

EXPRESSION OF INTEREST

NIFTEM (An Autonomous Institution under Ministry of Food Processing Industries) invites expression of interest from entrepreneurs, industry persons, food processors, farmers, self help groups, farmers producers organization etc. for leasing/rent out the following facilities for food processing existing in the campus of NIFTEM at Kundli Sonipat Haryana-

1. Ready-to-Eat Products
2. Indian Tradition food products
3. Milk processing line and dairy products
4. Fruits and vegetables processing products
5. Meat and poultry processing

The existing pilot plant consist of the facilities like compound wall, wide roads, soft water and power supply, Office space, complete utilities (Steam, Refrigeration etc.), Bank, Canteen, Food Testing Lab, Incubation centre including mentoring etc.

Those who are interested to take the pilot plant on floor basis or on equipment basis as rental/lease may submit their EOI along with the detailed profile of their company, activities proposed for taking the warehouse, financial capabilities, etc to the address given below on or before 15th November, 2018. The EOI should be in a sealed over and addressed to the Registrar, National Institute of Food Technology Entrepreneurship and Management (Deemed to be University under the Ministry of Food Processing Industries, Govt. of India) Plot No. 97, Sec.56, HSIIDC Industrial Estate, Kundli – 131028 Sonapat, Haryana, India. The contact point and the address details are given at the end of this document.

For more information about each pilot plant, equipments, process lines, products possible, please visit www.niftem.ac.in

Terms of Reference will follow shortly and will be available on the NIFTEM website, www.niftem.ac.in

Contact mail ID: pilotplants.niftem@yahoo.com with cc to registrar@niftem.ac.in

For more information please visit www.niftem.ac.in

Application form for EOI for Lease out of Pilot Plant

1.	Name of the applicant	
2.	Postal address with pin number, email, fax and phone including Mobile	
3.	PAN number of the applicant	
4.	Details of VAT registration with TIN number	
5.	Continuous years of business and type of business	
6.	Annual turn-over of the present business	
7.	Type of Commodity dealt with	
8.	Number and details of relevant plant currently dealing (if any)	
9.	Any more information	

Place:

(Signature of the applicant)

Date:

Seal of the Company:

OBJECTIVES AND FACILITIES OF PILOT PLANT FOR FRUIT & VEGETABLE PROCESSING

OBJECTIVES:

1. Serve as Business incubation center for budding entrepreneurs from both large scale industries as well as medium, small and micro enterprises
2. Provide a vital source for food companies that are just starting up or evaluating new process or product lines
3. Process lines of varying capacities to cater to the needs of the different sectors of the food industry (large, medium, small and micro enterprises).
4. Provide research facilities to the food industry for development of novel and innovative products and processes and modification of existing products and processes.
5. Used for evaluation of new ingredients, formulations and processes on a small and medium scale production and demonstration
6. Deliver product quality as best as possible as expected from a full scale production line
7. Provide training to the students and the industry personnel and the facility to work and conduct research in an operating production facility

Process Lines

- a. Storage and ripening facilities for fruits and vegetables
- b. Pulps , Purees and Juices,
- c. Squash, Cordial and formulated beverages
- d. Jams, Jellies and Marmalades
- e. Fruit Bars and fruit candy
- f. Aseptic processing lines for bag –box filling line
- g. Frozen foods

PRODUCT TYPES

- Fruit juices in bottles, cans and flexible packaging system
- Jams
- Jellies
- Marmalade
- Sauces such as tomato, and chili
- Soups
- Canned fruits and vegetables
- Baked Beans in tomato sauce

- RTS Beverages
- Syrups
- Squashes
- Cordials
- Fruit Pulp
- Tomato Puree
- Tomato Paste
- Tamarind Paste
- Fruit Juice concentrate
- Fruit bars
- Fruit candy and drops
- Fruit papads
- Tutti Fruitty
- Chutney
- Murabba
- Brined vegetables in can and bottles
- Glazed fruits and vegetables
- Desiccated and dehydrated fruits and vegetables
- Osmotic dehydration of fruits (limited shelf life fruits)
- Semi and Intermediate foods

List of equipments Available

Sr. No.	Name	Capacity	Number
1.	Steam jacketed boiling pan SS316	100 liters	2
2.	Pulper SS 304 with 0.5 HP motor	100 Kgs/hr	1
3.	Juice Extractors SS 304- with 1 HP motor, 1440 rpm	100 Kgs/hr	1
4.	Screw Press	-	1
5.	Colloid Mill	-	1
6.	Homogenizer	-	1
7.	Batch Mixing Tank with stirrer SS 316	-	1
8.	Steam Jacketed syrup making tank	-	1
9.	Bottle Washer – water jet type for new bottles – with loading and unloading platform	-	1
10.	Bottle filling machine-vacuum filler	-	1
11.	Coring and peeling machine for pineapple	-	1
12.	Slicing machine	-	1
13.	Cubing machine	-	1
14.	Bottle capping machine	-	1
15.	Bottle crimping machine	-	1

