DEPARTMENT OF HEALTH AND HUMAN SERVICES Food and Drug Administration	Food Process Filing for Acidified Method (Form FDA 2541e)
Note: There are separate process filing forms for each of the following: (Form FDA 2541e); Food Process Filing for Water Activity/Formulation	Food Process Filing for Low-Acid Retorted Method (Form FDA 2541d); Food Process Filing for Acidified Method Control Method (Form FDA 2541f); and Food Process Filing for Low-Acid Aseptic Systems (Form FDA 2541g).
USE FDA INSTRUCTIONS ENTITLED "Instructions for Paper Subm	nission of Form FDA 2541e (Food Process Filing for Acidified Method)"
FDA USE ONLY Date Received by FDA:// (MM/	DD/YYYY)
Food Canning Establishment (FCE) Number <i>(Enter number assigned</i>	Submission Identifier (SID) (YYYY-MM-DD/SSS) 20 /
A. Product Information	A.1 (Food Product Group) (Continued)
Note: Section A.1 (Food Product Group) requests optional infor	mation.
1. (Optional) Select one Food Product Group. If there is no single be Group that applies, select Other.	est Food Product Gelatin, Pudding Filling for Pies, Pie Filling (liquid form ready-to-eat such as apple pie filling, etc.) Gravies/Sauces (spaghetti sauce, mushroom gravy) Gravies/Sauces (spaghetti sauce, mushroom gravy)
crustaceans, etc.)	Imitation Dairy (includes soy-based products)
Baby Food (Infant/Junior foods including infant formula)	Imitation/Pit/Mixed/Subtropical Fruit
Beans, Corn, or Peas	- Fresh Succulent
Berry/Citrus/Core Fruit Berry/Citrus/Core Fruit Berry/Citrus/Core Fruit as a Jam, Jelly, Preserve, Drink, Syrup, To	Leafy/Stem Vegetables Leafy/Stem Vegetable Leafy/Stem Vegetable as a Juice or Drink (e.g., spinach juice, etc.) Depping
Beverage Base Breakfast Foods (liquid form – ready-to-eat, s	Image: Strain
 Cheese (does not include soy cheese or imitation dairy) Cocoa Coffee/Teas (excluding herbal and botanical teas) Crustacean (e.g., crab, shrimp, lobster, etc.) Dairy (milk-base Dietary Supplement and/or herbal and botanical teas 	Mixed Vegetables Image: Mixed Vegetables (e.g., carrots and peas, etc.) Image: Mixed Vegetables as a Juice or Drink (e.g., carrot and green bean juice, etc.)
 Dressings/Condiments (e.g., salad dressing, chutney, salsa, pepper s Engineered Seafood (e.g., shelf-stable imitation crab, surimi, etc.) Fishery (other aquatic (e.g., alligator, cuttlefish, frog legs, squid, etc.) 	sauce, etc.) Multiple Food (one container with a separate compartment for each product item (e.g., lasagna dinner, chop suey dinner, etc.) Noodle/Pasta Nut Spread and Nut Topping Other Vegetables Ret Food (o.g., dog/out food, etc.)
Fruit as a Vegetable	Rice, Wheat, Oat or Grain (liquid form – ready-to-eat such as grits)
Fruit as a Vegetable (e.g., eggplant, pumpkin, etc.)	Boot and Tuber Vegetables
Fruit as a Vegetable Juice or Drink (e.g., eggplant juice, pumpkin	juice, etc.) Root/Tuber Vegetables (e.g., carrots, leeks, potatoes, etc.) Root/Tuber Vegetables as a Juice or Drink (e.g., carrot juice, etc.)

