

**SKILLS FRAMEWORK FOR FOOD MANUFACTURING
TECHNICAL SKILLS & COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Quality Management					
TSC	Packaging Testing					
TSC Description	Verify that packaging materials maintain the desired level of compliance					
TSC Proficiency Description	Level 1	Level 2	Level 3 FMF-QUA-3033-1.1-14	Level 4 FMF-QUA-4033-1.1	Level 5 FMF-QUA-5033-1.1	Level 6
			Perform tests to verify the quality of food product packaging	Oversee implementation of packaging tests according to established processes	Lead development of packaging testing plans and processes	
Knowledge			<ul style="list-style-type: none"> • Packaging processes for manufactured food products • Sample handling and processing • Equipment required for packaging testing • Indicators of substandard product packaging or defects • Good manufacturing practices (GMP) • Environmental conditions required to test packaging material • Features and indicators of package integrity 	<ul style="list-style-type: none"> • Packaging engineering principles • Biochemical and food sciences • Optimal packaging materials and conditions to meet product requirements • Packaging requirements for different kinds of food products • Types of packaging materials • Significant parameters or features for each packaging process step • Sealing temperature, time, pressure and other parameters • Techniques to analyse material safety, product performance, sterilisation compatibility, shelf-life stability, and suitability for the intended manufacturing process 	<ul style="list-style-type: none"> • Optimal timing and frequency for packaging testing • Impact of different packaging materials and processes on food product quality • Inherent variability of the primary package materials • Maximum sterilisation exposure and tolerance level identified for food products • Application of manual packaging validation versus automated verification • Interactions among manufacturing systems, manual handling, packaging, distribution and storage environments within the food manufacturing facility • Regulatory agency inspections and audit procedures 	
Abilities			<ul style="list-style-type: none"> • Prepare equipment and materials used for packaging quality testing • Prepare real environment and 	<ul style="list-style-type: none"> • Develop internal packaging testing standard operating procedures (SOP) and documentation 	<ul style="list-style-type: none"> • Develop a packaging testing plan to ensure materials maintain the desired level of compliance over time 	

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			<p>conditions that simulate actual use to conduct package performance testing</p> <ul style="list-style-type: none"> • Gather samples of product packaging following a specified plan • Conduct visual inspection test to identify unsealed areas, nonhomogeneous areas and other defects • Conduct routine tests to assess sealing tightness, strength and peeling ability of the packaging • Conduct tests to assess microbial barrier of packaging system • Conduct accelerated aging tests to simulate aging of the packaging up to the expiry date • Examine variations or deviations of a package and between packages • Report packaging testing activities completed, results and key findings • Analyse the influence of packaging technology on the supply chain, food processing and automation 	<ul style="list-style-type: none"> • Implement packaging testing activities according to the set plan and good manufacturing practices (GMP) • Identify the materials and packaging variables that affect the quality of the manufactured product • Specify the packaging equipment and process parameters to be monitored, inspected and controlled • Determine equipment and calibration needed to inspect the quality of packaging • Determine the sampling method for each packaging qualification • Determine the appropriate environment and conditions under which package testing should be performed • Specify measurable acceptance criteria for each test or check being conducted • Check that conduct of tests on packaging is line with GMP and standard protocol • Investigate packaging deviations encountered during execution of testing activities 	<ul style="list-style-type: none"> • Specify the package requirements and characteristics to be tested • Introduce new methods and equipment to perform packaging tests • Lead investigation reports of non-conformity to packaging requirements and standards • Deliver updates to senior stakeholders on overall results and key findings from packaging tests and their implications on final product quality • Evaluate testing reports to identify areas for improvement 	
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