HACCP Analysis of Ready to Eat Chicken Fried Rice

Nathan Reesman
Dr. Taejo Kim

University of Wisconsin-Stout

Hazard Analysis and Determination of CCP's

Ingredient/ Processing step		Identify potential food safety hazards introduced, controlled or enhanced at this step	Is the potential food safety hazard significant?	Justification for decision	What control measure(s) can be applied to prevent the significant hazard?	Is this a critical control point (CCP)?
Receival (Fresh and Frozen)	B	*Microbes (Salmonella, E. Coli, Listeria, Staphylococcus, B. Cereus)*	yes	When receiving product outside of the proper temperature, there is an increased risk of bacterial contamination	Temperature control Receiving from approved suppliers	YES CCP1
Storage of Ingredients (Fresh and Frozen)	B	*Microbes (Salmonella, E. Coli, Listeria, Staphylococcus, B. Cereus)*	yes	Storing Ingredients outside of the set temperature can lead to microbial spoilage and contamination	Temperature control	YES CCP2
Cooking Rice	B	Microbes (Salmonella, E. Coli, Listeria, Staphylococcus, B. Cereus)	Yes	Cooked Rice is a perfect growing medium for B. Cereus, so proper temperature control of the cooked product is required	Temperature control	YES CCP3
Eggs Cooking	B	*Microbes (Salmonella, E. Coli, Listeria, Staphylococcus, B. Cereus)*	Yes	Raw eggs often contain salmonella spp. Ensuring the bacteria is reduced to a safe level is essential	Temperature Control	YES CCP4
Chicken / Cutting	P	Metal Shavings	Yes	Metal shavings from the blades used to cut the chicken may end up in final product	Daily Blade checks Magnet Usage X Ray Product	YES CCP5
Chicken / Frying	B	*Microbes (Salmonella, E. Coli, Listeria, Staphylococcus, B. Cereus)*	Yes	Raw chicken often contain salmonella spp. Ensuring the bacteria is reduced to a safe level is essential	Temperature Control	Yes CCP6
Package and Label	B	*Microbes (Salmonella, E. Coli, Listeria, Staphylococcus, B. Cereus)*	Yes	Bacteria that survive cold environments well (Listeria Mono.) require high cooking temperatures to kill	Ensure proper labeling design, indicating cooking instructions	YES CCP7
	C	Food Allergens (Egg, soy, Sesame)	Yes	Potential food allergens are included in the ingredients of this product	Ensure proper labeling design, indicating allergens	

Product Description/Intended Use

Product Name	Chicken Fried Rice
Product Description	Ready to Eat Frozen Meal, Water Activity above 0.9, slightly acidic
Ingredients	Cooked Fried Rice, Vegetables (Carrot, Edamame, Red Pepper, Onion), Chicken (White Chicken Meat, Water, Rice Starch, Salt, Sodium Bicarbonate, Spice), Sauce (Dextrose, Soy Sauce [Water, Soybeans, Wheat, Salt], Water, Maltodextrin, Distilled Vinegar, Sesame Oil, Miso Paste [Water, Soybeans, Rice, Salt, Alcohol], Sugar, Modified Corn Starch, Salt, Onion Powder, Caramel Color, Garlic Powder, Yeast Extract, Spice) Egg (Egg Whites, Whole Eggs, Corn Starch, Xanthan Gum, Beta Carotene) Canola Oil
Packaging used	Polypropylene and Cardboard
Intended use	Frozen RTE Meal
Intended consumers	Almost Everyone
Shelf life	1 to 2 years
Labelling instructions	Cooking Instructions, Allergens
Storage and distribution	Store Frozen

SSOP's

(Sanitation Standard Operating Procedure)

Sanitation controls are in compliance with 21 CFR 120.6

Safety of water that comes in contact with food

Condition and cleanliness of food contact surfaces, including utensils, gloves, and garments

Prevention of cross contamination from insanitary objects to food

Maintenance of hand washing, hand sanitizing, and toilet facilities

Protection of food, food packaging material, and food contact surfaces from adulteration

Proper labeling, storage, and use of toxic compounds

Control of employee health conditions that could result in contamination

Exclusion of pests from the food plant

GMP's

Good Manufacturing Practices

Plant GMP's cover 7 different aspects of plant production to distribution

1. Building and Facilities: Facility is suitable for the production of food
2. Equipment: Kept in working and sanitary order, replaced when needed
3. Personnel: Trained in proper procedures to prevent contamination
4. Raw Materials: Stored and handled to prevent cross contamination
5. Production: Written instructions for all processing steps
6. Laboratory Controls: Product is tested and verified to be in compliance
7. Records: Kept to ensure product was made to correct specifications

DISCUSSION

The HACCP presentation for ready-to-eat chicken fried rice highlights the diverse range of hazards inherent in food production. Biological risks, primarily microbial contamination, pose significant concerns due to the perishable nature of ingredients like chicken and rice. Robust sanitation and temperature control protocols are crucial to mitigate these risks. Additionally, physical hazards such as metal shavings and chemical hazards like allergens demand careful management to ensure consumer safety. By addressing these hazards through a comprehensive HACCP plan, food manufacturers can maintain high standards of safety and quality, reassuring consumers and safeguarding public health.

REFERENCES

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HACCP Plan

CCP	Hazards	Critical limits	Monitoring				Corrective action	Verification	Records
			What	How	Frequency	Who			
CCP1 CCP2	Microbial	Temperature must be lower then or equal to 40 degrees Fahrenheit for fresh product and 0 degrees Fahrenheit for frozen	Temperature	Checking atmospheric and product temperature	Every 4 Hours	QC Tech	When product found outside of temperature range, set product aside and test immediately for excess microbial contamination	Periodic calibration of TIDS and thermometers Verification review of temperature log	Receival Temperature Storage Temperature Corrective Action Log Verification Action Record
CCP3 CCP4 CCP6	Microbial	Cooking Temperature reaching a minimum of 165 Degrees Fahrenheit Product is cooled and frozen within two hours of cooking	Temperature	Testing temperature of product	Every 30 Minutes	QC Tech	When Product is found below 165 degrees, product is pulled aside to be cooked for additional time	Periodic calibration of TIDS and thermometers Verification review of temperature log	Time/ Temp Record Sheet Corrective Action Log Verification Action Records
CCP 5	Metal Shavings	Any Metal Detected In Product	Blade Inspection Magnet Inspection X Ray	Visual Inspection of all blades The chicken passes by a strong magnet, drawing shards of metal from product to magnet Product is sent through an X ray	Daily Magnet is checked hourly When Needed	QC Tech	Replace Broken Blades, Record Send Product through X Ray Discard Product	Verification Review of all Logs	Blade Inspection Records Magnet Check records X Ray Log Corrective Action Log Verification Action Records
CCP 7	Microbial Chemical	Not including critical information on cooking/allergen Not getting production code printed on packaging	Printer analysis	Visual Inspection ensuring lot code is printed on packaging, allowing traceability	Shift Change	QC Tech	Fix Time, Date, Lot Code on Printer Record Changes	Verification Review of all Logs	Printer Time Check Log Corrective Action Log Verification Action Records