

## HACCP Model for Dried Egg Products (Heat Treated Shelf Stable Processing Category)

The United States Department of Agriculture (USDA) published the [Pathogen Reduction/Hazard Analysis and Critical Control Point \(HACCP\) Systems Final Rule](#) (PR/HACCP rule) in July 1996, mandating all USDA inspected meat and poultry establishments implement a HACCP system. HACCP is a systematic and scientific method of process control for the production of safe food products. The HACCP regulations ([9 CFR Part 417](#)) requires meat and poultry establishments to develop and implement a system of controls designed to improve the safety of their products. The HACCP models' focus is on product safety, not product quality characteristics.

On October 29, 2020, USDA published a [final rule](#) that updated the egg products inspection regulations. USDA amended the egg products inspection regulations to require official establishments that process egg products to develop and implement Sanitation Standard Operating Procedures (Sanitation SOPs) to meet other sanitation requirements consistent with USDA's meat and poultry regulations (effective date: October 29, 2021) and develop and implement HACCP Systems (effective date: October 31, 2022).

With the PR/HACCP rule, the Food Safety and Inspection Service (FSIS) made available a guidebook for the preparation of HACCP plans and a generic model for each food processing category defined in the regulation ([9 CFR 417.2\(b\)\(1\)](#)). The guidebook and the generic models have been revised since their initial publication to be consistent with current science and policy. FSIS recommends you use the updated [Guidebook for the Preparation of HACCP Plans](#) when developing an establishment-specific HACCP plan.

Generic models serve as useful examples of how to meet the regulatory requirements. Each model represents a food processing category. Each processing category may contain numerous products. Therefore, each single model represents a category of products and, as such, the models do not demonstrate unique products or novel processes. The generic models are not intended to be used as is. Establishments are to tailor the model(s) to fit their establishment's operation.

This generic HACCP model illustrates the Heat Treated Shelf Stable processing category with a dried egg product. The model's critical control points (CCPs) do not necessarily apply to all egg products operations or products. Products or operations may require fewer or more CCPs depending on the operation. The flow diagram demonstrates a general production process and should be modified to reflect the processes used at the establishment. The food safety critical limits selected must come from scientific documents or other reliable sources and meet 9 CFR 417 regulations. This model includes references for guidance on the selection of critical limits.

The records produced while documenting a HACCP plan, including all documentation used to support the hazard analysis, are HACCP decision making records ([9 CFR 417.5\(a\)](#)). Ensure you maintain the documents produced while developing a HACCP plan.

For further assistance with developing HACCP plans, see the [Egg Products Hazards and Controls Guide](#), [FSIS Food Safety Guideline for Egg Products](#), [Guidebook for the Preparation of HACCP Plans](#), and the guidance materials available on the FSIS [HACCP Guidance](#) webpage. Visit the [State HACCP Contacts and Coordinators](#) webpage for a list of contacts who provide technical advice, assistance, resources, and conduct activities to support HACCP implementation in small and very small plants.<sup>1</sup>

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<sup>1</sup> This information is best suited for small and very small establishments seeking assistance in understanding the requirements in [Title 9 Code of Federal Regulations \(9 CFR\) Part 417](#). The HACCP model is for demonstration purposes only. The model does not represent all requirements that must be met. Establishments are required to develop HACCP plans specific to their facilities, production practices, and products.

## Step 3a: EXAMPLE PRODUCT DESCRIPTION<sup>2</sup>

### Process/Product Name(s)/HACCP Category

<b>Process/Product Type Name</b>	Shelf Stable Dried Egg Products (includes spray-dried whole egg, spray-dried egg white, spray-dried egg yolk, spray-dried yolk, and whole egg blends products)
<b>Important product characteristics</b>	None
<b>How it is to be used<sup>3</sup></b>	Ingredient for further processing, Ready to Eat (RTE) product at restaurants and institutions, retail RTE products
<b>Packaging (durability and storage conditions)</b>	Wax coated totes, plastic lined totes, plastic pouches, cartons, boxes, etc.
<b>Shelf life and at what temperature<sup>4</sup></b>	365 days unopened and at room temperature
<b>Where it will be sold (specify intended consumers, especially at-risk populations<sup>5</sup>)</b>	Retail, Restaurants, Institutions, Commercial outlets
<b>Labeling instructions and requirements</b>	Product name, inspection legend and establishment number, handling statement, net weight statement, ingredients statement, allergen statement, address, and nutritional facts <sup>6</sup>
<b>What special distribution controls are required</b>	None

