

Facilities available for Profiling of bioactive components and analysis of developed products

1. Gas chromatography-mass spectrometry (GCMS) for nutritional Analysis	8. Kjeldahl for protein estimation
2. High-performance liquid chromatography (HPLC) for profiling of bioactive elements	9. Soxhlet for fat estimation
3. Atomic Absorption Spectroscopy (AAS) for mineral estimation	10. Hot air oven for moisture estimation
4. Spectrophotometer for Quantitative Analysis	11. pH meter to determine the degree of acidity or alkalinity
5. Texture Analyzer for texture determination	12. Refractometer for measuring soluble solid content
6. Colorimeter for food product colour identification	13. Vortex, Ultrasonicator bath, Magnetic stirrer with hot plate
7. Laminar Air Flow for microbiological analysis	14. Centrifuge with temperature controller

Applicable charges extra, for the instrument usage and chemicals in the analysis.

Fee for availing the facilities for value addition of cashew apple and kernels

Particulars	Individual (₹)	Group (₹)	Remarks
Registration fee	2000	5000	To register with the incubation centre to avail the facilities
Training fee (3 days)	4500	4500	For In house training for value addition of apple
	8000	8000	For In house training for value addition of kernel
Rental fee / month	2000	2000	Charges for providing office facility only
Custom hiring facility	100 per day	100 per day	Only for machinery and gas, for labour and consumables actual charges to be paid extra
Raw materials cost (sugar, jaggery, fruits, wheat flour, rice flour other required items)	-	-	Cost varies with the market value

Facilities available at Agri-Business Incubation (ABI), ICAR-DCR for analysis of developed food products

- Nutritional analysis
- Biochemical analysis
- Texture measurement
- Colour analysis
- Microbiological analysis

The price for analysis shall be determined based on the sample size and in accordance with ICAR-DCR norms

Terms and conditions for individual interested to utilize state-of-the-art facility under custom hiring

1. The period of operation will be six months from the date of completion of trial-run.
2. Period of operation may be extended to six more months, if required and approved by the competent authority.
3. The selected individual/group/firm for in-house incubation has to pay the required security deposit of ₹5000/- for raw cashew processing / Value addition of kernels and ₹2000/- for value addition of cashew apple within 15 days from the date of communication. The selected incubatee shall be permitted to complete the processing within the approved period, failing which the incubatee will be terminated and caution deposit will be forfeited.
4. Application received from interested person will be scrutinized fortnightly (1st and 15th of every month) In case of holidays, scrutiny will be taking place next working day.
5. In case of more than one application for availing facility, the applicant need to present on their proposed business plan to Advisory cum Management committee (AcMc) and the Incubatee with the best business plan will be selected.
6. Any certification to make the units commercially functional is the sole responsibility of the Incubatee.
7. Repair and maintenance of the plant and machinery will be the sole responsibility of the Incubatee.
8. The competent authority may reserve the right to alter the terms & conditions according to the actual need and demand, without any prior notice.

Contact for further information

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Agri - Business Incubation Centre



Introduction

Agri Business Incubation Centre (ABIC) is hosted at ICAR-Directorate of Cashew Research, Puttur, Karnataka and supported by Intellectual Property and Technology Management, Indian Council of Agricultural Research (ICAR), New Delhi. Incubator is recognized as “Technology-led and Knowledge- Driven Enterprise” as it aids in speedy commercialization of innovations and research outputs. This ABIC provide the effective platform to promote Agri - Business and Entrepreneurship Developments in cashew ecosystem with the concept of growth through innovation, upgradation of technology and skill development. It is envisaged to support early Start-ups / Young Entrepreneur / Individuals with innovative ideas in the field of cashew, which holds significant potential for enterprise creation.

Scope of ABI

1. Support start-ups through mentorship, technical & scientific knowledge and by providing resources.
2. Encourage and promote Entrepreneurship.
3. Promoting Agri-business through commercializable technologies developed at ICAR-DCR, Puttur, Karnataka

Activities

1. Creating technology awareness through business meetings and exhibitions.
2. Facilitating skill development through training program and Entrepreneurship Development Program (EDP).
3. Providing ABI facilities for raw cashewnut, cashew apple, cashew kernels processing and profiling bioactive components for Incubatees.

Incubation models available for Incubatee

1. In house Incubation – Custom hiring facilities for processing and value addition of raw cashewnut, cashew apple and cashew kernels.
2. Scientific support for innovative ideas in cashew ecosystem.
3. Preparation of Detailed Project Report (DPR) for new start-up in cashew related business.
4. Value addition and packaging of cashew apple and kernels.
5. Consultancy for specific problem in cashewnut processing and value addition.

Facilities available at ABI for raw cashewnut processing

Facility / Machinery	Installation capacity	Remarks
Raw cashewnut grader	Grading capacity 550 kg per h	Electrically operated rotary sieve grader
Steam boiler with cooker	320 kg (1 No.) / 80 kg (1 No.)	Wood or cashew shell cake fuel fired
Shelling machine	Hand cum pedal operated (6 Nos.) / Automatic shelling machine (2 Nos.) (25-30 kg per h)	Manual and mechanically operated machines
Kernel dryer	Convective dryer – 25 kg / 60 kg /100 kg capacity per batch	Electrically operated tray dryers
Peeling machine	Automatic peeling machine (60 kg unpeeled kernels per h)	Peeling table (1 No.) is available
Grading	Manual grading	Grading table (1 No.) is available
Packaging	Heat sealing unit (1 No.), Vacuum Packaging unit (1 No.) – 25 kg per h and Band sealing machine (1 No.)	Manually and electrically operated

Fee for availing the facilities for raw cashewnut processing

Particulars	Individual (₹)	Group (₹)	Remarks
Registration fee	2000	5000	To register with the incubation centre to avail facilities.
Training fee (3 days)	17800*	17800*	For in house training excluding boarding and lodging charges.
Detailed Project Report	LS	LS	Preparation of detailed project report
Custom hiring of facility @ ₹10/ kg (Minimum 80 kg)	Actual	Actual	Only for machinery, but for labour and consumables actual charges to be paid extra

- Includes registration fee (₹ 2000/-); Raw cashewnut (₹ 9000/-) for 80kg; Processing charges (₹ 800/-) and Resource person (₹ 6000/-)
- LS – Lumsum, depending on the scale of project

Cashew apple-based technologies available on payment basis for Incubatees



1. Cashew Apple Jam
2. Cashew Apple Jelly
3. Cashew Apple Crisp
4. Cashew Apple Cider
5. Cashew apple Fruit bar
6. Cashew Apple cookies
7. Cash Lime

Cost for individual technology is ₹20,000 + 18% GST and ₹1,00,000 for combo pack of (1,2,5,6,7) five technologies.

Additionally, individuals interested in utilizing lab and resource facilities under custom hiring are encouraged as per the terms and conditions of ABI.

Other value-added products available for Incubatee :

- Cashew apple syrup
- Cashew kernel-based deserts