Features of the Nutritional Powder Production Line

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Nutritional powder is a powdered product made from various grains, cereals, legumes, and puffable ingredients used for both medicinal and edible purposes, extruded under high temperature and high pressure, and then refined through further processing.

The main raw materials are various grains, cereals, legumes, and edible and medicinal foods, such as corn, rice, oats, red beans, peanuts, yams, and red dates.

The following is the production process of the nutritional powder production line:

1. Loading System: This system can be equipped with one or more storage silos to store different types of raw materials. Raw materials pass through the feeding station and are conveyed by vacuum and negative pressure to the corresponding storage silos for subsequent use.

2. Batching System: An auger conveyor is installed below the storage silo, and a batching scale is located directly below the auger. It automatically weighs the ingredients according to the pre-set weight of the recipe.

3. Mixing System: This system is equipped with a high-efficiency paddle mixer that uses negative pressure air conveying to convey materials from the batching scale to the mixer for automatic mixing.

4. Extrusion System: The mixed raw materials are conveyed via negative pressure air into a loss-in-weight feeder. From there, they are metered into the extruder under PLC control. Simultaneously, a liquid feeder injects a predetermined amount of water. Under the high-temperature, high-pressure extrusion of the twin-screw extruder, the raw materials are finally produced.

5. Drying System: The extruded product is dried to a moisture content of less than 10% to facilitate subsequent crushing.

6. Crushing System: A fully automatic crushing system is available, capable of crushing different products as required.

Advantages of the Nutritional Powder Production Line:

1. Customizable production lines can be customized to meet the needs of individual customers, enabling them to produce a wide variety of products.

2. Utilizing the latest automated control system, the system achieves

high energy efficiency and effectively reduces unnecessary energy loss.

3. The production process achieves near-zero waste emissions, in line with the principles of green industrial development in modern industry.

4. Every component of the equipment undergoes rigorous testing to ensure it meets or exceeds national standards.

Market Applications

Nutritional powders can be formulated with various nutrients to meet the nutritional needs of individual consumers.

Reference

The following are five authoritative foreign literature websites in the field of Industrial food machinery:

1. Food Engineering Magazine

Website: https://www.foodengineeringmag.com/

2.Food Processing Magazine

Website: https://www.foodprocessing.com/

3.Journal of Food Engineering

Website:https://www.journals.elsevier.com/journal-of-food-engineering

4. Food Manufacturing Magazine

Website:https://www.foodmanufacturing.com/

5. International Journal of Food Science & Technology

Website:https://onlinelibrary.wiley.com/