16.	Bottle labelling machine	-	1
17.	Plate and Frame Filter Press	-	1
18.	Plate Heat Exchanger	-	1
19.	Hydrostatic Sterilizer	-	1
20.	Autoclave	-	3
21.	Pouch Filler	-	1
22.	Form-Fill-Seal machine	-	1
23.	Can Reformer	-	1
24.	Can Filler	-	1
25.	Can seaming machine	-	1
26.	Conveyor Belt-12 ft length, 2 ft wide	-	2
27.	SS Slat Chain Conveyor-5 inch, 12 ft length	-	2
28.	Inspection Table SS304 top	-	3
29.	Tray dryer	100 kgs/hr	1
30.	Drum dryer	65 kgs /hr	1
31.	Freeze dryer	-	1
32.	Small IQF plant	100 kgs/hr	1 set
33.	Plate freezer	100 kgs/hr	1
34.	Spray dryer	100 LPH	1
35.	Ripening Chamber	1 tonne	1
36.	Cold storage	0.5 tonne	1
37.	Controlled Atmosphere Storage	1.00 tonne	1

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**OBJECTIVES AND FACILITIES OF PILOT PLANT
FOR
MILK AND DAIRY PRODUCT**

OBJECTIVES:

8. To provide the processing facilities for the budding entrepreneurs as well as medium, small and micro enterprises.
9. To provide research facilities to the food industry for development of new products or the modification of existing products/processes.
10. To provide hands on training to the students and the industry personnel
11. To act as a model facilities centre including multiproduct

Process/ Production facilities available:

- h. Liquid milk processing with cream separator, homogenizer and FFS machine
- i. Ice-cream processing with automatic cup filling machine
- j. Paneer preparation with pneumatic press
- k. Flavour milk preparation with bottle filling, sterilization
- l. Butter preparation (Butter churn and CBMM)
- m. Ghee processing with FFS machine
- n. Dahi preparation with automatic cup filling machine
- o. Shrikhand preparation
- p. Membrane filtration unit

Utilities available:

- a. Diesel fired boiler
- b. Ammonia based refrigeration system
- c. Cold Storage for Milk, Ice-cream and Curd
- d. Water Softener plant
- e. CIP system for whole plant

List of major equipments available section wise:

MILK RECEPTION AND CHILLING SECTION			
Sr. No.	Name	Capacity	Number
1.	Weighment tank	100kg	1
2.	duplex inline filter		1
3.	Chilling of milk (PHE)	1KLPH	1
4.	Raw milk silos	5KL	1
5.	Processed milk silos	2KL	3
MILK PROCESSING SECTION			
1.	Homogeniser	1KLPH	1
2.	Pasteurizer	1KLPH	1
3.	Cream separator	1KLPH	1
CREAM PROCESSING, BUTTER AND GHEE SECTION			

1.	Cream Chillers	250LPH	1
2.	Cream Ripening tank	500 L	1
3.	Cream Aging tank	250 L	1
4.	Continuous Butter Making machine	50kg/h	1
5.	Butter Melting Vat	250kg	1
6.	Ghee Boiler	200 L	1
7.	Ghee Settling Tank	250 L	1
8.	Ghee Clarifier	500-100kg/h	1
9.	Ghee Granulation tank	250 L	1
10.	Ghee Pouch Filling Machine	200PPH	1
DAHI/CHHACH/LASSI SECTION			
1.	Curd setting tank (after culture addition)	500 litre	1
2.	Cup Filling and Sealing Machine	100/200/400gm (25 cups per minute)	1
3.	Curd Incubation Room		1
4.	Cold room		1
PANEER /CHEESE SECTION			
1.	Rectangular shape, jacketed and insulated Paneer/ Cheese vat	500 L	1
2.	Paneer/ Cheese washing cum cooling tank	50 L	1
3.	Paneer/ Cheese Press single head		1
4.	Vacuum Packing		1
5.	Vertical cooler paneer cabinet		1
SHRIKHAND SECTION			
1.	Separator/Basket centrifuge	250LPH	1
2.	Shrikhand Mixing Vat	250 L	1
3.	Cup Filling and Sealing Machine	25 cups per minute	1
ICE CREAM SECTION			
1.	Double Jacketed Aging Vat	200L	1
2.	Ice cream mix 2 stage hydraulically operated homogenizer	1450LPH	1
3.	Ice cream mix pasteurizer	150LPH	1
4.	Triple wall vertical tank conical top and bottom insulated Mix aging vat	100L	1
5.	Choco-bar/Mango/Other flavour tank	100L	
6.	Choco-bar/Mango/Other flavour Dip Tank	100L	1
7.	Batch freezer or Continuous freezer	100L	2
8.	Lolly pop defrosting tank	100L	1
9.	Fruit Feeder		1
10.	Cup cum Cone Filling machine		1
FLAVOR MILK SECTION			
1.	Intermediate dimple jacket multipurpose vat	250 L	1
2.	Sugar Mixing tank	250 L	1
3.	Double Head Filling Machine		1
4.	Shrink wrapping machine		1
5.	Bottle sleeving machine		1
6.	Bottle corking machine		1
7.	Bottle sterilizer	24 bottles/ batch	1

