



Effect of Infrared Pretreatment on Deoiled Cotton Seed Meal for Extraction of Protein to Develop Nutri bar



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❖ Cottonseed

- ✓ Cotton (“white gold”, “Golden Goose”)- cultivated for its fibre and oil content.
- ✓ Cottonseed contains about 14-24% oil and about 15-26% protein, thus it is a potential source of fibre, oil and protein.
- ✓ Cottonseed oil is widely used for human consumption.
- ✓ Cottonseed meal, rich in dietary proteins, is unsuitable for human consumption due to its gossypol content.
- ✓ In a particular study, infrared drying was used as a pre-treatment to reduce free gossypol levels in cottonseed meal.
- ✓ To develop innovative RTE food products like protein-based Nutri bar.

❖ Methodology



Procurement of delinted cottonseed



Deoiling of delinted Cotton seed

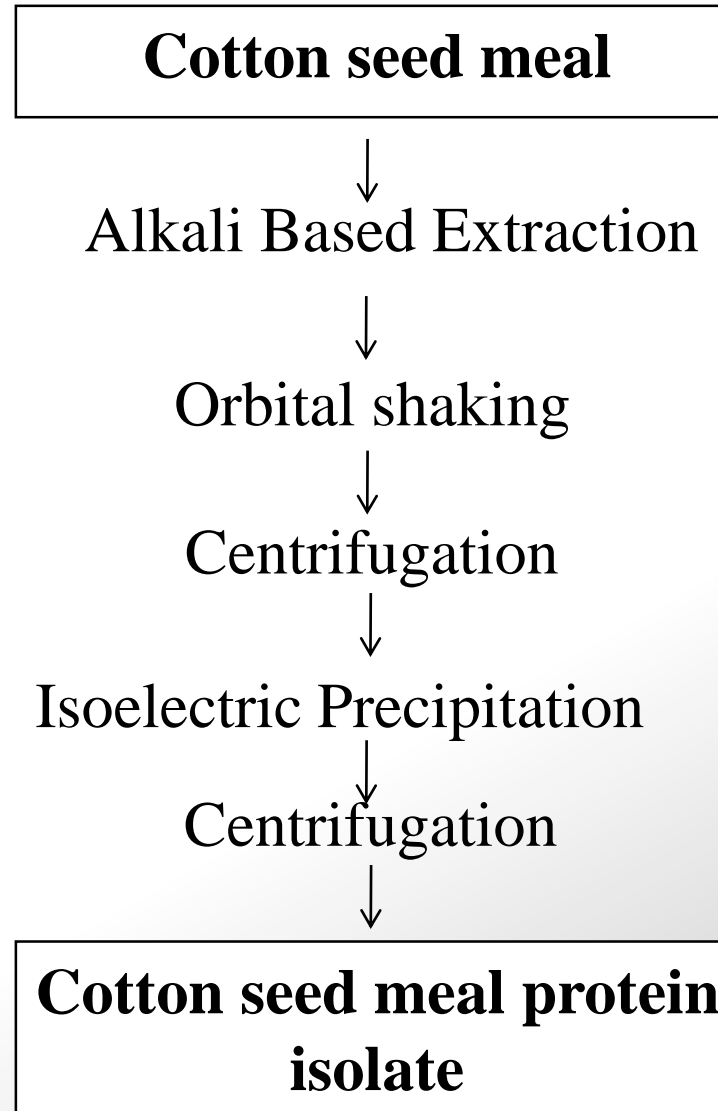


Infrared treated meal further analyzed for FG, TG and Crude protein.



Alkali salt assisted protein extraction

❖ Flow chart for preparation of Cotton seed meal protein Isolate



❖ Developed Product

Ingredients

Cottonseed meal protein, Puffed Amaranth, Sesame seeds, crushed Groundnuts, Flax seeds, Jaggery, Liquid glucose

Process

Roast Sesame seeds, Flax seeds and Groundnuts. Grind it and then mold it, After dipping it in dark chocolate allow it to cool down in refrigerated condition.



Nutri Bar



THANK YOU!!!!