

Research Fellow/Engineer (Food processing and pilot
plant design with LCA/TEA) - DJ7
Singapore Institute of Technology

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Posted Apr. 11, 2024, set to expire Aug. 11, 2024

Job Title Research Fellow/Engineer (Food processing and pilot plant
design with LCA/TEA) - DJ7

Department

Institution Singapore Institute of Technology
Singapore, , Singapore

Date Posted Apr. 11, 2024

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Graduate Student

Academic Field(s) Bioengineering (all Bio-related fields)

Job Website <https://careers.singaporetech.edu.sg/cw/en/job/498636/research-fellowengineer-food-processing-and-pilot-plant-design-with-lcatea-dj7>

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Job Description

Research Fellow/Engineer (Food processing and pilot plant design with LCA/TEA) - DJ7

Job no: 498636

Department: Food, Chemical and Biotechnology

Contract type: Contract

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As a University of Applied Learning, SIT works closely with industry in our research pursuits. Our research staff will have the opportunity to be equipped with applied research skill sets that are relevant to industry demands while working on research projects in SIT.

The primary responsibility of this role is to deliver on an industry innovation research project where you will be part of the research team to develop/produce/investigate extraction and fractionation of mung bean/rice/spent barley for improved functionality, generate process data for future life-cycle assessment and techno-economic analyses to understand the extraction processes' impact on sustainability.

Key Responsibilities:

- Participate in and manage the research project with Principal Investigator (PI), Co-PI and the research team members to ensure all project deliverables are met.
- Undertake these responsibilities in the project:
 - i. Lead and conduct bench-top and pilot plant extraction process for sustainable food ingredients and perform ingredient techno-functional property tests with the support of the team members.
 - ii. Lead the designing of food processing flow with optimized life cycle assessments (LCA) and Techno-Economic Analyses (TEA) for food ingredient manufacturing
 - iii. Plan, organize and carry out experiments and trials in the food pilot plant and chemical labs to achieve the objectives
 - iv. Manage and complete the project by presenting the findings in conferences or meetings with industrial collaborator, submitting timely data & documents, and purchase chemicals or consumables.
 - v. Consolidate the data in order to generate sufficient scientific evidence for meetings slides, publication, and report in conferences.
 - vi. Engage and communicate with industry collaborators for deployment of innovative technologies/solutions and visit their facilities to support the design of a conceptual pilot plant suitable for scale-up production.
- Carry out Risk Assessment, and ensure compliance with Work, Safety and Health Regulations.
- Coordinate procurement and liaison with vendors/suppliers.
- Work independently, as well as within a team, to ensure proper operation and maintenance of equipment.

Job Requirements:

- Have relevant competence in the areas of scale-up food processing (preferably in plant-based

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protein/polyphenol) extraction, fractionation, membrane filtration process, etc.

- Life Cycle Assessments (LCA) and Techno-Economic Analyses (TEA) of processing (preferably in food) technologies
- Background in scale-up processing design, modeling, statistical analysis, and optimization.
- Have a degree in Food Science and Technology, Biotechnology, Chemical Engineering, Pharmaceutical Engineering. Possessing a PhD degree will be advantageous.
- Knowledge of functional properties of protein, and food hydrocolloids will be bonus.
- Able to communicate with the teammates and industrial collaborators to share key findings, seek supports, or conducting pilot plant trials.

Key Competencies

- Show strong initiative and take ownership of research work for publication.
- Conduct individual projects with minimal supervision and drive to completion.
- Self-directed learner who believes in continuous learning and development with projects suitable for scale-up production and commercialization.
- Proficient in using statistics software, technical writing and oral presentation
- Possess strong analytical and critical thinking skills
- Able to build and maintain strong working relationships with people within the university and external companies.

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Advertised: 11 Apr 2024 Singapore Standard Time

Applications close: 31 Dec 2024 Singapore Standard Time

Contact Information

Please reference Academickeys in your cover letter when
applying for or inquiring about this job announcement.

Contact

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