

STANDARD LIST

DAIRY PROCESSING EQUIPMENT OPERATOR

SECTOR: FOOD PROCESSING

SUB-SECTOR: DAIRY PRODUCTS

REFERENCE ID: FIC/Q2002



State Council of Educational Research and Training(SCERT)

Vidyabhavan, Poojappura, Thiruvananthapuram - 695 012

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This list of equipment, tool, furniture & consumables are prepared for a batch of 30 students

Part A - EQUIPMENTS			
SL NO	NAME	SPECIFICATION	QUANTITY
1	pH Meter	Table top laboratory model -3 digit LED Display, temperature comp:0 to 100 degree celsius, BODY: ABS Dimension ,80mm(H)*235 mm(w) * 150mm-weight (1 kg approx)-Power required:230V AC 10% 50Hz,4 VA Warming time :5 minutes	2
2	Digital electronic weighing balance	Capacity 2gm to 6kg	1
3	Cream Separator	165 LPH	1
4	Milko tester	(Electronic),measuring range upto 13%,capacity 80 to 100 samples per hour ,sample volume 0.5 ml per test ,diluent volume -6.5 ml/test	1
5	Mixer Grinder	750 W, min 3 jar	1
6	Gerber's centrifuge electrically operated	With 24 sockets	1 set
7	Hot water bath	Rectangular (double wall) ; thermostatic control ;5 degree celsius above ambient to 100 degree celsius	2 set
8	Hot air oven -small size	Capacity 250 litre ,minimum 3 number of shelves ,temp range +5 to 250 degree Celsius ,automatic cut off heater and blower when door opened ; Digital PID temperature controller with timer ; outer body GI Epoxy coated ;Inner body Stainless steel ; control accuracy +/-0.5 degree Celsius	1
9	Desiccators small size	Non vacuum, Borosilicate glass, 12 inch /300mm ,, silica gel	1
10	Laminar air flow system	Size : 3 feet *2 feet * 2 feet ;HEPA Filter - two ,EPOXY Powder coating finish ,Illumination 2*40 watts ,Efficiency 99.99%down to 0.3%microns	1
11	Incubator	Thermostatic control and digital display ; 3 shelves ;temperature range 35degree Celsius above ambient to 60degree Celsius with temp. accuracy +/-1 degree Celsius ; power supply -220V AC ; Inner chamber SS 304, outer MS ;Inner dimension 45*45*45 cm	1

12	Oil immersion microscope	Light source type -LED,MATERIAL- METAL , magnification :40x,60x,100x,cover slip and other accessories , trinocular observation head inclined at 45 degree rotatable through 360degree ; power supply -100 to 220 v ; mechanical stage -coaxial low positioned of size 120*125 mm with Vernier graduatic stage	2
13	Colony counter	Power :230V-10%AC,50Hz,40w DISH SIZE :110mm, accessories :marking pen,magnifier lens , weight 3 kg (approx.)	1
14	Precision balance 0.1 to 300g	0.1 to 300 gm	1
15	Autoclave	Suitable for general laboratory use and sterilization ;stainless steel vertical body having no joints ;pressure range 15psi to 18 psi ;provided with dial pressure gauge ;domed cover can be sealed by a jointless gasket which is clamped to the vessel by wing nuts ; suitable to work on 230V AC 50Hz single phase ;pressure control switch	1
16	Refrigerator (double door)	Double door - minimum 260 litre	1
17	LPG Gas stove with two burners	Steel or glass top with min 2 burners	1
18	Hand Sealing machine	Cast Iron, Corded Electric,8" Inches Impulse Polybag Sealing Machine	1
19	LPG Gas Stove (Large)	Single burner	1
20	Deep Freezer (Double door) - Chest Mounted-	Minimum 300 litre	1
21	Digital Thermometer	Stainless steel penetration probe, temperature - 50degree Celsius to +150 degree Celsius ,accuracy +or -0.3 degree Celsius , digital display / read out in degree Celsius or degree fahrenheit	5 nos

Part B - TOOLS and ACCESSORIES

SL NO	NAME	SPECIFICATION	QUANTITY
1	Beaker	150 ml BOROSIL	4
2	Beaker	250 ml BOROSIL	4
3	Beaker	500 ml BOROSIL	2
4	Bunsen Burner	With wire gauze	5
5	Tripod stand for Bunsen Burner	metal	5
6	Food handlers gloves	Disposable	200
7	Protective Gloves	Rubber	30
8	Head Caps	Disposable	300