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A.1 (Food Product Group) (Continued) □ Shelled Egg □ Shellfish (e.g., clams, mussels, oysters, etc.) □ Soup □ Sweet Goods/Dessert (liquid form – ready-to-eat, such as pudding)	C. Container Type (Select one) Note: If the product is not packaged in one of the container types identified below, select Other.
Vine/Other Fruit Vine/Other Fruit	 Aluminum/Tinplate/Steel Can What is the shape of the container? (Select one)
 Vine/Other Fruit Vine/Other Fruit as a Jam, Jelly, Preserve, Drink, Syrup, Topping 	Cylindrical Oval Rectangular Irregular (Attach a picture or schematic, Provide name or a brief description of
	attachment below.)
☐ Other (Specify below)	Other (Attach a picture or schematic. Provide name or a brief description of attachment below)
2. Enter Product Name (e.g., salsa (mild, medium, hot), artichokes (marinated), peppers (red or green), etc.).	
	b) How many pieces are used to construct the container? (Select one or more choices, as applicable)
3. What is the form of the product? (Select all that are applicable) Chunks (e.g., chunks, nuggets, etc.) Cut Diced Filet French cut Liquid (i.e., all liquid no solids) On the Cob Paste/Puree Pieces Round/Spheres Shredded/Julienne Sliced (e.g., slices, quarters, strips, etc.)	 i. 2-pieces – Do you use perforated divider plates? Yes No ii. 3-pieces – Do you use perforated divider plates? Yes No How is the side seam sealed? (Select one) Cemented Welded
Spears/Stalks Whole Other (Enter product form)	2. Ceramic/Glass
4. What is the packing medium? (Select all that are applicable) Brine Cream/Sauce/Gravy Oil Solid (no packing medium) Syrup Water None	Irregular (Attach a picture or schematic. Provide name or a brief description of attachment below.)
Other (Enter packing medium)	Other (Attach a picture or schematic. Provide name or a brief description of attachment below.)
Continue to Section B.	
B. Governing Regulation: (Select one)	b) Do you use perforated divider plates? Yes No
 Acidified (Product is an acidified food and is governed by 21 CFR 108.25 and 21 CFR Part 114) 	c) Is overpressure used during the processing of the product to maintain container integrity?
2. Voluntary (The processor has concluded that the product is not an acidified food. The processor is voluntarily submitting process information about the product to facilitate FDA determinations regarding the regulatory status of the product.) If you select this choice, attach documentation to support the determination that the product is not an acidified food such as a list of ingredients with the pH and weight % of each ingredient and the finished equilibrium pH. If the product appears to be a fermented food, include a detailed process flow diagram of fermentation processor, including the pH at detailed process flow diagram of the product appears to be a fermented food.	 Yes (Continue to c.i) No (If using a Process Mode of: Batch Agitating, Hydrostatic Retort, or Still Retort; continue to c.ii-c.iv; otherwise, continue to Section D). What is the total overpressure used during processing? (enter in pounds per square inch gauge (psig)) (Continue to Section D) What is the percent (%) headspace?
(Attach document. Provide name or a brief description of attachment below.)	iii. What is the minimum initial temperature? (enter in Fahrenheit)
Continue to Section C	iv. What is the vacuum? (enter in inches of mercury (Hg))

