

BEST ENGINEERING TECHNOLOGIES

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STEPS OF PROCESS FOR ALOE VERA LIQUID GEL

1). Priliminary Washing:



The Leaves has to be dumped in to the civil water tank which are brought from the field to clean the mud & sand under turbulence. This tank will have bubbling system connected to Air Compressor to create air turbulence.

2). Cutting Table:(For only 0.5, 1.0 & 2.0 Ton capacity)



After Preliminary Wash, the leaves are to be cut at the bottom (white portion) and tip manually with labour on the Cutting Table.

3). Washing Tub: (For only 0.5, 1.0 & 2.0 Ton capacity plants)



After Cutting the leaves, the Alion will oozes out from the leafs, it has to be cleaned in the tub under air turbulences at warm temperature (40 -50°C).

4). Conveyerized System for Cutting & Washing only for 4.0 tons & above capacities.

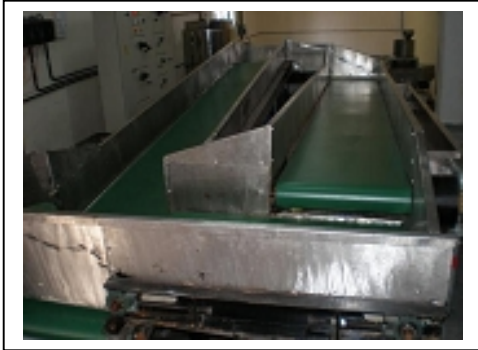
a) Feeding Conveyor :



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The leaves are carried on this conveyor to main conveyor from out side civil tank.

b). **Main Conveyor :**



Main conveyor system will be of rectangular Shape.

- i). On one Conveyor when the leafs are carrying, labour Will pick up the leaves and cut the bottom & tip.
- ii). The leaves which were cut to be picked up from the second parallel conveyor, and then the leaves are to be washed in the warm water. The warm water tub will be attached to this conveyor. Another two small conveyor are fixed to these two parallel conveyors at the end for taking diversion.



C) SAP Conveyor:

To carry out the waste leaves (SAP) from Pulp extractor to the out side premises

5). **Main Process :**

a) **Pulp Extractor:**



This machine will be feeded with leafs after cleaning manually. This machine will squeezes out the inner pulp and collects in the collection tray. The outer skin (SAP) will be separated.

b). Homogenizer / Colloidal Mill :



The pulp from the collection trays will enter in to this machine, where the pulp lumps will be grinded. So that lumps (pulp) will convert in to liquid form. The fibre particles are grinding to 5-100 microns.

c). Filtration System:



The liquid pulp will be pumped to this section, where the preservative will be mixed thoroughly at 60°C and then filtered under vacuum through 100/40/20 micron filter bags. Then it will be pumped to pasteurizer through the activated carbon filter.

d). Pasteurizer:



The liquid get which comes from filtration section will be passed to PHE (Plate Heat Exchanger) for instant heat and flash cooling to kill the bacteria.

e). Storage Tank:



After pasteurization the liquid gel will be pumped to Storage Tank.

Spl. Note: The above liquid gel is the base material for preparation of Juice, Powder (by Spray Drier) and various cosmetics (formulations can be avail from an