



2023-2024

Technical Skills Assessment

Food Science and Processing Technology

Results by Standard

Legend (%)		
0-50%	51-75%	76-100%

Assessment: Food Science and Processing Technology	% Correct 21-22	% Correct 22-23	% Correct 23-24
Number tested: 9			
Program 1: CONTENT STANDARD 1.0: FOOD INDUSTRY AND HISTORICAL DEVELOPMENT	48.00%	61.03%	58.52%
Duty 1: Performance Standard 1.1: Evaluate the Significance and Implications of Changes and Trends	52.00%	57.69%	56.67%
Standard 3: 1.1.3 Identify consumer concerns related to food quality and safety (such as allergens,	50.00%	53.85%	70.37%
Standard 4: 1.1.4 Discuss the economic implications when low-quality and unsafe foods enter the market.	63.33%	64.10%	51.85%
Standard 8: 1.1.8 Identify and explain environmental and safety concerns about the food supply.	45.00%	55.77%	50.00%
Duty 2: Performance Standard 1.2: Investigate Industry Organizations, Groups, and Regulatory Agencies Affecting the Food Products and Processing Industry	40.00%	67.69%	62.22%
Standard 1: 1.2.1 Explain the purposes of organizations that are part of and/or regulate the food	40.00%	53.85%	61.11%
Standard 2: 1.2.2 Determine the relationship between regulatory agencies (i.e., FDA, USDA, CDC, WHO)	40.00%	76.92%	62.96%
Program 2: CONTENT STANDARD 2.0: FOOD SAFETY AND SANITATION	61.63%	69.70%	69.61%
Duty 1: Performance Standard 2.1: Create Sanitation Standard Operating Procedures and Master	56.67%	65.81%	62.96%
Standard 1: 2.1.1 Create Sanitation Standard Operating Procedures (SSOP) for a food processing company.	36.67%	53.85%	55.56%
Standard 2: 2.1.2 Understand Good Manufacturing Practices (GMP) and how they relate to a food	73.33%	79.49%	70.37%
Standard 3: 2.1.3 Create Master Sanitation Schedule (MSS) for a food processing company.	60.00%	64.10%	62.96%
Duty 2: Performance Standard 2.2: Create a Food Safety Plan, Understand the Biological, Chemical, and Physical Hazards Associated with Food Processing and Handling	69.05%	63.00%	70.90%
Standard 1: 2.2.1 Understand and evaluate the different biological hazards (prions, bacteria, viruses,	60.00%	51.92%	80.56%
Standard 2: 2.2.2 Understand and evaluate the different chemical hazards (pesticides, herbicides, allergens, paints, heavy metals, dioxins, PCBs, etc.) that could be present in the raw ingredient through processing and distribution of a food product.	66.67%	71.79%	48.15%
Standard 3: 2.2.3 Understand and evaluate the different physical hazards (metal, plastic, rubber, etc.)	86.67%	69.23%	70.37%