9	Aprons	Cotton	40
10	Safety Goggles	made of polycarbonate polymer	30
11	Safety Boots	Sole with Hard PVC	30
12	Mouth Masks	Cloth mask	100
13	Sanitizer	With 70% alcohol based	5 ltr
14	Milk Sampling dipper	50 ml ss	2
15	Milk Plunger for can		2
16	Milk plunger for tanker		2
17	Milk sample bottle 100ml polythene	100ml polythene	5
18	Milk Can	40 ltr(stainless steel or ALUMINIUM)	1
19	Duplex filter for milk	Stainless steel	1
20	Lab models of pasteurizer/dairy plant		1
21	Models of 3way valve and 2 way valve	SS 304 (STAINLESS STEEL)	4
22	Cream butyrometer	Glass 0-70%	2
23	Skimmilk butyrometer	Round scale, plain neck diameter 11/12 mm	2
24	Gerber's butyrometer for milk	With 0-10 % scale marked with 0.1 % mark	25 nos
25	10.75ml milk pipettes	10.75ml	15 nos
26	10 ml Tilt measure for acid with bottle	10 ml	5
27	Tilt measure for amyl alcohol with bottle	1ml	5
28	Lovibond colour Comparator	1ml	1
29	Butyrometer stoppers		50
30	Butyrometer stand with lock 24 holes	with lock 24 holes	8
31	Lock stoppers		50
32	Milk pipette stand	plastic	5 nos
33	Thermometer	Mercury thermometer 0 to 110 degree celsius	5 nos
34	Lactometer	Zeal type	15 nos
35	Glass cylinder	150 ml	8 nos
36	Glass cylinder	250 ml	4 nos
37	Porceline disc bottom flat	100 ml	6 nos
38	Shallow bottom SS dish 7-8 cm dia 2.5cm deep provided with easily removable lid	SS dish 7-8 cm dia 2.5cm deep	5 nos
39	15 ml, 2 ml, 1 ml, pipettes for protein test	15 ml, 2 ml, 1 ml	10 each
40	Glass funnel	25mm	5 nos
41	Pipette 0.1 ml breeds pipette	0.1 ml	5 nos
42	Pipette 1 ml, 5 ml	1 ml, 5 ml	25 each
43	petridishes	Glass 15x60mm	10 nos
44	Standard flask	1 litre, 100 ml	8 each
45	Photographs / charts of different equipments such as pasteurizer ,cream separator ,tankers ,sanitisation procedures	A4 size or chart size	1 each
46	Burette stand	metal	12
47	Pipette	10 ml	20
48	Test tubes medium size	Medium size	7 dozen
49	Test tube stands	plastic	5 nos

50	Conical flask 250 ml	250 ml BOROSIL	8 nos
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Part C - CONSUMABLES

Sl.No	Item	quantity
1	Gerber sulphuric acid concentration of 90 to 91% by weight	3 litre
2	Amyl alcohol 95% of clear colourless with density of 0.805 g/ml	500 ml bottle
3	N/10 sodium hydroxide solution	500 ml x 2bottle
4	0.5 % phenolphthalein Indicator	500 ml x 1 bottle
5	Ethyl alcohol 68% or 75% by volume	500 ml
6	Conc. hydrochloric acid	500 ml
7	Resorcinol powder	450 gm
8	Spirit- laboratory type	1litre bottle
9	Iodine solution 1%	1 litre
10	Methylene blue thiocyanate solution	1 bottle
11	gelatin	500 gm
12	Sodium alginate	500ml
13	Citric acid	1 litre x2 bottle
14	Soluted potassium oxalate solution	250 ml
15	Neutral formalin	500 ml
16	Potassium chromate aqueous 10%	250 ml
17	Ag no3 (normal)	100 gm
18	Hydrogen Peroxide	500 ml
19	Anhydrous A R sodium carbonate	500 gm
20	A R sodium bicarbonate	500 gm
29	First aid kit	4
30	Toned milk	50 litre
31	Standardised milk	50 litre
32	Toned Milk	50 litre
33	Ferric Chloride	500 ml
35	Filter paper	Whatman No 2
36	Conc. Sulphuric Acid	500 ml
37	Paraphenylene Diamine Hydrochloride	500 gm
38	Sugar	15 kg
39	Ghee	5 kg
40	Butter	2 kg
41	Milk Cream	2 kg
42	Skimmed Milk Powder	1 kg
43	Condensed Milk	1 kg
44	Rava	1 kg
45	Maida	25 kg
46	Baking Powder	100 g
47	Essence	300 ml

48	Colour	300 ml
49	Coconut Oil	3 kg
50	Cocoa Powder	500 gm
51	Salt	500 gm
52	Cashew Nut	500 g
53	Cardamom	250 g
54	Cherry Raisins	250 g each

Part D - OTHER ACCESSORIES

SL NO	NAME	SPECIFICATION	QUANTITY
1.	Bronze Uruli 3 kg	Bronze uruli	1
2.	Bronze Uruli 4 kg	Bronze uruli	1
3.	Vegetable cutting slab	½ feet X 1 feet	1 nos
4.	Tray (Steel)	steel	5 nos
5.	Vessels (5L) Steel	steel(5L)	5 nos
6.	Vessels (3L) Steel	steel(3L)	5 nos
7.	Vessels (2L) Steel	Steel(2L)	5 nos

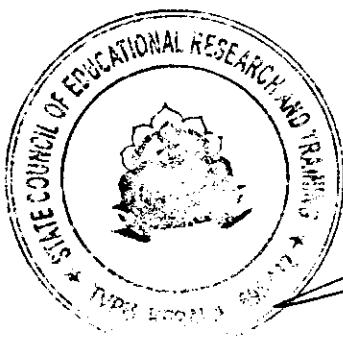
Part E - FURNITURE

1	Steel Cupboard	6 feet height,4 feet width,Stainless steel(18gauge) double door	2
2	Wooden shelf	6 feet height,4 feet width, double door	1
3	Steel rack	8 feet height, 4 feet width, stainless steel	2

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