



FULLY AUTOMATIC PEANUT BUTTER MAKING PLANT

Your Trusted Partner for Consultancy and Turnkey Project Execution



COMPANY OVERVIEW

Salvin Industries is a leading engineering, technology and consulting conglomerate, working closely with diversified industries spanning across food processing, agriculture, plastics, chemicals, metals healthcare, packaging, Dealer, distributor, super stocks, marketing plan, product analysis and other industries and business sectors offering complete turn-key solutions including advanced engineering, Industry 4.0 solutions, digital transformation and expert technical and management consultancy. With 10+ years of experience and global presence in 8+ countries, Salvin Industries is serving from the most demanding to the most distant customers across the globe. We empower them for rewriting their future with our depths of knowledge, unique ideas, technical expertise, creative solutions and enduring results, all at the most optimal costs, right at their doorsteps.

Armed with the eminence in technological expertise, global capabilities and a process driven approach, we have the ability to take on any challenging project. Crossing the geographical borders & cultures and living up to our core values Excellence, Respect, Care & Joy, we propel innovation to engineer solutions that build & foster equality. Working together as one team with all our business partners & associates, we are transforming industries, fueling economies, developing sustainable solutions and thereby elevating societies, globally. We realize the need to respond to the dynamism & speed with which the world is changing all around us and understand the need to anticipate

PEANUT BUTTER

MAKING PLANT

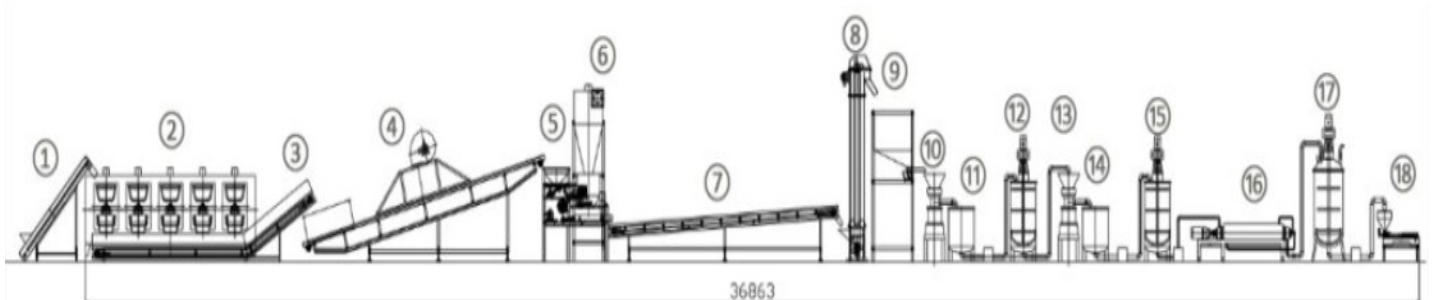
Peanut butter is yellowish-brown butter like product made from ground nuts or peanuts. It consists essentially of cleaned, graded, blanched, roasted and crushed groundnuts containing about 45% oil and over 25% proteins.

Peanut butter is highly nutritive food containing protein, fat and carbohydrates as major constituents. It contains calcium, phosphorus, iron, vitamin A, B1 & B2 etc. The calorific value of peanut butter is around 600.

The peanut butter is easily separable, free from the skins or shells of peanuts and foreign matter, and the product does not show any sign of separation of fat. Peanut butter has the characteristic flavour of fresh roasted peanuts, and is free from and objectionable flavour and taste. A hurried meal style, stress on balanced diet and increasing demand for ready-made food items have made peanut butter receive a top priority.

Peanut butter is used in the production of sandwiches, candy, and bakery, insecticidal formulations (as carried to attract the insects/pests) etc.

P&L DIAGRAM PEANUT BUTTER MAKING PLANT



Equipment List of Peanut Butter Production Line

- | | | | | | |
|--------------------|-------------------------|------------------|--------------------|---------------------|-------------------------|
| ① Lifting Machine | ② Drum Roasting Machine | ③ Stokehold Belt | ④ Cooling Belt | ⑤ Peeling Machine | ⑥ Spiral Dust Collector |
| ⑦ Picking Belt | ⑧ Lifting Machine | ⑨ Storage Hopper | ⑩ Grinding Machine | ⑪ Storage Tank | ⑫ Mixing Tank |
| ⑬ Grinding Machine | ⑭ Storage Tank | ⑮ Mixing Tank | ⑯ Cooling Machine | ⑰ Degassing Machine | ⑱ Filling Machine |

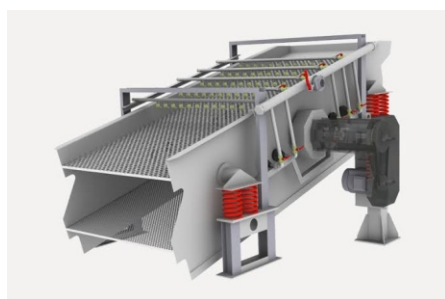
PEANUT BUTTER MAKING PLANT

THE PROCESS

Raw Material Receiving & Storage

Raw material receiving & Storage

Raw peanuts (in-shell or shelled) are received via gravity or pneumatic systems, weighed, and stored in ventilated silos. This stage buffers supply, controls incoming moisture levels, and prevents mold growth (aflatoxin risk) prior to cleaning.



