

## B2 Allergens

**Definition:** An overview of food allergens, including labeling requirements, preventive controls, and societal impact.

**Topic Area TLO:** Discuss the control of allergens in relation to food safety.

**Topic Area ELOs:**

- Explain the risks of allergen exposure.
- Identify major food allergens.
- Describe potential routes of allergen cross-contact.
- Use agency resources to evaluate allergen controls.
- Explain allergen labeling requirements.

Unit 1: Foundations	TLO Behavioral Anchors - not all-inclusive
<p><b>Definition:</b> Food allergens related to food programs.</p> <p><b>TLO:</b> Discuss foundational information related to major food allergens.</p> <p><b>ELOs:</b></p> <ul style="list-style-type: none"> <li>• Define relevant terminology.</li> <li>• Differentiate food allergy from food intolerance.</li> <li>• Discuss the prevalence of food allergy in the United States.</li> <li>• Identify major food allergens as recognized by FDA and USDA.</li> <li>• Give examples of foods deemed major allergens in non-U.S. countries.</li> <li>• Discuss the public health significance of food allergens.</li> <li>• Describe the symptoms of an allergic reaction.</li> <li>• Describe the treatment of an allergic reaction.</li> </ul>	<ul style="list-style-type: none"> <li>• The regulator has a knowledge or awareness of the existence of allergens.</li> <li>• The regulator can define what an allergen is.</li> <li>• The regulator has a knowledge or awareness of regulations tied to allergens.</li> <li>• The regulator has a knowledge or awareness that allergens have the potential to cause a health hazard.</li> <li>• The regulator can give examples of some of the major allergens:             <ul style="list-style-type: none"> <li>a. List the major food allergens</li> <li>b. 8 common allergens</li> </ul> </li> <li>• The regulator has a knowledge or awareness of regulations related to allergens:             <ul style="list-style-type: none"> <li>a. Name the regulation</li> <li>b. Undeclared allergens                 <ul style="list-style-type: none"> <li>▪ Recalls</li> </ul> </li> <li>c. Animal feed is exempt</li> <li>d. Labeling requirements</li> </ul> </li> <li>• The regulator can discuss the importance of regulating allergens.</li> <li>• The regulator has a knowledge or awareness of routes of exposure for allergens:             <ul style="list-style-type: none"> <li>a. Hygiene hypothesis</li> </ul> </li> </ul>

<ul style="list-style-type: none"> <li>• Discuss allergens in relation to recalls.</li> </ul>	
<p><b>Unit 2: Labeling Requirements</b></p>	<p><b>TLO Behavioral Anchors - not all-inclusive</b></p>
<p><b>Definition:</b> Food labeling requirements pertaining to major food allergens.</p> <p><b>TLO:</b> Discuss allergen labeling requirements.</p> <p><b>ELOs:</b></p> <ul style="list-style-type: none"> <li>• Discuss the purpose of the Food Allergen Labeling and Consumer Protection Act (FALCPA).</li> <li>• Give examples of allergen labeling options under FALCPA.</li> <li>• Give examples of scientific terms vs. plain language.</li> <li>• Give examples of allergen labeling for tree nuts, fish, and crustacean shellfish.</li> <li>• Discuss the placement of allergen provisions on food labels.</li> <li>• Discuss the use of allergen advisory (“may contain”) statements.</li> </ul>	<ul style="list-style-type: none"> <li>• The regulator has knowledge or awareness that allergens must be declared on the label.</li> <li>• The regulator has a knowledge or awareness of which allergens must be declared on the label:             <ol style="list-style-type: none"> <li>a. Big 8 (USA)</li> </ol> </li> <li>• The regulator has a knowledge or awareness of different allergen labeling options.</li> </ul>
<p><b>Unit 3: FSMA</b></p>	<p><b>TLO Behavioral Anchors - not all-inclusive</b></p>
<p><b>Definition:</b> The provisions of FSMA specifically related to major allergens.</p> <p><b>TLO:</b> Discuss the allergen provisions of the Food Safety Modernization Act (FSMA).</p> <p><b>ELOs:</b></p>	<ul style="list-style-type: none"> <li>• The regulator has a knowledge or awareness that because of FSMA, allergens are considered health hazards.</li> </ul>

<ul style="list-style-type: none"> <li>• Discuss “adulterant” in relation to allergens under FSMA.</li> <li>• Discuss “hazard” in relation to allergens under FSMA.</li> <li>• Define “food allergen cross-contact”.</li> </ul>	
<p><b>Unit 4: Control Measures</b></p>	<p><b>TLO Behavioral Anchors - not all-inclusive</b></p>
<p><b>Definition:</b> Measures by industry to prevent allergen cross-contamination.</p> <p><b>TLO:</b> Discuss control measures to prevent allergen cross-contact.</p> <p><b>ELOs:</b></p> <ul style="list-style-type: none"> <li>• Define “allergen threshold”.</li> <li>• Define “dedicated” in relation to allergen cross-contact.</li> <li>• Discuss cleaning methods to remove allergen residues.</li> <li>• Discuss the role of product changeover in relation to allergen cross-contact.</li> <li>• Discuss the scheduling of processing runs in relation to allergen cross-contact.</li> </ul>	<ul style="list-style-type: none"> <li>• The regulator has a knowledge or awareness of various control measures.</li> <li>• The regulator has a knowledge or awareness of control measures utilized to prevent cross-contact.</li> <li>• The regulator can name several control measures:             <ol style="list-style-type: none"> <li>a. Cleaning</li> <li>b. Sanitizing</li> <li>c. Physical separation</li> <li>d. Dedicated equipment</li> <li>e. Labeling</li> <li>f. Colored coding</li> <li>g. Dedicated facility</li> <li>h. Gloves</li> <li>i. Air flow controls</li> <li>j. Training</li> </ol> </li> <li>• The regulator can explain how control measures prevent cross-contact.</li> <li>• The regulator can recognize when control measures are not properly implemented.</li> </ul>