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<sup>2</sup> Prior to developing the HACCP plan, please read the FSIS [Guidebook for the Preparation of HACCP Plans](#) for detailed descriptions of the worksheets and hazard analysis. The FSIS [Guidebook for the Preparation of HACCP Plans](#) and the generic HACCP models are intended for small and very small establishments seeking assistance in understanding the requirements in [Title 9 Code of Federal Regulations \(9 CFR\) Part 417](#). The HACCP models are for demonstration purposes only. The models do not represent requirements that must be met. establishments are required to develop HACCP plans specific to their facilities, production practices, and products.

<sup>3</sup> The intended use or consumer of the product must be identified in accordance with [9 CFR 417.2\(a\)\(2\)](#). Identifying the product's intended use in the product description is one way to meet the regulatory requirements specific to [9 CFR 417.2\(a\)\(2\)](#).

<sup>4</sup> Each establishment's products may have their own defined shelf life. A specific shelf life may not be applicable for intermediate products.

<sup>5</sup> At-risk populations include young children, the elderly and immunocompromised persons.

<sup>6</sup> See the [FSIS Labeling Overview and Generic Label Approval](#) guideline for information on required labeling features. Not all labeling features are required for products moving between official establishments under company control.

**Step 3b: EXAMPLE LIST OF PRODUCT INGREDIENTS AND INCOMING MATERIALS<sup>7</sup>**

**Process/Product Name(s)/HACCP Category:**

<b>Eggs/Egg Products</b>	Spray-Dried Whole egg, egg yolk, egg whites
<b>Non-egg food ingredients<sup>8</sup></b>	Glucose oxidase, microbial culture, corn syrup, soy flour, other food-grade ingredients Generally Recognized as Safe (GRAS)
<b>Antimicrobial Interventions</b>	N/A
<b>Packaging Material</b>	Wax coated totes, boxes, cartons, plastic pouches
<b>Restricted Ingredients/Allergens</b>	Silicon dioxide and Sodium aluminosilicate
<b>Other</b>	

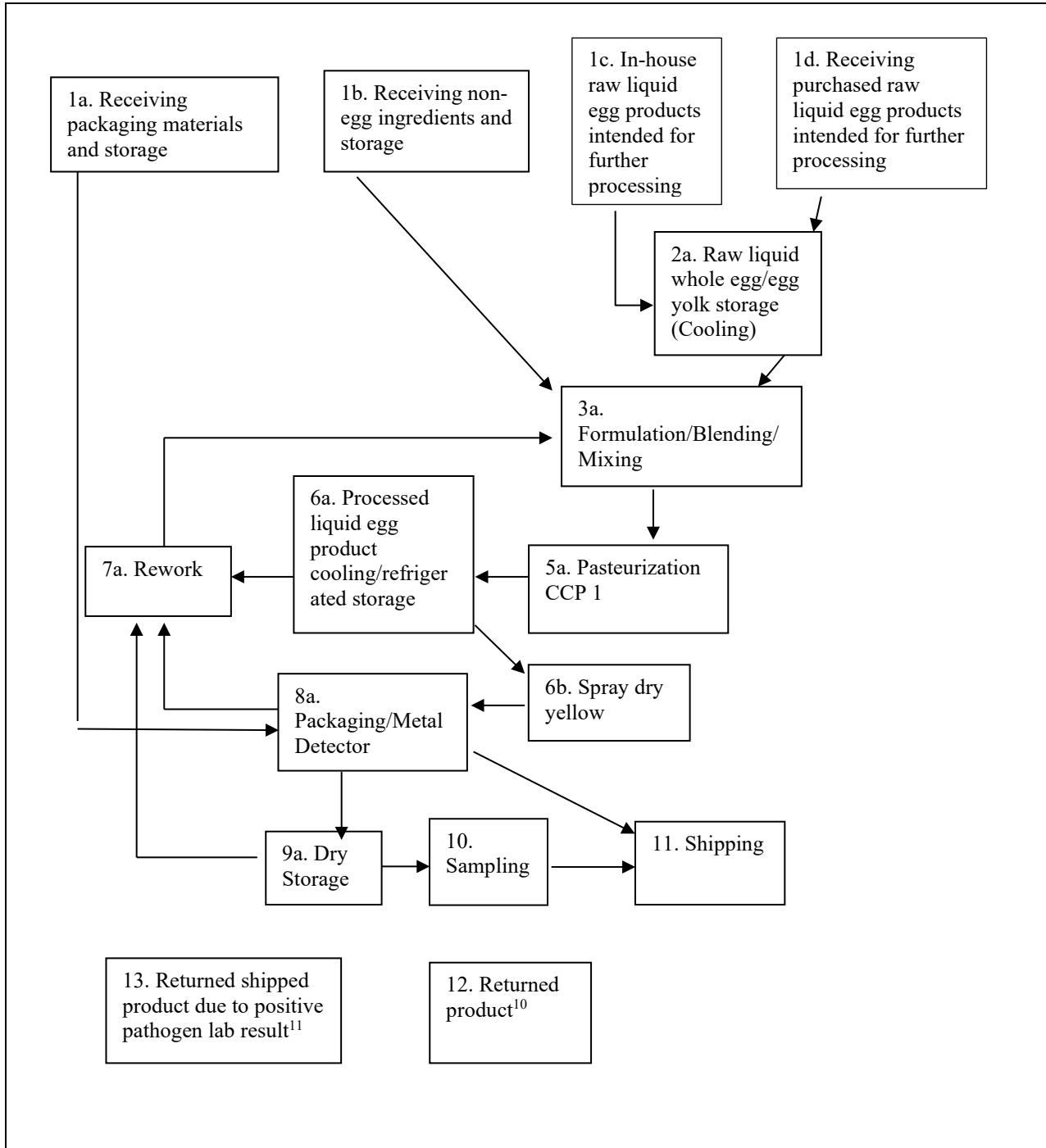
DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

