

Bioprocess Engineer


ESTIMATED TIME HORIZON:
 Medium-term*

Trends impacting this role

- Emerging food technology
- Food processing

Other considerations

- Companies manufacturing emerging food products such as alternative proteins will require the expertise of this role as they move from lab trials to production on an industrial scale

Responsibilities of the role

The Bioprocess Engineer supports the commercialisation of novel foods, facilitating the smooth execution of projects from concept through mass production in collaboration with Research & Development, Engineering, and Production teams. The job holder is a thought leader in process development and improvement, as well as an expert in one or more broad emerging food technologies, and guides the design and implementation of manufacturing processes for such products.

Job Tasks

- Provide subject matter expertise to project teams and functions by offering technical guidance and scientific insight for new process development and process improvements for downstream production of emerging food products such as alternative proteins, cultivated proteins and nutraceuticals
- Determine the financial and operational viability of scaled-up manufacturing for emerging food products, process control, sampling, and monitoring systems and technologies
- Serve as an operational and tactical enabler to develop and improve processes and technologies and ensure compliance with intellectual property laws, regulations and company policies
- Collaborate with Engineering, Maintenance, and Production teams to set up appropriate technology and equipment, as well as implement, validate, and monitor manufacturing processes for emerging food products
- Analyse causes of performance problems and process deviations that may impact production quality and yield, leading root-cause analysis, troubleshooting, and resolution of issues
- Train teams in quality, safety, and other manufacturing requirements and procedures to ensure that finished products meet with organisation's standards and local regulations

Technical Skills (TSC) Required

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|--|---|
| • Change Management | • Novel Food Product Introduction ² |
| • Continuous Process Improvement | • Emerging Food Technology Application ² |
| • Data Analytics | • Operation Management |
| • Facility Design | • Process Modelling |
| • Flexible Facilities Implementation | • Process Monitoring |
| • Food Manufacturing Process Design | • Process Optimisation |
| • Good Manufacturing Design and Implementation | • Process Validation |
| • Innovation Management | • Production Performance Management |
| • Manufacturing Process Management | • Quality Assurance Management |

*Estimated timeline of demand for emerging job roles (Short-term: Current to 2 years | Medium-term: 2 to 5 years | Long term: Beyond 5 years)

²Not existing Technical Skills and Competencies. Highlighted as emerging skill areas and will require further input from industry on knowledge and abilities involved.



Technical Skills (TSC) Required (cont'd)

- Quality Control Management
- Quality Systems Management
- Solutioning
- Systems Thinking
- Technical Presentation
- Technology Application

Critical Core Skills (CCS) Required

- Adaptability
- Collaboration
- Communication
- Decision Making
- Problem Solving

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