MEMBRANE PROCESSING SECTION			
1.	Nanofiltration Unit	set	1
2.	Reverse Osmosis Unit	set	1
3.	Ultrafiltration Unit	set	1

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**OBJECTIVES AND FACILITIES OF PILOT PLANT
FOR
READY TO EAT AND TRADITIONAL FOOD PRODUCTS**

OBJECTIVES:

12. To provide the processing facilities for ready to eat and Indian Savoury item, to budding entrepreneurs as well as medium, small and micro enterprises under NIFTEM incubation centre
13. To provide research facilities to small and medium enterprises for development of new products or the modification of existing products/processes.
14. To provide hands on training to the students and the industry personnel
15. To act as a model facilities centre with multiple production line - Flakes line, extrusion line, puffed product, core filled product, burger line and Traditional Indian Products like - Papad, dosa, laddu, idli, vada, chakli, Indian Savoury .

VARIOUS PROCESSING TECHNIQUES AVAILABLE:

- | | |
|------------------------------|--------------------------------------|
| q. Accelerated freeze drying | z. Namkeen Extruding |
| r. Hot air drying | aa. Namkeen mixing |
| s. Frying | bb. Baking |
| t. Extrusion | cc. Grating |
| u. Grit mixing | dd. Forming |
| v. Puffing | ee. Indigenous Cooking/ processing |
| w. Coating | ff. Washing of Fruits and Vegetables |
| x. Peeling | gg. Trimming/cutting/peeling |
| y. Dough making | hh. Packing and Labelling |

PRODUCT VARIANTS:

- f. Preserved Chapaties
- g. Flavoured Chapaties
- h. Parathas
- i. Puff and Serve Chapaties
- j. Besan Laddu
- k. Cashew nut Burfi
- l. Canned Upma
- m. Vegetable Halwa
- n. Pattie
- o. Khakara
- p. Puri
- q. Panipuri
- r. Papad
- s. Samosa
- t. Sev
- u. Idli
- v. Corn Balls, Flakes
- w. Extruded Snaks
- x. Chakli
- y. Dosa
- z. wada
- aa. Ganthiya
- bb. Bundi/ Laddu
- cc. Papdi
- dd. Potato Chips
- ee. Sticks chips
- ff. Topioco Chips
- gg. Papaya chips
- hh. Raw mango chips
- ii. Sweet potato Chips

LIST OF MAJOR EQUIPMENTS AVAILABLE IN TRADITIONAL FOOD PRODUCT SECTION:

S.No.	Machine	Capacity (FG)
1.	Auto Papad Making Machine (Blending, Sheeting, Cutting and Drying)	15 Kg/h
2.	Auto Farsan Namkin Machine with Fryer	100 Kg/h
3.	Auto Peeling Machine	50 Kg/h
4.	Auto chips cutting Machine	50 Kg/h
5.	Auto Heating Mixing (Khoa) Machine	30 Kg/ h

6.	Semi-automatic Chakli Making Machine	40 Kg/h
7.	Automatic Gulla Cutting & rounding Machine	1000Psc/ h
8.	Dosa / Vada making Machine	100 Dosas/h
9.	Hydraulic press tableting machine for RTE various veg and non-veg cakes	25Strokes/Min
10.	Automatic Laddu making machine	1500 Pcs/h
11.	Pop Corn Machine with electrical heating system	250 gm/batch
12.	Dry Extruder Processing Line	150 Kg/ Hour
13.	Cheese Curl Processing Line	150 Kg/Hour
14.	Fruit/cereals/ Nutro Bar Processing Line	60 Kg/Hour
15.	Burger Processing Line	100 Kg/Hour
16.	Multi head automatic granule packaging machine	30 Pkts/ Min
17.	Liquid Packing Machine	30 Pkt/Min
18.	Dry Extruder Processing Line	150 Kg/ Hour

LIST OF MAJOR EQUIPMENTS AVAILABLE IN RTE SECTION:

S.No.	Machine	Capacity
1.	Vertical Mixer	200 kg/batch
2.	Screw Conveyor	100-150 kg/h
3.	Rotatory Head Extruder	120-150 kg/h
4.	Continuous Fryer	100-150 kg/h
5.	Vibrator Sifter	100-150 kg/h
6.	Seasoner	100-150 kg/h