<sup>7</sup> List all egg, non-egg ingredients, restricted ingredients (for example, nitrites), processing aids, and packaging material used in production of this product. This is important to help identify any special ingredients or processes to address in the HACCP plan. See [the FSIS Compliance Guideline Allergens and Ingredients of Public Health Concern: Identification, Prevention and Control, and Declaration through Labeling](#) for detailed information on allergens. To review restrictions on the use of nitrite and sodium ascorbate or sodium erythorbate, see [9 CFR 424.22\(b\)](#).

<sup>8</sup> FSIS and the Food and Drug Administration (FDA) have a memorandum of understanding (MOU) that establishes the working relationship followed when responding to notifications for the use of food additives (including ingredients) intended for use in the production of FSIS regulated products. FSIS determines the suitability of the use of food ingredients used in the production of meat, poultry, and egg products. FSIS consults, as necessary, with FDA on the requirements under the [Federal Food Drug and Cosmetic Act](#), and its implementing regulations. See [FSIS Directive 7120.1, Safe and Suitable Ingredients Used in the Production of Meat, Poultry, and Egg Products](#) for the list of suitable ingredients.

### Step 4: EXAMPLE PROCESS FLOW CHART<sup>9</sup>

Process/Product Name(s)/HACCP Category: Heat Treated Shelf Stable Dried Egg Product (Whole Egg/Egg Yolk)



