TECHNICAL REPORT
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MEAT ENTREE OPERATION GUIDES DEVELOPED FOR USE IN FORT LEE INTERIM CENTRAL FOOD PREPARATION FACILITY

by

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November 1978

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FEL-84

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U.S. Army Natick Soldier Research, Development and Engineering Center
Natick, Massachusetts 01760-5000

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Many production guides have been developed by NARADCOM which adapt recipes to cook-freeze systems and to production operations rather than kitchen preparation. However, these are general guides which then have to be refined and adapted to the facility using the guides and its specific equipment, layout, personnel, and mission. The guides in this report have been adapted to the Interim Central Food Preparation Facility which will go on-line in FY78. To differentiate these guides, they are called Operational Guides. Included

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in this report are 44 Operational Guides for entree items.

PREFACE

Cook-freeze food service systems tailored for specific situations are being used or contemplated for use in several Armed Forces feeding situations. It is anticipated that the use of these types of systems will become increasingly important in the future.

Since the cook-freeze approach separates food preparation from food serving, the facilities using it tend to have a food preparation operation that resembles a manufacturing system rather than one dealing with traditional dining halls. Lot sizes are larger and in some cases have been replaced with continuous operations. Sanitation and formal quality control become much more important, since time for microbiological growth is extended, and personal supervision becomes diluted. Recipes used in standard operations must be altered.

The concept of Central Food Preparation Systems for garrison feeding has been approved by the Army. In order to test the concept further, an interim central food preparation facility (I-CFPF) has been established at Fort Lee, Virginia. NARADCOM has been tasked with technical help in the planning, start-up, operation, and evaluation of this facility. This report covers a part of that effort and is concerned with studies for producing entree items in the I-CFPF.

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MEAT ENTREE OPERATION GUIDES
DEVELOPED FOR USE IN FORT LEE
INTERIM CENTRAL FOOD PREPARATION FACILITY

INTRODUCTION

The Food Engineering Laboratory has developed a large number of Production Guides for various cook-freeze systems contemplated for use, or in use, in the Armed Forces. These guides are based upon the Armed Service Recipe Service or special hospital recipes and are set up for fairly large-scale production of products to be frozen for later rethermalization in the dining hall. The term "production guides" is used to differentiate them from the parent recipes. These guides have been kept rather general so that they may be adapted to the particular equipment, facility, and circumstances of the site at which they are to be used.

A request was received from US Army Troop Support Agency to adapt production guides for products to be used in I-CFPF at Fort Lee to the equipment and layout of that facility. To differentiate the documents produced from recipes and production guides, it was decided to call them "operational guides". Further, it was decided that the operational guides would consist of five sections: Ingredients, Procedure, Equipment Flow Sheet, Material Flow Sheet, and Packaging Requirements.

Later on when operations stabilize, the packaging instructions probably will be combined into a single document which will be referred to in the Operational Guide.

In some cases, Standard Operating Procedures will be used rather than

Operational Guides. This would be true particularly with the vegetables such as carrots and potatoes that are prepared in different ways as ingredients in other items. However, those SOP's are not included in this report.

Operational Guides always should be considered "live" documents, subject to change as conditions warrant. It is axiomatic that the guides contained herein will be changed at least in a minor way as they are put to use.

PROCEDURE

With a few exceptions it was not necessary to actually formulate the products in the Processing Laboratory, since this had been done in developing the original production guides. Based upon personal visits to Fort Lee, equipment lists, and layout diagrams, it was possible to develop the guides without actually producing the product. However, whenever there was any doubt, the product was made. Layout for the I-CFPF kitchen is shown in Fig. 1.

Basic to the design of the guides was selecting the key piece of equipment which would control processing and lot size. The guide was then based upon the lot size determined as optimal for that piece of equipment. In some cases, such as with jacketed kettles, more than one size is available so that different lot sizes are available for production scheduling.

Two pieces of information considered desirable by Troop Support Agency are not included in the Operational Guides in this report. These are an identifying number for each ingredient and critical control points in the process. The GSA catalogue numbers probably will be used for identifying numbers for the I-CFPF, although this has not yet been finalized. Establishment of critical control points has not been made because no agreement has been reached as yet on the criteria for such points. The philosophy and criteria for the points will depend upon the facility, operating personnel, quality control personnel, and the degree of formality desired by management.

OPERATIONAL GUIDE FOR BARBECUED BEEF

(SLOPPY JOE) N-27

INGREDIENTS & BATCH SIZE

Controlling Equip: Kettles
Container Net Wt.: 5 lb

Standard Servings: 12 of 2/3 cup

Est. Prep Time: 4.3 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	500 Servings 40-gal Kettle (lb)	800 Servings 60-gal Kettle (lb)	Utensils
1	Beef, Bnls, Ground	310	30.00	90.00	150.00	240.00	Kettle (agitating)
2	Onions, dehyd, chopped	5290	0.69	2.07	3.45	5.52	
	Catsup, tomato	14410	7.13	21.39	35.65	57.04	
	Mustard, prepared	15310	0.97	2.91	4.85	7.76	
	Salt, table	15850	0.35	1.05	1.75	2.80	
	Sugar, brown	9870	0.69	2.07	3.45	5.52	
	Water		4.78	14.34	23.90	38.24	
3	Vinegar, white	16000	1.40	4.20	7.00	11.20	
4	Water		To make 4.5 gal	To make 13.5 gal	To make 22.5 gal	To make 36.00 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 1977