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<u>C. Container Type (Continued)</u>	C. Container Type: 4. Retortable Paperboard Carton (Continued)
3. Elexible Pouch	c) Is overpressure used during the processing of the product to control container thickness?
a) What is the shape of the container? (Select one)	Yes (Continue to c.i) No (Continue to d)
☐ Flat pouch ☐ Gable top ☐ Gable top/side gusseted ☐ Gusseted	i. What is the total overpressure used during processing? (enter in pounds
Irregular (Attach a picture or schematic. Provide name or a brief description of attachment below.)	per square inch gauge (psig)) d) What is the maximum thickness during retort processing?
Other (Attach a picture or schematic. Provide name or a brief description of attachment below.)	e) What is the maximum residual air? (enter in cubic centimeters)
 b) Is the container physically restricted during the processing of the product to control container thickness? Yes (<i>Continue to b.i</i>) No (<i>Continue to c</i>) Racks 	 5. Rigid Container (industrial size) a) What is the shape of the container? (Select one) Cylindrical Rectangular Other (Attach a picture or schematic. Provide name or a brief description of attachment below.)
 Other (Attach a picture. Provide name or a brief description of attachment below.) 	b) What kind of rigid container is used? (Select the description that best applies to the container (i.e., drum, pail, or tote) and select the material that makes up that container)
 c) Is overpressure used during the processing of the product to control container thickness? Yes (<i>Continue to c.i</i>) No (<i>Continue to d</i>) i. What is the total overpressure used during processing? (enter in pounds per square inch gauge (nsig)) 	 Drum (Large industrial cylinder container) (Select one) Aluminum/Steel Fiberboard Plastic Other (Enter material)
 d) What is the maximum thickness during retort processing? (enter in inches) Not Applicable e) What is the maximum residual air? (enter in cubic centimeters) Not Applicable 	 Pail (Select one) Aluminum/Steel Fiberboard Plastic Other (Enter material)
 4. Retortable Paperboard Carton a) What is the shape of the container? (Select one) Rectangular Other (Attach a picture or schematic. Provide name or a brief description of attachment below.) 	 Tote (Large industrial rectangular container) (Select one) Aluminum/Steel Fiberboard Plastic Other (Enter material)
 b) Is the container physically restricted during the processing of the product to control container thickness? Yes (Continue to b.i) No (Continue to c) i. Racks Other (Attach a picture. Provide name or brief description of attachment below.) 	Other (Enter rigid container) (Attach a picture or schematic. Provide name or a brief description of attachment below.)

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<u>C. Container Type (Continued)</u>	C. Container Type: 6. Semi-Rigid (Continued)
6. 🗌 Semi-Rigid	f) Is the container physically restricted during the processing of the product to control
a) What is the shape of the container? (Select one)	
🗌 Bowl 🔲 Cylindrical 🔲 Oval 🗌 Rectangular 🗌 Tray	i Resko
Irregular (Attach a picture or schematic. Provide name or a brief description of attachment below.)	 Other (Attach a picture. Provide name or a brief description of attachment below.)
Other (Attach a picture or schematic. Provide name or a brief description of attachment below.)	g) Is overpressure used during the processing of the product to control container thickness?
b) Is this a compartmentalized container?	 What is the total overpressure used during processing? (enter in pounds per square inch gauge (psig))
Yes How many compartments? No	h) What is the maximum thickness during retort processing?
c) What is the predominant material used to make the body of the container? (Select one)	· (enter in inches)
 HDPE (high-density polyethylene) HDPP (high-density polypropylene) Paperboard PET (polyethylene teraphthalate) 	i) What is the maximum residual air? (enter in cubic centimeters) Not Applicable
Other (Enter material)	7. Other <i>(Enter container type)</i>
 d) What is the predominant material used to make the lid of the container? (Select one) Aluminum/Steel HDPE (high-density polyethylene) HDPP (high-density polypropylene) Nylon 	 a) Attach schematic or picture of container. (Provide name or a brief description of attachment below.) b) Specify the material that, based on weight, is the predominant material used to make the
 PET (polyethylene teraphthalate) Not Applicable 	container stock. This is the material that constitutes the highest weight value of the container stock.
Other (Enter material)	 c) Specify the material that, based on weight, is the predominant material used to make the lid stock. This is the material that constitutes the highest weight value of the lid stock. If the contained have a lid appearie bet Applicable.
e) How is the lid sealed to the body of the container? (Select one)	the container does not have a lid, specify Not Applicable.
Double Seam Heat Seal Induction Weld Press Twist	d) Specify the method used to seal the lid to the body of the container. If the container does
Snap On Threaded Closure Ultrasonic Seal	not have a lid, specify Not Applicable.
Not Applicable	
Other (Enter seal type)	Continue to Section D.

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D. Container Size

Note: You are required to complete either D.1 (Dimensions) or D.2 (Volume). You may complete D.2 if you intend to select the thermal process mode in Section G as: 1) High Temperature Short Time (HTST); 2) Hot Fill and Hold; or 3) Steam Jacketed Kettle.