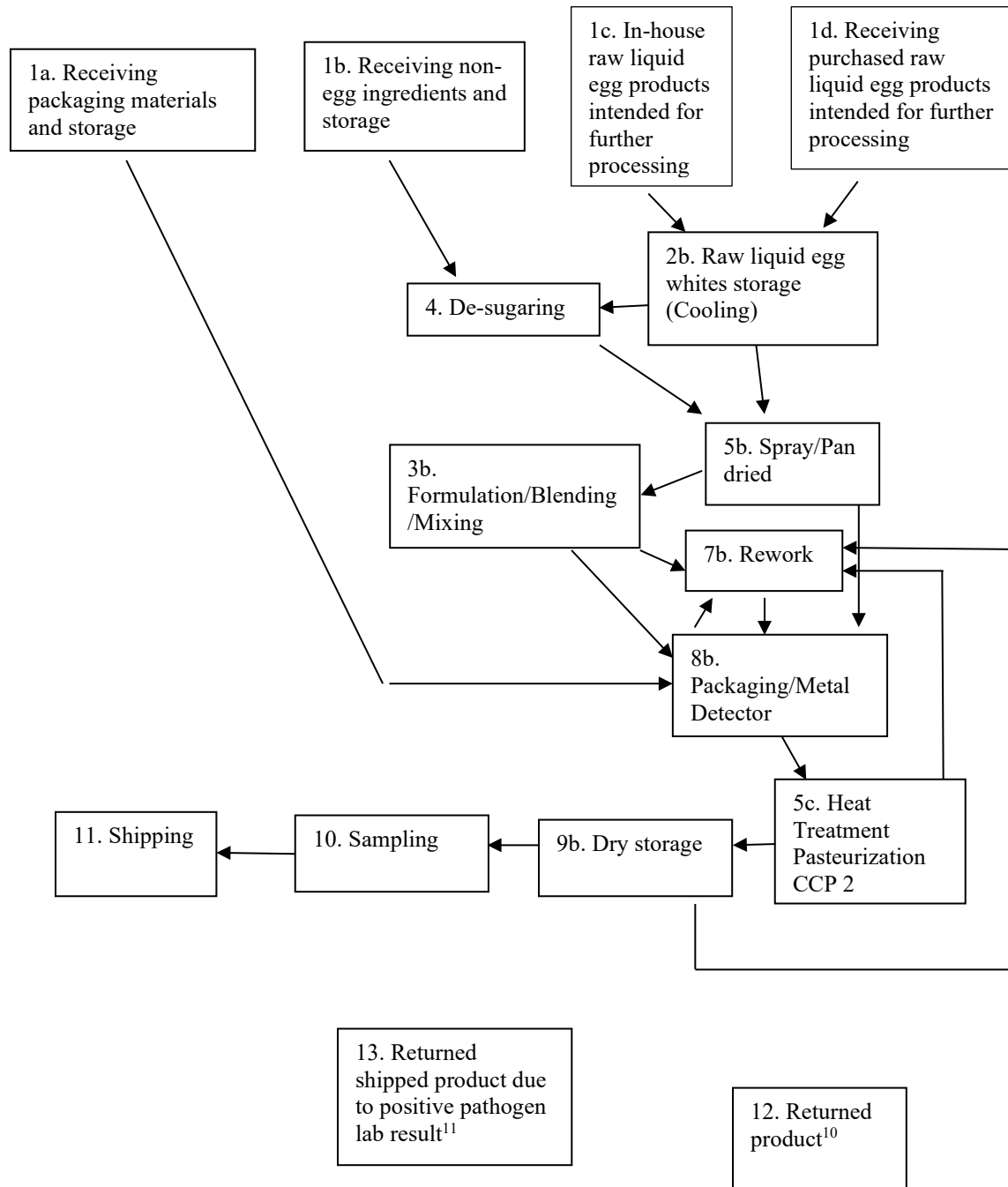
<sup>9</sup> This is an example flow diagram. Establishments' flow diagrams for the same product may be different. Establishments determine which steps are included in their process. The steps must represent all relevant hazards in the hazard analysis.

<sup>10</sup> The Returned Product step (12) is shown as not connected to another process step. Returned product may re-enter the production system at different process steps depending on condition or problem. Returned product may be re-processed, discarded, etc.

<sup>11</sup> Returned shipped product due to positive pathogen lab result may re-enter the production system at different process steps depending on the establishment's evaluation of any sanitation, misbranding, or food safety hazards related to that finding. Returned product may be reprocessed or discarded.

### Step 4: EXAMPLE PROCESS FLOW CHART<sup>9</sup>

Process/Product Name(s)/HACCP Category: Heat Treated Shelf Stable Dried Egg Product (Egg Whites)



**Principle 1: HAZARD ANALYSIS<sup>11</sup>**

**Process/Product Name(s)/HACCP Category:**

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Ingredient/ Process Step	Potential Hazards (Introduced or Controlled) at This Step	Is the Potential Food Safety Hazard Reasonably Likely to Occur (RLTO)? (Yes or No)	Justification / Basis for Decision	If Yes in Column 3, (RLTO), What Control Measures Can Be Applied to Prevent, Eliminate, or Reduce the Hazard to Acceptable Levels	Is This Step a Critical Control Point (CCP)?
<b>1a. Packaging Materials Receiving and Storage</b>	B: Contamination with pathogens (e.g., <i>Salmonella</i> )	No	Procedure to protect packaging materials from pests and environmental contamination.		No
	C: Non-food grade materials	No	Letter of Guarantee (LOG) for packaging materials ( <a href="#">9 CFR 590.435</a> ) and materials are safely stored.		
	P: Foreign material (e.g., metal, plastic)	No	Foreign material SOP with visual evaluation for foreign material.  Protecting packaging materials from environment.		
<b>1b. Non-egg Ingredients Receiving and Storage</b>	B: Contamination with pathogens (e.g., <i>Salmonella</i> )	No	Procedure to protect non-egg materials from pests and environmental contamination that ensures product integrity and sanitary conditions are maintained.		