Cleaning Destoning

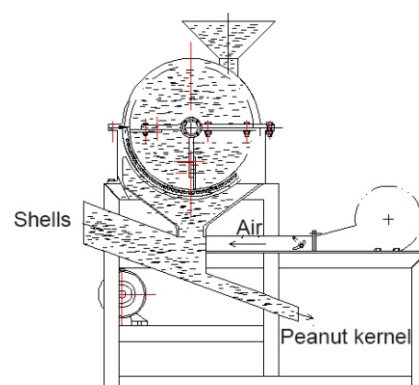
Cleaning / Destoning

Peanuts pass through vibrating screens and air sifters to remove stones, soil, metal fragments, shells, and twigs. Magnetic separators extract ferrous contaminants. This protects downstream machinery from damage and ensures food safety compliance.

Shelling

Shelling

Whole peanuts are fed between counter-rotating rollers which crack the brittle shells without crushing the kernels. A screening and aspiration system separates shells from meats. Moisture content is precisely controlled to minimize dust and kernel breakage.



Roasting

Roasting

Cleaned kernels are roasted at 160–210°C (batch) or 160–180°C (continuous) to develop flavor, aroma, and color. This reduces moisture (<2%), inactivates enzymes, and sterilizes the nuts. Time/temperature profiles determine light, medium, or dark roasts.

PEANUT BUTTER MAKING PLANT

THE PROCESS

Cooling Cooling

Hot peanuts are rapidly conveyed through a perforated cooling belt or cylinder where ambient or forced air is drawn through the mass. Rapid cooling (target $\sim 30^{\circ}\text{C}$ / 86°F) halts the cooking process, prevents oil migration, and retains volatile aromatic compounds.



Blanching / Skin removal Skin removal

Cooled peanuts pass through double roller machines which frictionally loosen the red skins. A high-velocity cyclone system aspirates the lightweight skins, while a gravity separator removes any remaining unsplit kernels or bitter hearts.

Sorting / Inspection Inspection

De-skinned kernels travel along a wide picking belt where defective, over-roasted, or unblanched nuts are manually or optically removed. This ensures uniform color and flavor, preventing bitter notes in the final butter.



Pre-grinding Pre-grinding

Clean kernels are fed into a steel grinder for initial size reduction. This breaks whole nuts into a coarse paste or meal, releasing natural oils and preparing the material for ultra-fine milling. Temperature is monitored to avoid excessive heat.

PEANUT BUTTER MAKING PLANT

THE PROCESS

Fine grinding / Milling **Fine grinding / Milling**

The coarse paste enters a colloid mill where rotor-stator clearances create intense hydraulic shear. Particle size is reduced to <7 microns (smooth) or left coarser (crunchy). This step defines the mouthfeel and spreadability of the butter.



Ingredient **Ingredient blending**

Salt, sugar, stabilizers (hydrogenated oil), and emulsifiers (lecithin) are metered into the paste via automated dosing systems. Vacuum mixers incorporate dry powders without aerating the product, ensuring uniform flavor distribution and chemical stability.

Homogenization **Homogenization**

The blended butter is forced through a high-pressure homogenizer or emulsifier. This creates a stable oil-in-water emulsion, fibrillates solids, and prevents oil separation during shelf life. Critical for natural (no-stabilizer) formulations.



Cooling **Cooling**



Butter exiting the mill (often 60–70°C) is passed through a scraped-surface or jacketed heat exchanger. Rapid cooling to below 45°C crystallizes fats and stabilizes the texture before packaging. Prevents product softening in jars.

PEANUT BUTTER MAKING PLANT

THE PROCESS

Deaeration / Degassing

Deaeration / Degassing

Warm peanut butter is held under vacuum in a degassing tank. Dissolved air and entrapped micro-bubbles are drawn out, reducing oxidation risk, preventing mold growth in the headspace, and eliminating surface oil film formation.



Intermediate storage

Deaerated butter is temporarily held in jacketed, agitated storage tanks. Gentle scraping agitation maintains homogeneity and temperature (40–50°C) while preventing settling of solids or fat crystal separation prior to filling.

Filling

Product is volumetrically dispensed into jars, tubs, or pouches via piston or positive displacement fillers. Nozzle cut-off mechanisms prevent stringing. Filling accuracy ($\pm 1\%$) is maintained by PLC-controlled load cells or time-pressure systems.



Capping, Labeling & Secondary Packaging

Filled containers are hermetically sealed with screw caps or induction seals, then self-adhesive or sleeve labels are applied with inkjet batch codes. Containers are collated, tray-packed, shrink-wrapped, and palletized. This integrated line ensures airtight closure, regulatory traceability, and logistics-ready unitization.





LET'S WORK TOGETHER



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