

Edible Soybean Flour

Soybean is consumed in China, Japan and other East Asian countries as a traditional food from time immemorial. It finds use in traditional foods in East Asian including Japan, Korea, Indonesia and Thailand as a richest and cheapest source of protein.

Soybean is an excellent raw material for a number of fabricated food products with desired composition, texture and flavour. In Uttarakhand, Himachal Pradesh and Assam etc., soybean has been in use in a small way. Madhya Pradesh is the largest producer of soybean and a large number of solvent extraction plants are operating for extraction of soybean oil and de-oiled cake is being exported.



Some people in M.P., Maharashtra and Gujarat mix soybean with wheat and consume it, which is harmful in the long run and may lead to digestive problems. There is a need to prepare soy flour properly and mix with wheat flour. 500 gm of soy flour in 10 kg wheat flour is recommended. It could be mixed in higher proportion (10-15%) in occasional snacks.

Constituents of soybean

Fats	18-20%
Protein	40-44%
Carbohydrates	20-30%
Minerals	(for 100 gm of raw material)
Ca	226 mg
P	546 mg
Fe	5 mg
Mg	276 mg
Cu	2-4 mg
Vitamins	
Vitamin A and B	(in 100 gm of material)
carotene	426 mg
thiamine	0.73 mg
riboflavin	0.39 mg
niacin	3.2 mg

Thus, if one consumes soybean daily there is no need to take any tonic.

Advantages of soylflour

- Egestron hormone in soybean cures gynecological problems in women.
- Controls blood pressure
- Lowers cholesterol
- Immunity to diabetes and arthritis
- Prevention against cancer
- Leads to slimness



Manufacturing Process

The process of manufacturing soylflour is very simple. First of all, the soybeans are cleaned and dehusked to remove husk. It may be noted that husk should not be consumed. The dehusked seeds are blanched and water is allowed to drain off. The soy beans having (60-65% moisture) are dried in sun only using hot air drier, solar drier till moisture content of 6-7% is achieved. The dried beans are ground in hand operated power *chakkies*. Due to 18-20% oil content in soybean the grinding capacity is drastically reduced as material sticks to burr plates which require frequent cleaning.

It is advised to grind mixture of wheat or other grains with treated soybean splits.

Soybean flour can be used for protein fortification of wheat flour. Addition of 500 gm of soylflour is recommended in 10 kg of wheat flour.

Soyflour constituents

Protein	38- 40%
Fat	19-20%

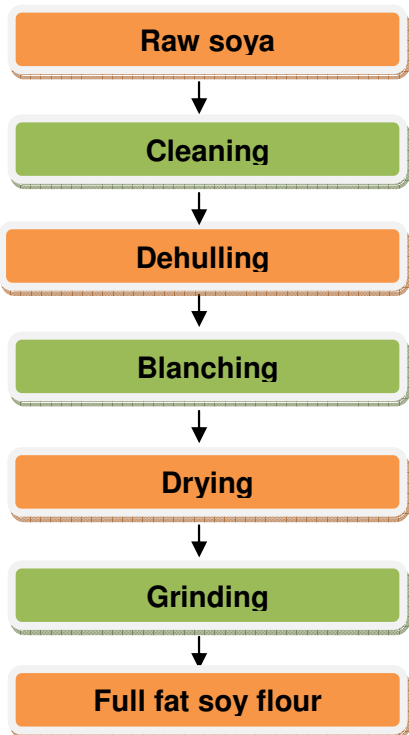


Typical composition of full fat soylflour

Fortified Biscuits	
Maida	100
Sugar	40
Vanaspati	40
Baking power	1.0
Sodium-bicarbonate	0.80
Salt	1.00
Soy Component	30.00
Water	32

Soy flour is extensively used in meat products, cereals, ready-to-eat products, food, drinks, baby food, confectioneries, candy products, special diet food, high protein soups, protein concentrates, food additives etc.

Process flow chart



Capacity

	100 kg/ day shift
Building (on rental) 600 sq. ft	Rs. 2000
Equipment	Rs. 1.25 lakh
Working capital 25 days cost of raw material Rs. 120 kg/day @ Rs. 25/Kg	Rs. 75,000
Fuel/ Electricity	Rs. 5,000
Man power (2 persons)	Rs. 8,000
Packaging material	Rs. 2000
Misc.	Rs. 5000
Cost of production	Rs. 95, 000
Sales Rs. 50/- per kg for 2500 kg x 40.	Rs. 1.25 lakh
Profit (1,25,000- 95,000)	Rs. 30,000/per month.

Equipments required

- Cleaner
- Dehusker
- Blancher
- Drier
- Grinder
- Weighing Scale
- Packaging Machine



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Note: The author may have used various references in the preparation of this article. For further details please contact him/her.

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