	C: Allergens	No	LOG, approved supplier program, proper storage/handling/separate equipment/tools to prevent cross-contamination of allergen-free products. Allergen properly identified in ingredients statement on finished product label.		
	P: Foreign material (e.g., metal, plastic)	No	Foreign material SOP with visual evaluation for foreign material.		
<b>1c. In-house Raw Liquid Egg Products Intended for Further Processing</b>	B: Contamination/outgrowth of pathogens (e.g., <i>Salmonella</i> )	Yes	Maintain product at Safe Harbor holding time and temperature combination to minimize pathogen outgrowth ( <a href="#">Table 2 – Cooling Operations within FSIS Food Safety Guideline for Egg Products</a> )	Product subject to pasteurization at a later step to achieve lethality. Controlled at CCP 1.	No
	C: Residues, pesticides, cleaners, antibiotics	No	Residue Control Program or approved supplier program under Raw Non-Intact HACCP plan. Sanitation SOPs address proper cleaning, sanitation, and use of cleaning chemicals/compounds.		
	P: None	No			

<b>1d. Receiving Purchased Raw Liquid Egg Products Intended for Further Processing</b>	B: Contamination/outgrowth of pathogens (e.g., <i>Salmonella</i> )	Yes	Improper product temperature during transport may lead to pathogen growth. Maintain product at Safe Harbor holding time and temperature combination to minimize pathogen growth ( <a href="#">Table 2 – Cooling Operations within FSIS Food Safety Guideline for Egg Products</a> ). Product properly handled prior to acceptance (e.g., LOG, product temperature records, bill of lading).	Product subject to pasteurization at a later step to achieve lethality. Controlled at CCP 1.	No
	C: Residues, cleaners, pesticides, antibiotics	No	Prerequisite Supplier Residue Control Program, LOG that materials are free of hazards.		
	P: Foreign materials (e.g., eggshell fragments)	No	Plant records indicate little or no occurrence of foreign materials. Supplier controls, LOG that materials are free of hazards when received.		
<b>2a. Raw Liquid Whole Egg/Egg Yolk Product Storage (Cooling)</b>	B: Contamination/outgrowth of pathogens (e.g., <i>Salmonella</i> )	Yes	Improper product temperature during storage may lead to pathogen growth. Maintain product at Safe Harbor holding time and temperature combination to minimize pathogen growth ( <a href="#">Table 2 – Cooling/Freezing</a>	Product subject to pasteurization at a later step to achieve lethality. Controlled at CCP 1.	No

			<a href="#">Operations within FSIS Food Safety Guideline for Egg Products</a> ).		
	C: None				
	P: None				
<b>2b. Raw Liquid Egg White Product Storage (Cooling)</b>	B: Contamination/outgrowth of pathogens (e.g., <i>Salmonella</i> )	Yes	Improper product temperature during storage may lead to pathogen growth. Maintain product at Safe Harbor holding time and temperature combination to minimize pathogen growth ( <a href="#">Table 2 – Cooling/Freezing Operations within FSIS Food Safety Guideline for Egg Products</a> ).	Product subject to heat treatment at a later step to achieve lethality. Controlled at CCP 2.	No
	C: None				
	P: None				
<b>3a. Formulation/Blending/Mixing (Whole Egg/Egg Yolk)</b>	B: Contamination/outgrowth of pathogens (e.g., <i>Salmonella</i> )	No	Maintain product at time/temperatures that minimize pathogen growth. Maintaining product at Safe Harbor holding time and temperature combination (specify combination) to minimize pathogen growth ( <a href="#">Table 2 – Cooling/Freezing Operations within FSIS Food Safety Guideline for Egg Products</a> ).		
			Sanitation SOPs address proper cleaning and		

			<p>sanitation of room and equipment.</p> <p>Good Manufacturing Practices (GMPs) and proper processing procedures ensure proper identification, storage, and weighing of ingredients.</p>		
	C: Cross-contamination with allergens	No	<p>Allergens properly identified in ingredients statement on finished product label.</p> <p>Products containing allergens are processed and stored separately from allergen-free products.</p> <p>Written Allergen Program to monitor allergens, labels, and prevent cross-contamination.</p>		
	P: None				
<b>3b. Formulation/Blending/Mixing (Egg Whites)</b>	B: Contamination/outgrowth of pathogens (e.g., <i>Salmonella</i> )	No	<p>Maintain product at time/temperatures that minimize pathogen growth. Maintaining product at Safe Harbor holding time and temperature combination (specify combination) to minimize pathogen growth (<a href="#">Table 2 – Cooling/Freezing Operations within FSIS Food</a></p>		

