

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

TSC Category	Process Development/Manufacturing Science and Technology					
TSC	Product Improvement					
TSC Description	Analyse technical specifications of nutritional products and identify ways to make improvements					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
			BPM-PST-3012-1.1	BPM-PST-4012-1.1	BPM-PST-5012-1.1	
<b>Knowledge</b>			<ul style="list-style-type: none"> <li>Analyse the technical specifications of nutritional products</li> </ul>	<ul style="list-style-type: none"> <li>Review existing products and identify areas for improvements</li> </ul>	<ul style="list-style-type: none"> <li>Lead product improvements to support business growth</li> </ul>	
<b>Abilities</b>			<ul style="list-style-type: none"> <li>Principles of food science</li> <li>Methods of analysing the components of raw materials used in nutritional manufacturing</li> <li>Methods of analysing the components of nutritional products</li> <li>Types of equipment used to analyse the nutritional components of products or raw materials</li> <li>Current Good Manufacturing Practices (CGMPs)</li> </ul>	<ul style="list-style-type: none"> <li>Types of drivers for changing the specifications of products</li> <li>International food product regulations</li> <li>Nutritionals manufacturing processes</li> <li>Business case development</li> <li>Methods of conducting manufacturing pilots</li> <li>Methods of measuring Return on Investment (ROI)</li> </ul>	<ul style="list-style-type: none"> <li>Business strategies and objectives</li> <li>Factors impacting the costs of developing and manufacturing nutritional products</li> <li>Business implications of product changes and improvements</li> <li>Equipment operating capacity, process capability and other performance indicators and targets</li> </ul>	
			<ul style="list-style-type: none"> <li>Analyse the chemical and nutritional make-up of products</li> <li>Identify chemical and nutritional properties of raw materials and ingredients in nutritional products</li> <li>Propose changes to the technical specifications of nutritional products to meet specified criteria</li> <li>Produce technical reports of findings</li> <li>Support the development and testing of product prototypes</li> </ul>	<ul style="list-style-type: none"> <li>Identify opportunities to improve products in order to enhance sales or efficacy</li> <li>Translate product improvement objectives into tangible technical solutions</li> <li>Conduct analysis of how technical specifications of products may be altered and improved</li> <li>Develop business cases for making improvements to products</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate opportunities to enhance products</li> <li>Assess business and technical viability of improving and changing products</li> <li>Approve business cases for testing and implementation of product improvement initiatives</li> <li>Negotiate with relevant stakeholders to secure resources to support product improvements</li> <li>Initiate pilot test runs of the manufacturing</li> </ul>	

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				<ul style="list-style-type: none"> <li>• Conduct the development and testing of prototypes</li> <li>• Review the manufacturability of the refined products through test runs and pilots of the manufacturing processes</li> <li>• Review alignment of new products with international regulations pertaining to food products</li> <li>• Measure the ROI for product improvements</li> </ul>	<p>processes for new products prior to full scale roll-out</p> <ul style="list-style-type: none"> <li>• Assess regulatory compliance of proposed product optimisation interventions</li> <li>• Evaluate success of product improvement interventions</li> </ul>	
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