet then high protein supplements, such as cottonseed cake, chuni should be added. Since lignin, saponin, oxalate, and trace minerals contents are high, cows should never be fed totally on banana peels. A common recommendation is to replace up to 50% of maize/sorghum silage (or green fodder on a DM basis).

Fertilizers

Banana peels are good fertilizer because of what they do not contain. They contain absolutely no nitrogen. While plants need nitrogen (remember the NPK on fertilizers), too much nitrogen will create lots of green leaves but few berries or fruits. This means potassium-rich banana peels are excellent for plants like tomatoes, peppers or flowers. Banana peels also contain calcium, which prevents blossom end rot in tomatoes. The manganese in banana peels aids photosynthesis, while the sodium in banana peels helps water flow between cells. They even have traces of magnesium and sulfur, elements that help make chlorophyll.

Recipe Ideas

-  Raw Banana Peels Stir Fry
-  Banana Peel Vegan Pulled Pork Sandwich
-  Banana Peel Smoothie
-  Banana Peel Chutney
-  Banana Skin Curry
-  Green Banana Skin Patty
-  Banana Peel Cake with Brown Sugar Frosting
-  Banana Tea
-  Banana Peel Stir Fry

CONCLUSION

Banana peel is a good source of dietary fiber exhibiting 50 g/100 a dry matter. The sun drying preparation method had an influence on the properties of banana peel dietary fiber concentrate obtained subsequently after removal of fat, protein, and starch fraction. Sun drying process yielded the banana dietary fiber concentrates with significantly higher fat, protein, and starch residue, resulting in the lower dietary fiber concentration. These results indicated that this treatment was the most effective method to provide an opportunity to enhance the functionality of dietary fiber concentrate and hence to use the banana peel dietary fiber concentrate as a low-cholic functional

ingredient for fiber enrichment, although the incorporation of them within the food system may slightly affect the color of the final product. Banana peel is good source of nutritional benefits in our daily life.

REFERENCES

- Suresh Bandal, Mohammed Talib, Vishal Parate,(2014) “Utilization of Banana and Pomogranate Peel Flour in Fortification of Bread” Department of Food Technology, University Institute of Chemical Technology North Maharashtra University, Jalgaon- International Journal of Engineering Research & Technology (IJERT) Vol. 3 Issue 7,
- Kalyani Jambhale, Chaitali Gohatre U.G(2019). Student, SVD College of Food Technology, “To Study Sun Drying Banana Peel Powder Nutritional Value Used As Beneficial Nutritional Juice” Pala, Amravati, India1 Assistant Professor, Department of Food Engineering, SVD College of Food Technology, Pala, Amravati, India Vol. 8, Issue 2, February 2019.
<https://doi.org/10.1080/2374068X.2018.1545201>