			<p><a href="#">Safety Guideline for Egg Products</a>).</p> <p>Sanitation SOPs address proper cleaning and sanitation of room and equipment.</p> <p>GMPs and proper processing procedures ensure proper identification, storage, and weighing of ingredients.</p>		
	C: Cross-contamination with allergens	No	<p>Allergens properly identified in ingredients statement on finished product label.</p> <p>Products containing allergens are processed and stored separately from allergen-free products.</p> <p>Written Allergen Program to monitor allergens, labels, and prevent cross-contamination.</p>		
	P: None				
<b>4. Desugaring (Egg Whites)</b>	B: Pathogen cross-contamination from culture	No	<p>Ingredients are acceptable under conditions of use (e.g., Letters of Guarantee – LOG).</p> <p>GMPs and proper processing procedures ensure proper identification, storage, and</p>		

			weighing of ingredients.		
	C: None				
	P: None				
<b>5a. Pasteurization</b>	B. Pathogens (e.g., <i>Salmonella</i> , <i>Listeria monocytogenes</i> (Lm))	Yes	Improper pasteurization could lead to survival of <i>Salmonella</i> or other pathogens. Salted or sugared egg products may require higher pasteurization times and temperatures.	Monitor time and temperature to ensure proper pasteurization of product is attained. CCP 1 Pasteurization Temperature Log.  Maintain product at Safe Harbor holding time and temperature combination (specify combination) to achieve required lethality. Example: Pasteurize at 142°F for 4.46 minutes (see <a href="#">Appendix III: Pasteurization Time and Temperature Tables within FSIS Food Safety Guideline for Egg Products</a> ).	Yes CCP 1
	C: None				
	P: Foreign material, plastic, rubber, metal (e.g., gaskets)	No	Pre-operational inspections, implementing proper sanitation and maintenance of equipment (Sanitation		

			SOPs).		
<b>5b. Spray/Pan Dried Egg Whites</b>	B. Contamination/outgrowth of pathogens (e.g., <i>Salmonella</i> , <i>Lm</i> )	Yes	Product subject to heat treatment at a later step to achieve lethality.	Controlled at CCP 2	No
	C: Sanitizer residues	No	Low occurrence as sanitation procedures address proper cleaning and sanitation of equipment.		
	P: Foreign material, metal contamination	No	Pre-operational inspections, implementing proper sanitation and maintenance of equipment (Sanitation SOPs).		
<b>5c. Heat Treatment of Egg Whites</b>	B. Pathogens (e.g., <i>Salmonella</i> , <i>Lm</i> )	Yes	<p>Improper pasteurization could lead to survival of <i>Salmonella</i> or other pathogens. Percent moisture may impact the number of days to achieve pathogen lethality.</p> <p>Sanitation SOPs address proper cleaning and sanitation of room and equipment.</p>	<p>Measure percent (%) moisture of product before pasteurization. Monitor time and temperature to ensure proper pasteurization of product is attained. CCP 2 Hot Room Temperature Log.</p> <p>Maintain product at Safe Harbor number of days and temperature based on percent (%) moisture (specify combination) to achieve required lethality. 6% moisture held for 18 days at 129.2°F to meet</p>	Yes CCP 2

				minimum lethality of 5.7 log <sub>10</sub> of <i>Salmonella</i> (See <a href="#">Table 4 within FSIS Food Safety Guideline for Egg Products</a> ).	
	C: None				
	P: None				
<b>6a. Processed Liquid Egg Product Cooling/Refrigerated Storage</b>	B: Outgrowth of pathogens	No	Improper product handling and subsequent temperature abuse during storage may lead to pathogen growth.  Maintain product at Safe Harbor holding time and temperature combination to minimize pathogen growth ( <a href="#">Table 2 – Cooling/Freezing Operations within FSIS Food Safety Guideline for Egg Products</a> ).		
	C: Allergens	No	Proper sanitation and maintenance of equipment.  Written Allergen Program to monitor allergens, labels, and prevent cross-contamination.		
	P: None				
<b>6b. Spray Dried Whole Egg/Yolks Egg Products</b>	B. Potential for contamination with pathogens (e.g., <i>Salmonella</i> , <i>Lm</i> )	No	Proper pasteurization of product achieves lethality of liquid egg product.		
	C: Sanitizer residues	No	Low occurrence as sanitation procedures address proper		