If you are completing D.2 because you intend to select HTST, Hot Fill and Hold, or Steam Jacketed Kettle, and if 1) your product is a cheese product under Section A.1, and 2) you have identified "Other" under Section C, you may indicate "Not Applicable" in your response to D.2. In all other circumstances, if you are completing D.2 in accordance with the directions in paragraph 1, you may not select "Not Applicable."

For all other circumstances, complete D.1. Section D.3 (net weight) is optional information.

1. Dimensions:

a) ____ Diameter ____ Height *(Use for cylindrical shapes)* (see accompanying instructions for proper coding)

b) ____ Length ____ Width ____ Height/Thickness (Use for container shapes other than cylindrical) (see accompanying instructions for proper coding)

2. Volume: ____ (Select one)

Fluid Ounces	Gallons	Liters	Milliliters	Not Applicable
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3. Net Weight (Optional): ___ (enter in ounces)

Submissions for Acidified Foods: Continue to Section E.

Voluntary Filing: Stop here and go to the signature section at the bottom of the form.

E. Processing Method: Acidification:

1. What is the natural pH of the low-acid ingredient(s) before acidification?									
2. What is the finished equilibrium pH of the product after acidification?									
f									
۶r									
1									

E. Processing Method: Acidification: (Continued)

5. Acidifying Agent(s): (Select all that apply)

Acetic Acid	Acid Food(s)	Apple Product(s	s) (other than vinegar)					
Citric Acid	Fruit Juice(s)	Fumaric Acid	Gluconic Acid					
Hydrochloric	Acid 🗌 Lactic Ac	cid 🗌 Malic Acid	Phosphoric Acid					
Sodium Acid	Sulfate 🗌 Tam	narind Product(s)	Tartaric Acid					
Tomato Prod	uct(s) 🗌 Vinega	ars (All Types)	Wine					
Other (Enter one or more agents not listed)								

6. Microbial Preservative(s) critical to the scheduled process: (Select all that apply and enter percent concentration(s))

Microbial Preservative	Concentration (%)
Alcohol	
Ascorbic Acid	
Benzoic Acid	
Butylated Hydroxyanisole	
Butylated Hydroxytoluene	
Calcium Chloride	
Calcium Propronate	
Calcium Sorbate	
Erythorbic Acid	
☐ Ethanol	
☐ Gucono Delta Lactone	
☐ Polvsorbate	`
Potassium Benzoate	`
Potassium Bisulphate	`
Potassium Metabisulphite	`
Potassium Propionate	`
Potassium Sorbate	`
	`
	`
☐ Salt	`
Sodium Benzoate	`
Sodium Bisulphate	`
Sodium Chloride	`
Sodium Erythorbate	
Sodium Metabisulfite	
Sodium Polyphosphate	
Sodium Propionate	

(Continue next page – Microbial Preservative(s))

