

**SKILLS FRAMEWORK FOR ENERGY AND CHEMICALS
SKILLS MAP - LABORATORY SUPERVISOR**

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| Sector | Energy and Chemicals | | | | |
| Track | Quality Assurance and Quality Control (QA&QC) | | | | |
| Occupation | Functional Leader | | | | |
| Job Role | Laboratory Supervisor | | | | |
| Job Role Description | <p>The Laboratory Supervisor is responsible for planning laboratory operation activities during his/her shift, to meet customers' needs within schedule and in accordance with the organisation's quality objectives. He/She supervises the conduct of activity-based risk assessments and ensures the compilation and currency of Safety Data Sheets (SDS), in compliance with Workplace Safety and Health (WSH) and Environmental Management System (EMS) requirements.</p> | | | | |
| | <p>The Laboratory Supervisor supervises routine and non-routine sample analyses and sample inspections, and reviews data trends and analyses on sample testing results to verify conformance with Quality Assurance and Quality Control (QA&QC) standards. He manages non-conformance by highlighting findings to management, and initiates plant or process work stoppage in the event of product quality issues. In addition, he coaches and mentors the laboratory technicians and supports the implementation of initiatives for laboratory and QA&QC-related continuous improvements.</p> | | | | |
| | <p>The Laboratory Supervisor leads a team, on either a day or rotating shift, in the laboratory. He has good leadership skills and encourages teamwork among his shift members. He interacts effectively with others and has good communication, analytical and problem-solving skills.</p> | | | | |
| Critical Work Functions and Key Tasks | Critical Work Functions | | Key Tasks | | |
| | Administer Workplace Safety and Health (WSH) and Environmental Management Systems (EMS) | Ensure the compilation and currency of Safety Data Sheets (SDS) | | Lead emergency responses to chemical spillages | |
| | | Supervise good housekeeping in the workplace | | Supervise compliance with WSH and EMS systems | |
| | | Supervise the conduct of activity-based risk assessments | | Supervise the proper handling, storage and transportation of hazardous substances and dangerous goods, in accordance with WSH and EMS standards and practices | |
| | | Perform laboratory operations | | Plan laboratory operation activities, to meet customers' needs within schedule and in accordance with the organisation's quality objectives | |
| | | Supervise the preparation and inventory checks of stock solutions and reagents | | Supervise the purchasing and technical specification of new laboratory equipment and consumable items | |
| | | Supervise troubleshooting on a range of laboratory equipment, and plan calibration and preventive maintenance schedules | | Support laboratory special projects for new developments, systems and equipment at the department level | |
| | Manage sample collection and analyses | Support the development and implementation of Standard Operating Procedures (SOPs) for laboratory operations | | Review data trends and analyses to verify conformance with QA&QC specifications and make recommendations to the production team | |
| | | Supervise data entry and retrieval from the laboratory information management system (LIMS) | | Supervise inspections on samples for contamination, foreign matter and/or defects | |
| | | Supervise routine and non-routine sample analyses and technical work for product formulation, prototyping and applications | | Supervise the application of emerging technologies for product and in-process sampling, and laboratory data management, within the team | |
| | | Manage Quality Assurance and Quality Control (QA&QC) | | Ensure good documentation control and management at the department level | |
| | | Sign off Certificates of Quality (COQ) for product releases | | Manage non-conformance | |
| | Administer staff and organisational development | Initiate plant or process work stoppages in the event of product quality issues | | Prepare and distribute non-conformance reports, and escalate to management for remedial action | |
| | | Coach and mentor staff | | Identify opportunities for continuous improvement | |
| | | Manage resources within the team | | Support the implementation of continuous improvement initiatives and activities | |
| Technical Skills and Competencies | | Generic Skills and Competencies (Top 5) | | | |
| Skills & Competencies | Analytical Method Validation | Level 3 | Communication | Intermediate | |
| | Change Management | Level 4 | Sense Making | Intermediate | |
| | Continuous Improvement Management | Level 3 | Decision Making | Intermediate | |
| | Data and Statistical Analytics | Level 2 | Teamwork | Intermediate | |

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| Skills & Competencies | Environmental Management System Framework Development and Implementation | Level 3 | Digital Literacy | Intermediate |
| | Incident Investigation Management | Level 3 | | |
| | Laboratory Data Reporting and Analysis Management | Level 4 | | |
| | Laboratory Equipment Maintenance and Calibration Management | Level 4 | | |
| | Laboratory Operations Management | Level 4 | | |
| | Materials Qualification | Level 3 | | |
| | Non-Conformance Management | Level 4 | | |
| | Organisational Resource Management | Level 4 | | |
| | Procurement Management | Level 3 | | |
| | Product Testing Management | Level 3 | | |
| | Project Management | Level 3 | | |
| | Quality Assurance Management | Level 3 | | |
| | Quality Control Management | Level 3 | | |
| | Sample Management | Level 4 | | |
| | Staff Development Management | Level 3 | | |
| | Staff Management | Level 4 | | |
| | Technical Report Writing | Level 3 | | |
| | Training, Coaching and Assessment Management | Level 4 | | |
| Workplace Safety and Health Framework Development and Implementation | Level 3 | | | |
| Workplace Safety and Health Hazard Identification and Risk Control Management | Level 3 | | | |
| Programme Listing | For a list of Training Programmes available for the Energy and Chemicals sector, please visit: www.skillsfuture.sg/skills-framework/energyandchemicals | | | |

The information contained in this document serves as a guide.