			cleaning and sanitation of equipment.		
	P: Foreign material, metal contamination	No	Pre-operational inspections, implementing proper sanitation and maintenance of equipment (Sanitation SOPs).		
<b>7a. Rework of Spray Dried Whole Egg/Egg Yolk Products</b>	B: Outgrowth of pathogens (e.g., <i>Salmonella</i> )	No	Reinspection SOP implemented before reworking product. Sanitation SOPs, GMPs, SOPs address proper storage conditions, product handling, and prevent the adulteration of product.		
	C: Allergens	No	Written Allergen Program to monitor allergens, labels, and prevent cross-contamination.		
	P: None				
<b>7b. Rework Dried Egg Whites</b>	B: Outgrowth of pathogens (e.g., <i>Salmonella</i> )	No	Reinspection SOP implemented before reworking product. Sanitation SOPs, GMPs, SOPs address proper storage conditions, product handling, and prevent the adulteration of product.		
	C: Allergens	No	Written Allergen Program to monitor allergens, labels, and prevent cross-contamination.		
	P: None				
<b>8a. Packaging</b>	B: Presence of	No	Proper sanitation of		

<b>of Dried Whole Egg/Egg Yolks</b>	pathogens in post lethality exposed RTE products at time of packaging (e.g., <i>Salmonella, Lm</i> )		<p>packaging equipment (e.g., spray nozzles) and implementation of Sanitation SOPs.</p> <p>Good employee hygiene and product handling procedures.</p> <p>Maintenance of packaging equipment and proper sealing of finished product containers.</p>		
	C: Allergens	No	Written Allergen Program to monitor allergens, labels, and prevent cross-contamination.		
	P: Foreign material, metal contamination, plastic fragments	No	Written Prerequisite Program for metal detection for operating and monitoring metal detection equipment at end of packaging line prior to boxing. Plant records indicate very low incidence of metal contamination indicating that metal contamination is not a hazard RLTO.		
<b>8b. Packaging of Dried Egg Whites</b>	B: Presence of pathogens in post lethality exposed RTE products at time of packaging (e.g., <i>Salmonella, Lm</i> )	No	<p>Proper sanitation of packaging equipment (e.g., spray nozzles) and implementation of Sanitation SOPs.</p> <p>Good employee hygiene and product handling procedures.</p> <p>Maintenance of packaging equipment and proper sealing of finished product</p>		

			containers.		
	C: Allergens	No	Written Allergen Program to monitor allergens, labels, and prevent cross-contamination.		
	P: Foreign material, metal contamination, plastic fragments	No	Written Prerequisite Program for metal detection for operating and monitoring metal detection equipment at end of packaging line prior to boxing. Plant records indicate very low incidence of metal contamination indicating that metal contamination is not a hazard RLTO.		
<b>9a. Dry Storage of Sprayed Dried Whole Egg/Egg Yolks</b>	B: None				
	C: None				
	P: None				
<b>9b. Dry Storage of Dried Egg White Products</b>	B: None				
	C: None				
	P: None				
<b>10. Sampling</b>	B: Contamination with pathogens (e.g., <i>Salmonella, Lm</i> )	No	Improper employee hygiene and product handling practices and environment contamination may lead to introduction of bacterial contamination.  Good employee hygiene and		

			<p>product handling procedures during sampling procedures along with proper sealing of finished product containers to protect product from exposure to environmental contamination.</p> <p>Product Lab Sampling SOP for pathogens to ensure compliance with <a href="#">9 CFR 590.580</a> requirements.</p>		
	C: None				
	P: None				
<b>11. Shipping</b>	B: None				
	C: None				
	P: None				
<b>12. Returned Product</b>	B: Pathogens	No	<p>Reinspection SOP implemented before accepting returned product (<a href="#">9 CFR 590.430</a>). Persons or business returning the product must demonstrate the product was stored under sanitary conditions. When such assurance is not available, returned product is rejected or destroyed. Opened packages are not accepted due to potential exposure to pathogens, chemicals, or foreign material. Exterior of sealed packages are cleaned before</p>		

