

Fragrance and Flavour Development Centre, Kannauj

Machinery Details

Agro-Tech. Division:

S. No.	Name of Machinery	Technical Specification	Primary Application & Utility	Location/ Division
1.	Field Distillation Unit (cap. 1.00 ton per batch)	Charging capacity: 4000 lts. or approx 1000 kg. grasses/herbs/flowers per batch Made of MS along with condenser & receiver	Processing of aromatic crops	Agro-tech Shed
2.	Field Distillation Unit (cap. 0.5 ton per batch)	Charging capacity: 2000 lts. or approx. 500 kg. grasses/herbs/flowers per batch Made of SS along with condenser & receiver	Processing of aromatic crops	Agro-tech Shed
3.	Field Distillation Unit (cap. 0.1 ton per batch)	Charging capacity. 400 lts. or approx. 100 kg. grasses/herbs/flowers per batch Made of SS along with condenser & receiver.	Processing of aromatic crops	Agro-tech Shed

Process-Tech. Division:

S. No.	Name of Machinery	Technical Specification	Primary Application & Utility	Location/ Division
1.	Steam Distillation Unit	Charging capacity: 150-200 kgs raw material; Volume: 700 liters; Made of Stainless Steel;	Production of essential oils	Pilot Plant/ Process Tech
2.	Solvent Extraction Unit	Charging capacity 200-300 kgs raw material; Volume: 1400 liters (two extractors of 700 liters); Made of Stainless Steel;	Production of oleoresin, concrete and resinoid	Pilot Plant/ Process Tech
3.	Fractional Distillation Unit	Charging capacity: 180 kgs raw material; Volume: 250 liters, Made of Stainless Steel;	Isolation of valuable ingredients from essential oils /purification of oils	Pilot Plant/ Process Tech
4.	Chemical Reaction Unit	Charging capacity 200 kgs raw	Chemical	Pilot Plant/

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		material; Volume: 300 liters; Made of Stainless Steel;	conversion /making of derivatives by chemical reaction	Process Tech
5.	Hydrogenation Unit	Charging capacity 150 kgs raw material; Volume: 250 liters; Made of Stainless Steel;	Chemical conversion	Pilot Plant/ Process Tech
6.	Glass reaction unit	Charging capacity 10 kgs raw material; Volume: 20 liters; Made of Glass;	Chemical conversion/R&D purpose	Process Tech Lab
7.	Glass Fractional distillation unit	Charging capacity 10 kgs raw material; Volume: 20 liters; Made of Glass;	Isolation of valuable ingredients from essential oils /purification of oils/ R&D purpose	Process Tech Lab
8.	Glass Solvent extraction unit	Charging capacity 5 kgs raw material; Volume: 10 liters; Made of Glass;	Production of oleoresin, concrete and resinoid /R&D purpose	Process Tech Lab
9.	Crystallization unit/Freezing unit	Charging capacity 100 kgs raw material; Volume: 250 liters; Made of MS with copper tubes,	Crystallization / R&D purpose	Process Tech Lab

Quality Assessment Division:

S. No.	Name of Machinery	Technical Specification	Primary Application & Utility	Location/ Division
1.	Gas Liquid Chromatography-I	Agilent 7890B make; Imported instrument attached with FID & Capillary column of 30 mtrs,	Purity of Essential oils & aroma chemicals as per BIS	Instrumentation Lab/Quality Assessment Division
2.	Gas Liquid Chromatography-II	Agilent 6890N make; imported instrument attached with FID & Capillary column of 30 mtrs,	Purity of Essential oils & aroma chemicals as per BIS	Instrumentation Lab/Quality Assessment Division

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3.	Gas Chromatography Mass Spectroscopy(GCMS)	Agilent 6890 make; imported instrument attached with Mass spectrometer & Capillary column of 30 mtrs,	Identification of Ingredients/components of Essential oils, Fragrances & Flavour oils.	Instrumentation Lab/Quality Assessment Division
4.	Gas Liquid Chromatography	Nucon 5765 make; instrument attached with FID & Packed column of 3 mtrs,	Purity of Essential oils & aroma chemicals as per BIS	Instrumentation Lab/Quality Assessment Division
5.	Polarimeter	Rajdhani make Indigenous Polarimeter of Manual operated of 10ML cell capacity	Determination of Optical Rotation of Essential oils, Fragrances & Flavour oils.	Physical Lab/Quality Assessment Division
6.	Rerfactometer	Abbe make Indigenous	Determination of refractive index of Essential oils, Fragrances & Flavour oils.	Physical Lab/Quality Assessment Division
7.	pH Meter	Digitally operated UETECH make Indigenous	Determination of Ph value of floral & Hydrosol.	Physical Lab/Quality Assessment Division
8.	Clevenger apparatus	Glass, Flask Capacity 5 liters with 50 ml tube	Determination of percentage volatile components in Fragrant raw materials	Chemical Lab/Quality Assessment Division
9.	Soxhlet apparatus	Glass, Soxhlet capacity 250 ml and Flask capacity 1 liters	Determination of percentage oleoresin/concrete/resinoid in Fragrant raw materials	Chemical Lab/Quality Assessment Division

