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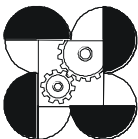
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# ACETATOR VINEGAR PRODUCTION



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***‘Our Business is Industry...’***

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# ACETATOR VINEGAR PRODUCTION

## DEFINITION

- Vinegar is the liquid produced by the alcoholic and acetic acid fermentation of one or more of the different crops rich in starch or carbohydrates.
- As per DOH AO 134, all vinegar shall have an acidity of not less than 4% except nipa sap, not less than 3%.

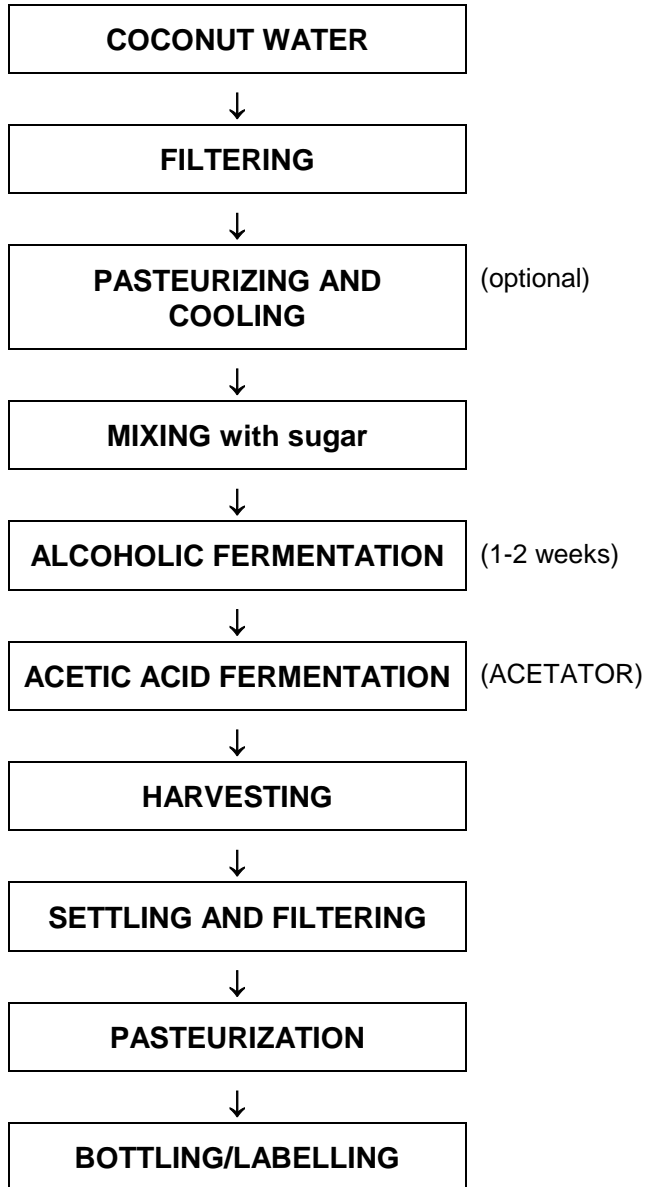
## TYPES OF VINEGAR IN THE MARKET

Types of Vinegar	Kinds/Source
Grain	Rice, sake lees, unpolished rice, malt
Fruit	Apple cider, grape, wine vinegar, balsamico, sugary materials (coconut water, pineapple wastes, sugar cane, dried mango spent syrups, banana)
Spirit (distilled)	Produced from industrial alcohol and distilled vinegar
Synthetic	Made by blending diluted solutions of non-food grade acetic acid with water and cloudifier (deemed to be adulterated and not safe, AO134, 1970).

## VINEGAR PRODUCTION

- Traditionally, vinegar production takes about 4 weeks to 15 weeks to complete and to obtain 4-5% acetic acid.
- Process involves: (1) yeast fermentation of coconut water to produce an alcoholic solution; (2) further fermented to vinegar by means of the so-called acetic acid bacteria.
- The process is carried out simply by exposing to the air the partially fermented coconut water with the "starter" containing acetic acid bacteria.

**Process Flow  
PRODUCTION OF VINEGAR**



## THE ITDI ACETATOR

### Features (Model FPD - AC200-1)

- Equipped with aeration pressure gauge and regulator.
- Air is supplied by an air compressor, fitted and regulated before injecting to the bottom of the acetator.
- The necessary control for the optimum aeration rate can easily be set to the required value corresponding to the volume of the acetator.

### Advantages (Model FPD - AC200-1)

- Start-up time is short
- Designed to accelerate the traditional fermentation process of producing vinegar within 1 day instead of 30-90 days
- Produce naturally fermented vinegar
- Easy to operate
- Can be set-up in the countryside and requires minimum processing area
- Can be operated on a minimum initial volume of 200 liters
- Product can be drawn out daily from the acetator at a minimum rate of 20 liters

### SPECIFICATIONS

Working volume	100-150 liters
Vessel size	Diameter - 23"
Plastic vessel	Height - 36"
Air compressor	1 hp (0.746 KW)
Power supply	220V / 60 Hz
Container for fermentation	Stainless steel/food grade plastic drum (HDPE)
Space requirement	2 sq. meters (minimum)

### Option

- Additional units can be installed (maximum of 4 units for 1 Hp compressor, with 5 psig air supply to each working vessel).

## PRODUCTION EQUIPMENT

QTY	UNIT	PRODUCTION EQUIPMENT	UNIT COST (P)	TOTAL COST (P)
4	units	Acetator kit, (200-liter cap. drum)	P16,000	P64,000
1	unit	Stainless Kettle, 60 liters	1,500	1,500
2	units	Air Compressor, 3 Hp	8,000	16,000
1	set	LPG-Burner with tank	2,000	2,000
16	units	Drums HDPE, 200-L*	500	8,000
1	set	Plant accessories	1,000	1,000
				P92,500

- \* 4 units for acetator  
8 units for alcoholic  
4 units for products

**NOTE:** *T.A. quick test kit (including training) is provided with the acetator kit without additional cost.*