Standard 4: 2.2.4 Identify potential sources of contamination.	67.50%	53.85%	66.67%
Standard 5: 2.2.5 Develop strategies to eliminate or reduce contamination to an acceptable level.	73.33%	79.49%	92.59%
Standard 6: 2.2.6 Discuss current regulatory food safety programs, including HACCP (Hazard Analysis	65.00%	59.62%	66.67%
Duty 3: Performance Standard 2.3: Apply Sanitation Procedures in the Handling, Processing, and Storing	55.79%	78.95%	71.35%
Standard 1: 2.3.1 Evaluate food product handling procedures.	57.50%	61.54%	55.56%
Standard 2: 2.3.2 Explain the importance of microbiological tests (e.g., ATP, equipment swabs,	40.00%	74.36%	62.96%
Standard 3: 2.3.3 Explain the importance of allergen cross-contact and how sanitation affects allergen management.	65.00%	90.38%	83.33%
Standard 4: 2.3.4 Discuss documentation procedures and their importance in a food processing and distribution system.	65.00%	88.46%	77.78%
Standard 5: 2.3.5 Understand how Clean in Place (CIP) and Clean Out of Place (COP) affects overall sanitation of a facility.	53.33%	89.74%	77.78%
Standard 6: 2.3.6 Understand the use of chemical types and applications and how it affects plant sanitation procedures.	53.33%	74.36%	74.07%
Program 3: CONTENT STANDARD 3.0: PERSONAL SAFETY	51.82%	63.64%	70.71%
Duty 1: Performance Standard 3.1: Understand Worker Safety Principles in a Manufacturing Facility	51.82%	63.64%	70.71%
Standard 1: 3.1.1 Outline guidelines for personnel safety in the food products and processing industry	37.50%	44.23%	61.11%
Standard 2: 3.1.2 Perform a safety risk analysis of a manufacturing facility, including behavior based	70.00%	69.23%	77.78%
Standard 4: 3.1.4 Demonstrate the ability to follow safety and operational procedures in a lab setting and	52.50%	78.85%	75.00%
Program 4: CONTENT STANDARD 4.0: THE SCIENCE OF FOOD PRODUCTS	61.67%	55.13%	59.26%
Duty 2: Performance Standard 4.2: Evaluate, Grade, and Classify Processed Food Products	76.67%	53.85%	62.96%
Standard 5: 4.2.5 Interpret and evaluate results of quality assurance tests on food products and examine	76.67%	53.85%	62.96%
Duty 3: Performance Standard 4.3: Understand the Constituents of Food (e.g., Lipids, Proteins,	50.00%	69.23%	55.56%
Standard 2: 4.3.2 Compare and contrast food constituents and their relative value to product taste, appearance, and so forth.	50.00%	69.23%	55.56%
Duty 4: Performance Standard 4.4: Understand and Recognize the Different Additives in Food and	45.00%	50.00%	55.56%
Standard 2: 4.4.2 Describe the purpose of common food additives (CFA).	80.00%	92.31%	88.89%
Standard 3: 4.4.3 Describe how CFAs influence the chemistry of food.	10.00%	7.69%	22.22%
Program 5: CONTENT STANDARD 5.0: FOOD PROCESSING OPERATIONS AND TECHNOLOGY	58.75%	73.08%	61.11%
Duty 1: Performance Standard 5.1: Process Food and Food Products for Sale and Distribution	45.00%	69.23%	66.67%
Standard 1: 5.1.1 Understand principles of raw material/ingredient receiving.	50.00%	53.85%	50.00%
Standard 2: 5.1.2 Create a flow diagram for food production process steps.	40.00%	84.62%	83.33%
Duty 2: Performance Standard 5.2: Preserve Food and Food Products for Sale and Distribution	72.50%	76.92%	55.56%

Standard 1: 5.2.1 Describe factors related to food preservation.	80.00%	89.74%	66.67%
Standard 3: 5.2.3 Preserve foods using various methods and techniques.	50.00%	38.46%	22.22%
Program 6: CONTENT STANDARD 6.0: EXPLORE CAREER OPPORTUNITIES	68.33%	71.79%	72.22%
Duty 1: Performance Standard 6.1: Understand Employment Fields in the Food Science Technology Industry	68.33%	71.79%	72.22%
Standard 1: 6.1.1 Identify potential careers in the food science and processing industry.	56.67%	64.10%	66.67%
Standard 3: 6.1.3 Demonstrate employability skills for a career in the food science and processing industry (e.g., create a resume and cover letter, participate in job interviews).	80.00%	79.49%	77.78%
Program 7: CONTENT STANDARD 7.0: LEADERSHIP TRAINING THROUGH AGRICULTURAL EDUCATION	76.00%	67.69%	71.11%
Duty 1: Performance Standard 7.1: Recognize the Traits of Effective Leaders and Participate in Leadership Training through Involvement in FFA	83.33%	71.79%	66.67%
Standard 5: 7.1.5 Participate in a speech or presentation activity.	83.33%	71.79%	66.67%
Duty 2: Performance Standard 7.2: Understand the Importance of School and Community Awareness	65.00%	61.54%	77.78%
Standard 1: 7.2.1 Participate in a school improvement or community development project.	65.00%	61.54%	77.78%