Fragrance & Flavour Division:

S. No.	Name of Machinery	Technical Specification	Primary Application & Utility	Location/ Division
1.	Paddle operated Agarbatti Machine	Production Capacity: 5 kg/hr; Material: Mild Steel; Part Type: Rocket nozzle die; Features: Pedal agarbatti making machine; Power Required: no power required; Type of Stick: Round; Incense Stick Length: 8-12 inch; Machine Weight: 35 kg; Automation Grade: Manual	For making agarbatti	Fragrance & Flavour Division
2.	Dough Kneading Machine	Power Source: Electric; Capacity: 14kg Power : 2HP; Material: Stainless Steel Voltage: 220V; Phase: Single Phase Brand: Jackson; Model: AKM20; Size: 3.8x3.4x2.1mm	for kneading purpose	Fragrance & Flavour Division
3.	Emulsifiers Homogenizer	Motor: 1/20 HP ; Maximum Speed (RPM): 4000 rpm; Model No: SE-151	For making demo for cosmetic products	Fragrance & Flavour Division
4.	Double rolling machine for Dhoopbatti Making	Control System: Frequency Speed; Control; Voltage Frequency: Speed Control ;Material: Stainless Steel; Automatic Grade: Semi-Automatic;	For making dhoopbatti	Fragrance & Flavour Division
5.	Hot Plate	Shape: Rectangular; Voltage: 220-230 V; Type of Product: Lab Heating Plate; Dimension: 450x 600 X 150 mm	For melting purpose	Fragrance & Flavour Division
6.	Agarbatti, Dhoopbatti & Havansamagri Mixer Machine	Capacity: 10 kg; Phase: Single Phase; Automation Grade: Automatic; Voltage: 230V; Frequency: 50 Hz; Power: 1HP;	Agarbatti, Dhoopbatti, Hawansamagri raw material mixing purpose	Fragrance & Flavour Division
7.	Fragrance Blending Machine	Storage Material: Fragrance; Material: Stainless Steel; Max Design Pressure: 0-10 bar; Material Grade: Stainless steel;	Production of fragrance	Fragrance & Flavour Division

S. No.	Name of Machinery	Technical Specification	Primary Application & Utility	Location/ Division
		Phase: Three/single both; Capacity: 125 Ltr.		
8.	Flavour Blending Machine	Storage Material: Flavour; Material: Stainless Steel; Max Design Pressure: 0-10 bar; Material Grade: Stainless steel; Phase: Three/Single both; Capacity: 125 Ltr.	Production of flavour	Fragrance & Flavour Division
9.	Water bath With Magnetic Stirrer	Working temperature: Ambient +5-95°C; Temperature stability ±0.5°C at 37°C; PID based temperature controller; Stirring range: Maximum 1200 RPM; Bath Volume: upto 5 liters;	Melting & stirring purpose	Fragrance & Flavour Division
10.	Refrigerator Singal door	Product Dimensions: 65D x 53.4W x 127.7H Centimeters; Capacity: 185 litres; Configuration: Freezer-on-Top; Energy Star: 5 Star	Storage of high volatile fragrant raw materials	Fragrance & Flavour Division
11.	Stirrer	Frequency: 50 Hz; Weight: 10 Kg	For stirring of aromatic blend	Fragrance & Flavour Division
12.	Weighing Scale	Capacity: 30 kg; Accuracy: 1 g; Calibration: Fully Automatic	For production of fragrance & flavour	Fragrance & Flavour Division

FFDC Extension Unit, Berhampur (Orissa):

S. No.	Name of Machinery	Technical Specification	Primary Application & Utility	Location/ Division
1.	Laboratory Equipment	Glassware Items for Determination of percentage of oil by Clevenger apparatus of various capacities from 5L to 20L	Farmers / Distillers / Entrepreneurs	Extn Unit, Berhampur
2.	Laboratory Equipment	01. One no of Gas Chromatography of Agilent Technologies make N-Series of 6890 model	Farmers / Distillers / Entrepreneurs	Extn Unit, Berhampur

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		02. Polari meter of Manual operated of 10ML cell capacity and other small equipments existed in laboratory		
3.	Small Distillation Unit	One no Charging Capacity: 50KG; SS make Distillation Unit procured under the project of DBT	For processing of flower and other materials for trial runs	Extn Unit, Berhampur