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E. Processing Method: 6. Microbial Preservative(s) (Continued)	H. Container and Container Closure Treatment: (Complete this section
Microbial Preservative Concentration (%)	ONLY for Process Modes: 1) High Temperature Short Time (HTST);
Sodium Sorbate	2) Hot Fill and Hold; 3) Steam Jacketed Kettle
	Describe how the container, headspace, and interior surface (the surfaces that are in contact
	with the food) of the container closure are treated. (Select one)
$\square \text{ Other: (Enter preservative)}$	1. Aseptically Filled
(Enter preservative)	a) What is the filler name and model?
(Enter preservative)	· · · · · · · · · · · · · · · · · · ·
□ None	
Continue to Section F.	2. Heating Tunnel
F Process Source	a) What is the process time? (Select one)
1 What is the Process Source?	Seconds Minutes
1. What is the Flocess Source:	b) What is the temperature in the heating tunnel? (enter in Fahrenheit)
(Attach support documentation)	3. Hot Fill and Hold
	a) What is the temperature of the product in the container at the end of the hold time?
2 What is the date of the Process Source Document (mm/dd/vvvv)? / /	(enter in Fahrenheit)
	i. Select one of the container closure treatments.
Continue to Section G.	Inversion/Laydown of Container: How long is the product inverted/laid-down?
G. Process Mode (Select one)	(Select one)
1. High Temperature Short Time (HTST)	Seconds Minutes
2. Hot Fill and Hold	Steam Flow Closure
3. Steam Jacketed Kettle	Other (Enter container closure treatment)
When process mode 1, 2, or 3 is selected, continue to Section H.	
4. Batch Agitating Retort	What is the exposure time? (Select one)
5. Cold Fill and Hold (Attach support documentation. Provide name or a brief	Seconds Minutes
description of attachment below.)	
6 Crateless Petort	4. Water spray
 Challeness Neton Let Air Steam or Water (water assessed water immersion water spraw) 	\square Seconds \square Minutes
 Preading Tulmer-ThorAir, Steam of Water (water cascade, water immersion, water spray) Hudrostotic Potort 	b) What is the temperature of the water spray? (enter in Fahrenheit)
a otenimatic 10 Still Retort (Steam or Water)	5. 🗌 Other (Specify)
11 \square Bath (Steam or Water)	
12 Other (Attach cuppert decumentation) Provide name or a brief description of	
attachment below.	
When process mode 4-12 is selected, continue to Section I.	Continue to Section I.

I. Scheduled Process: (Do not write in shaded areas -- Check appropriate box under column heading, when applicable, and enter numerical values on dashed lines.)

In the section below, please do NOT enter decimal points. They are already on the form. No blank spaces are allowed, therefore, enter leading zeros, where necessary.

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8				Col. 9			Col. 10	Col. 11
Process No	Step	Temperature	Process Time	Process Temperature	F value (only one)	Thruput (Containers per Minute)	Headspace	a. Reel Speed	b. Reel Diameter	c. Steps per Turn of Reel	d. Chain/ Conveyer Speed	e. Cooker Capacity	f. Frequency Strokes per Minute	Maximum Fill Weight	Other
		Min. Initial	Seconds		Fo (F18/250)		Net Gross				Feet			Fill	
		Hold	Hours		Other F Ref T						Flights				
		remp.			z: (°F only)						(per minute)				
Number	Number	°Fahrenheit	See above	°Fahrenheit	Minutes	Number	Inches	RPM	Inches	Number	Number	Number	Number	Ounces	
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J. Additional Information (Optional)

Heat Penetration Study (Attach document. Provide name or a brief description of attachment below.)

Temperature Distribution Study (Attach document. Provide name or a brief description of attachment below.)

Other (Attach document. Provide name or a brief description of attachment below.)

Comments:

Note: Under the terms and provisions of Title 18, Section 1001, United States Code, in any matter within the jurisdiction of the executive branch of the Government of the United States it is a criminal offense to falsify, conceal, or cover up a material fact; make any materially false, fictitious, or fraudulent statement or representation; or make or use any false writing or document knowing the same to contain any materially false, fictitious, or fraudulent statement or entry.

If your process filing appears to be fabricated, the product on this form will not be in compliance with 21 CFR 108.25(c)(2). A process filing appears fabricated

when it contains parameters that cannot be reconciled with one another, such that the filing does not describe a process that could actually be carried out. If we determine that your process filing appears fabricated, we will delete the filing from our system and notify you. We will not consider you to have complied with 21 CFR 108.25(c)(2) until you submit a completed process filing that does not appear to be fabricated.

Full Name (Please Type or Print)			Signature				
Establishment Name	State or Province		Country (other than U.S.)	Date	Telephone No.		

LACF Contact Information

For more information, contact the LACF Registration Coordinator by e-mail at LACF@FDA.HHS.GOV or phone: 240-402-2411.

For paper submissions, send completed forms to:

Food and Drug Administration LACF Registration Coordinator (HFS-303) Center for Food Safety and Applied Nutrition 5001 Campus Drive College Park, MD 20740-3835

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