

**SKILLS FRAMEWORK FOR FOOD MANUFACTURING  
SKILLS MAP - QUALITY ASSURANCE AND QUALITY CONTROL SPECIALIST/FOOD SAFETY  
SPECIALIST/LABORATORY MANAGER**

<b>Sector</b>	Food Manufacturing		
<b>Track</b>	Quality Assurance and Control		
<b>Occupation</b>	Quality Controller		
<b>Job Role</b>	<b>Quality Assurance and Quality Control Specialist/Food Safety Specialist/Laboratory Manager</b>		
<b>Job Role Description</b>	<p>The Quality Assurance and Quality Control (QA&amp;QC) Specialist/Food Safety Specialist/Laboratory Manager develops sampling plans and procedures for testing product quality. He/She maintains standards and quality processes in food manufacturing operations by verifying test results and audits for compliance with food safety regulations and requirements set by regulatory authorities. He determines the optimal operating conditions for the laboratory's infrastructure and equipment and investigates underlying causes, technical faults or practices that impact laboratory operations. He develops standard operating procedures (SOPs) in line with good laboratory practices (GLPs), good manufacturing practices (GMPs), regulatory requirements and guidelines in food safety management and control, such as ISO standards and Hazards and Critical Control Points (HACCP) system.</p> <p>He possesses excellent analytical skills and sound judgement for establishing critical guidelines, parameters and procedures within the laboratory and with other functional departments in the organisation. Often working in a team and having to supervise and guide others, he should work well in a team and possess strong communication skills to interact effectively with others to achieve organisational objectives.</p>		
<b>Critical Work Functions and Key Tasks</b>	<b>Critical Work Functions</b>	<b>Key Tasks</b>	<b>Performance Expectations (For legislated / regulated occupations)</b>
	Conduct tests for food quality and packaging	Develop sampling plans for quality control purposes	<ul style="list-style-type: none"> <li>• In accordance with:</li> <li>• ISO 22000:2005 - Food safety management systems</li> <li>• Singapore Standard (SS) 590:2013</li> <li>• SS 444:2010</li> <li>• Food Safety System Certification (FSSC) 22000</li> <li>• Good laboratory practices (GLP)</li> <li>• Good manufacturing practices (GMP)</li> <li>• Specifications within the <i>Codex Alimentarius</i></li> </ul>
		Establish standard operating procedures (SOPs) and conditions for handling, storage and preservation of samples	
		Develop inspection and testing protocols for materials, products and packaging	
		Verify alignment of sampling documentation, testing activities and procedures with established protocols to identify anomalies and issues	
	Maintain standards and quality processes in food manufacturing operations	Develop methods and indicators of success for the testing quality of materials, products and packaging	
		Inspect facilities, equipment, products and/or production lines to ensure food is prepared according to safety modulations of food planning and situational health sections	
		Conduct root cause analyses for product defects and quality lapses	
		Verify quality control (QC) records, test results and reports for submission to regulatory authorities	
	Manage laboratory operations	Develop SOPs and infrastructure requirements for laboratories and optimal calibration standards for laboratory equipment operation, in line with good laboratory practice (GLP) requirements	
		Specify the protocols and laboratory infrastructure, equipment and utilities to be inspected and tested	
		Investigate underlying causes, technical faults and practices that impact laboratory equipment operations and infrastructure functionality	
		Review reports and develop guidelines and standard practices for data documentation and analysis	
	Manage quality assurance and quality control framework	Develop SOPs that align with regulatory requirements, industry guidelines and organisation's policies	
		Implement plans and strategies to facilitate provision of safe food products	
		Participate in quality management system reviews and promote quality and food safety policies to all personnel	
Develop product and process quality metric reports			
Lead internal and external quality, and food safety related audits			
Rectify issues of non-compliance	Lead traceability investigations on the source of quality lapses and other product issues		
	Lead root cause analyses and investigations into process deviations and for product defects and quality lapses		

	Oversee corrective and preventative actions (CAPA) implementation and documentation in collaboration with other departments			
<b>Skills &amp; Competencies</b>	Technical Skills and Competencies		Generic Skills and Competencies (Top 5)	
	Budgeting	Level 3	Problem Solving	Intermediate
	Business Continuity Management	Level 4	Communication	Intermediate
	Business Performance Management	Level 4	Sense Making	Intermediate
	Change Management	Level 4	Interpersonal Skills	Intermediate
	Chemical Risk Management	Level 4	Decision Making	Intermediate
	Cleanliness Testing	Level 4		
	Conflict Resolution	Level 4		
	Continuous Process Improvement	Level 4		
	Document Control	Level 4		
	Emergency Response Management	Level 2		
	Food Safety Analysis	Level 4		
	Food Safety Management	Level 3		
	Good Manufacturing Practices Implementation	Level 4		
	Hazards and Risk Control, and Policy Management	Level 4		
	Innovation Management	Level 4		
	Laboratory Data Analysis	Level 4		
	Laboratory Management	Level 4		
	Manufacturing Process Management	Level 4		
	Packaging Testing	Level 4		
	Process Validation	Level 4		
	Product Testing	Level 4		
	Project Management	Level 4		
	Quality Assurance Management	Level 4		
	Quality Control Management	Level 4		
	Quality System Management	Level 4		
	Risk Management	Level 4		
Stakeholder Management	Level 3			
Strategy Development	Level 4			
Systems Thinking	Level 4			
Technical Presentation	Level 4			
Technical Report Writing	Level 4			
WSH Performance Management	Level 3			
<b>Programme Listing</b>	For a list of Training Programmes available for the Food Manufacturing sector, please visit: <a href="http://www.skillsfuture.sg/skills-framework/foodmfg">www.skillsfuture.sg/skills-framework/foodmfg</a>			

The information contained in this document serves as a guide.