			opening. Accepted product enters the appropriate step of the production system based on findings of product evaluation. Notify FSIS personnel when returned product has been accepted.		
	C: None				
	P: None				
<b>13. Returned Shipped Product Due to Positive Pathogen Lab Result</b>	B: Pathogens (e.g., <i>Salmonella, Lm</i> )	Yes	Reinspection SOP implemented before accepting returned product. Persons or business returning the product must demonstrate the product was stored under sanitary conditions. When such assurance is not available, returned product is rejected or destroyed. Opened packages are not accepted due to potential exposure to pathogens or foreign material. Exterior of sealed packages are cleaned before opening. Accepted product enters the appropriate step of the production system based on findings of product evaluation. Notify FSIS personnel when returned product has been accepted.	Product subject to pasteurization or heat treatment to achieve lethality. Controlled at CCP 1 (Dried Whole Eggs/Yolks) Controlled at CCP 2 (Dried Egg Whites)	No
	C: None				

	P: None				
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DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

**Example HACCP PLAN<sup>1</sup>**

**Process/Product Name(s)/HACCP Category:**

HACCP Plan									
CCP	Significant Hazard(s)	Critical Limits	Monitoring				Corrective Action	Verification	Records
			What	How	Frequency	Who			
CCP 1 Pasteurization	B: Pathogens (e.g., <i>Salmonella</i> , <i>Lm</i> )	Pasteurize plain whole egg at 142°F for 4.46 minutes to align with the Safe Harbor holding time and temperature combination to minimize pathogen outgrowth dependent on product.  <a href="#">(Appendix III: Pasteurization Time and Temperature Tables within FSIS Food Safety Guideline for Egg Products)</a>	Product temperature and holding time/flow rate is recorded via pasteurization recording chart on continuous monitoring log.	An employee will review records hourly from pasteurization recording chart on continuous monitoring log sheet for each pasteurization run.  Record results on Pasteurization Temperature CCP Form.	Continuous for every pasteurization run.	Designee	If a deviation from a critical limit occurs, the supervisor will:  1. Hold product until appropriate disposition is taken (no product injurious to health will be shipped into commerce). 2. Determine and eliminate the cause of the deviation. 3. Bring the CCP under control. 4. Take measures to prevent recurrence ( <a href="#">9 CFR 417.3</a> ).	Once per week, a supervisor will directly observe the monitoring activity, conduct the records review.  Once per quarter, a supervisor or designee calibrates pasteurization thermometers per manufacturer's instructions.  Once daily, a supervisor or designee conducts pasteurizer manual flow rate checks (e.g., calculating holding time).	Pasteurization Temperature CCP Form  Thermometer Calibration Log  Verification Form  Corrective Action Form  Pre-Shipment Form

**Example HACCP PLAN<sup>2</sup>**

**Process/Product Name(s)/HACCP Category:**

HACCP Plan									
CCP	Significant Hazard(s)	Critical Limits	Monitoring				Corrective Action	Verificati on	Records
			What	How	Frequency	Who			
CCP 2 Heat Treatment of Powdered Egg Whites	B: Pathogens (e.g., <i>Salmonella, Lm</i> )	Maintain product at Safe Harbor number of days and temperature (specify combination) to achieve required lethality  6% moisture held for 18 days at 129.2°F to meet minimum lethality of 5.7 log <sub>10</sub> of Salmonella  (See <a href="#">Table 4 within FSIS Food Safety Guideline for Egg Products</a> ).	Hot room temperature and time is recorded via hot room recording chart.	An employee will record heat treatment time and monitor hot room temperature with a calibrated thermometer during pasteurization of egg whites.  Results recorded on Hot Room Temperature CCP Form.	Daily for designated timeframe for spray dried or pan dried product lot	Designee	If a deviation from a critical limit occurs, the supervisor will:  1. Hold product until appropriate disposition is taken (no product injurious to health will be shipped into commerce). 2. Determine and eliminate the cause of the deviation. 3. Bring the CCP under control. 4. Take measures to prevent recurrence ( <a href="#">9 CFR 417.3</a> ).	Once per week, a supervisor will directly observe the monitoring activity, conduct the records review. Once per week, a supervisor or designee calibrates thermometers per manufacturer's instructions.	Hot Room Temperature CCP Form  Thermometer Calibration Log  Verification Form  Thermometer Calibration Log  Corrective Action Form  Pre-Shipment Form