7.	Air Puffing Machine	50-60 kg/h
8.	Sugar Boiling Pot	200 L
9.	Automatic Cutting and Forming Machine	200-250 kg/h
10.	Packing Machine	100-150 kg/h
11.	Hot Extruder	100-150 kg/h
12.	Five Layer Oven	100-150 kg/h
13.	Flaker	100-150 kg/h
14.	Seasoning Machine	100-150 kg/h
15.	Sifter	100-180 kg/h

Other Equipment:

1.	Multi Head Automatic Granule Packaging Machine	30 bags/min
2.	Liquid Packaging Machine	20 Bottle/min
3.	Pop Corn Machine	250 gm/batch
4.	Automatic Laddu Making Machine	1500 Laddu/h
5.	Burger Processing	100 kg/h

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Incubation Centre/Pilot plant on Meat and Poultry Processing

Objectives:

This pilot plant will cater to various needs of meat processors in the country

- **Incubation center:** wherein prospective as well as existing entrepreneurs can try/utilize facilities to tap the market so that they don't have to invest much in equipments and machineries.
- **Training & Workshops:** Pilot plant will be used for the training and exposure of our own students as well as students from other Universities/Institutes and other stakeholders such as farmers, government officers/inspectors, etc for the training and workshop purpose.
- **R & D:** For the food industry and institutes on prior agreement and with prevalent terms and conditions

Process Lines:

1. Cured Meat Products
2. Comminuted/Emulsified Meat Products
3. Traditional Meat Products
4. Coated Meat Products
5. Roasted Meat Products
6. Reconstructed Products

Products that can be manufactured:

1. Sausages
2. Salami
3. Frankfurters
4. Chicken ham
5. Meat Nuggets
6. Meat patty
7. Meat burgers
8. Sheekh Kebabs
9. Shami Kebabs
10. Tandoori meat Tikka
11. Cured meat products/Cured chicken breasts

List of Equipments available:

S. No.	Item Description	Make	Model	Capacity
1	Band saw ST 320 (with table)	MEDOC, SPAIN	ST 320	manual
2	Automatic Mixer Grinder/Mixer	SEYDELMANN, GERMANY	MD 114	Approx. 1000 kg/hr at 13 mm
3	Bowl cutter	TALSA, SPAIN	K 50 E	Approx. 37 kg / batch
4	Hydraulic Filler, Stuffer (Vacuum)	HANDTMANN, GERMANY	VF 608 PLUS	max 300 portions / min for 25 grams or below
5	Link Cutters	GASER, SPAIN	L 80	manual
6	Ham cooker	LOCAL		approx. 80 kg/batch
7	Heavy Duty Automatic Slicer	SCHARFEN, GERMANY	G 330A	variable speed 58 strokes per minute max.
8	Forming Line, Portioning Machine	DEIGHTON, UK	R 1200	1200 pcs / hr max
9	Injector	RUHLE, GERMANY	PR 8	approx. 500 kg/hr for whole bird or big pieces of meat
7	Tumbler	RUHLE, GERMANY	MPR 300	approx. 220 kg/batch
10	Meat skewer machine	LOCAL		Manual
11	Ice Maker	SHENZHEN, CHINA	GMS-15K	approx. 1500 kg/24 hr at ambient condition
12	Gas Flushing Machine (MAP+Vacuum packaging machine)	RUHLE, GERMANY	VR 1 SERVO	with gas 2-3 cycles / min
13	Stewing, Cooking Range, Broiling, Frying, Roasting, machines/equipment	LOCAL		Approx. 5 kg or ltr / batch
14	Metal detector	LOCAL	AMD 011	22 mtr/min with 920 mm width
15	Trolley stainless steel	LOCAL		N/A
16	Trolley stainless steel	LOCAL		N/A
17	Landing Table stainless steel	LOCAL		N/A
18	Boning Table	LOCAL		N/A
19	Packaging table	LOCAL		N/A
20	Digital thermometer probes for temperature measurement	LOCAL	ST 9283B	manual
21	Boning knife, Serrated knife, Sharpening steels, Scabbards, Meat hooks, Trimming hooks, Knife sterilizer	LOCAL		N/A
22	Chiller 2 MT Capacity for Meat / Carcass (+4°C)	LOCAL		Approx. 2 MT
23	Cold store (-18°C)	LOCAL		Approx. 8 MT
24	Blast freezer (-18 to -25°C)	LOCAL		Approx. 500 kg / batch
25	Compressed air supply system for suitable size and capacity as per process requirement	LOCAL		9 CFM
26	Raw and soft water supply of suitable size and capacity as required	LOCAL/Industrial scale		Approx. 250 LPH

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