Processing

Preparation

Harvested Aloe Vera leaves must be processed immediately; otherwise nutritional degradation will destroy the potency of this "Miracle" plant.

Our Company has invested in modern processing facilities. All equipment in contact with the product is made from stainless steel. Each step of the process is monitored to ensure stringent sanitary conditions are met.

The fresh Aloe ves leaves harvested in the early morning arrive at the processing plant, are weight, sorted and placed into a series of stainless steel soak tanks and rotary brushes. The purpose of these soak tanks and brushes is to clean the Aloe leaves of all field dirt prior to processing. The mild chlorine or salt solution that kills any remaining microorganisms is added to the final soak tank. The elevator conveyer conveys the cleaned aloe vera leaves from the final soak tank through a small opening into the filleting room.

The filleting room has an independent air-conditioning system to prevent contamination. In this room, the rinds are separated from the inner gel. Firstly, the workers use sharp knives to remove the tips and tails of the Aloe leaves before placing them on conveyers leading to a series of sanitary specially designed filleting machines. The filleting machines peel off the rinds from the inner gel. The inner filler gels emerge from the filleting machines relatively free from Aloin. Aloin is the smelly, sticky yellow substance one observes upon cutting into a fresh Aloe Vera leaf. The inner filler gels are conveyed to the sanitary hammer mill, where the fillets are reduced into a pump-able liquid.

The fillet gel is immediate stabilized though a continous process to maintain the potency of the aloe vera gel. The gel is further clarified though the sanitary pulper. A small quantity of carbon is used to absorb the remaining Aloin in the gel.

Pasteurization & Concentration:

The fillet gel must be pasteurized immediately to kill the remaining micro organisms, without damaging the natural goodness of the Aloe Vera gel. The best method of pasteurization is HTST (high temperature short time), which exposes the gel to elevated temperatures for periods of one to three minutes. The pure Aloe Vera fillet gel produced is referred as AVI 1X (0.5% solid).

The gels obtained using the pasteurization methods can be concentrated by evaporating the water under vacuum without significant loss of its potency. The concentration is conducted under 60 mm mercury vacuum at temperatures 45-50°C. The Aloe Vera fillet gel produced is referred as AVI 10X (4.5-5% solid) and AVI 20X (9.5-10% solid).

Spray Drying:

The moisture of the Aloe Vera Concentrate can be further reduced and transformed into fine powder in a continous spray drier tower. The spray dried aloe vera powder is referred as AVI 200X.