

**SKILLS FRAMEWORK FOR ENERGY AND CHEMICALS
SKILLS MAP - SENIOR LABORATORY TECHNICIAN/TECHNOLOGIST**

Sector	Energy and Chemicals				
Track	Quality Assurance and Quality Control (QA&QC)				
Occupation	Technician				
Job Role	Senior Laboratory Technician/Technologist				
Job Role Description	The Senior Laboratory Technician/Technologist coordinates work activities among team members in the laboratory, such as the preparation of stock solutions and reagents, laboratory consumable inventory checks, and purchase and qualification of new laboratory equipment and consumables. He/She ensures that team members comply with Workplace Safety and Health (WSH) and Environmental Management System (EMS) requirements, and adhere to good housekeeping practices.				
	The Senior Laboratory Technician/Technologist performs trending and analyses on sample testing results to ensure conformance with product quality, and initiates corrective actions for non-conformance issues. He also contributes to staff and organisational development by identifying opportunities for continuous improvement and providing guidance to junior staff.				
	The Senior Laboratory Technician/Technologist usually works in a team, on either a day or rotating shift, in the laboratory. He is organised and meticulous, possesses good communication skills, and is able to work independently with minimal supervision as well as interact effectively with others.				
Critical Work Functions and Key Tasks	Critical Work Functions		Key Tasks		
	Administer Workplace Safety and Health (WSH) and Environmental Management Systems (EMS)			Compile and maintain Safety Data Sheets (SDS)	
				Ensure compliance with WSH and EMS systems among team members	
				Ensure team members adhere to good housekeeping practices	
				Handle, store and transport hazardous substances and dangerous goods, in accordance with WSH and EMS standards and practices	
				Participate in activity-based risk assessments	
				Respond to chemical spillages and emergencies	
	Perform laboratory operations			Coordinate laboratory consumable inventory checks, purchasing and qualification of new laboratory equipment and consumable items	
				Coordinate the preparation of stock solutions and reagents among team members	
				Maintain Standard Operating Procedures (SOPs) for laboratory operations	
				Perform calibration and troubleshooting on a range of laboratory equipment and/or on-line analysing devices	
				Perform periodic checks to ensure the correct labelling of samples	
				Perform technical work involving formulation, prototyping and product applications	
	Manage sample collection and analyses			Apply emerging technologies to perform product and in-process sampling, and laboratory data management	
				Perform inspections on samples for contamination, foreign matter and/or defects	
		Perform routine and non-routine product and in-process sample analyses, according to documented test methods			
		Perform trending and analyses on sample testing results for conformance with product quality and initiate corrective actions for non-conformance issues			
		Record sample testing results into the laboratory information management system (LIMS)			
Manage Quality Assurance and Quality Control (QA&QC)			Liaise across departments to ensure completeness of Certificate of Analysis (COA) documentation		
Administer staff and organisational development			Contribute to continuous improvement initiatives and activities		
			Identify opportunities for continuous improvement		
			Provide guidance to junior staff		
Skills & Competencies	Technical Skills and Competencies		Generic Skills and Competencies (Top 5)		
	Analytical Method Validation	Level 3	Teamwork	Intermediate	
	Continuous Improvement Management	Level 3	Problem Solving	Intermediate	
	Data and Statistical Analytics	Level 2	Communication	Intermediate	
	Environmental Management System Framework Development and Implementation	Level 3	Sense Making	Intermediate	
	Incident Investigation Management	Level 2	Interpersonal Skills	Intermediate	
	Laboratory Data Reporting and Analysis Management	Level 3			
	Laboratory Equipment Maintenance and Calibration Management	Level 3			
	Laboratory Operations Management	Level 3			
	Materials Qualification	Level 3			
	Non-Conformance Management	Level 3			
	Procurement Management	Level 2			

Skills & Competencies	Product Testing Management	Level 3	
	Project Management	Level 3	
	Quality Assurance Management	Level 3	
	Quality Control Management	Level 3	
	Sample Management	Level 3	
	Staff Management	Level 3	
	Technical Report Writing	Level 2	
	Technical Services Management	Level 3	
	Training, Coaching and Assessment Management	Level 3	
	Workplace Safety and Health Framework Development and Implementation	Level 3	
	Workplace Safety and Health Hazard Identification and Risk Control Management	Level 2	
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.