OPERATIONAL GUIDE FOR BARBECUED BEEF (SLOPPY JOE) N-27

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients and spices as to number and amounts received from Prep. Area.		10
00-	Deliver all components, etc., to Kettle Area.		5
1-	Place ground beef in kettle, turn on agitator to slow speed. Turn on steam; brown (sear) meat in its own juices. When meat is browned (loses all traces of pink), turn off steam and agitator; drain and discard fat and juices.		20
2-	Add water and all remaining ingredients and seasonings <u>except</u> <u>vinegar</u> to meat in kettle; turn on steam and agitator; mix well; simmer covered for 30 minutes with agitator on slow speed.		40
3-	Turn off steam. Add vinegar to beef mixture; mix well.		5
4-	Shut off agitator; raise level (volume) of mixture in kettle with water to required number of gallons using measuring stick. Mix well.		10
5-	Transfer barbecued beef to filler.		10
6-	Fill half-size steam table pans with 5 lb of product.		20
7-	Pass filled pans of barbecued beef thru lidding machine to cover and close.		10
8-	Pass covered pans thru labelling machine. Labels should read:		10

Barbecued Beef (Sloppy Joe) Date Prepared_____
Net Wt: 5 lb Servings: 12 of 2/3 cup

Reconstitution Instructions:
Heat covered pans in 325°F preheated ovens to internal temperature of 160°F.

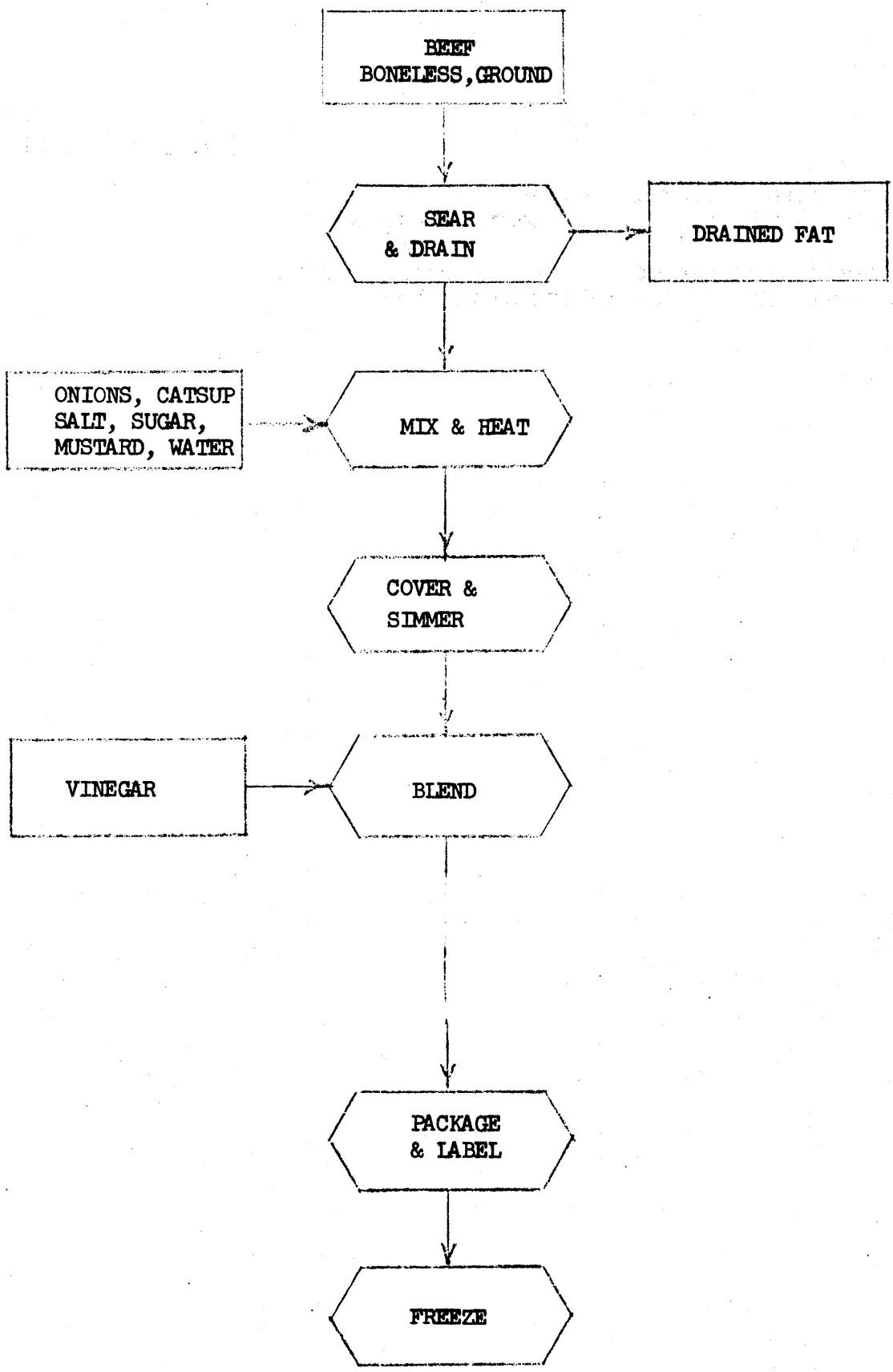
Check Points	Time (Minutes)

Convection ovens: 1 hour 15 minutes
Conventional (ordinary) ovens: 1 hour 30 minutes

Alternatively the Barbecued Beef may be poured (removed from foil pans) into kettle and warmed to 160°F.

MATERIAL FLOW

BARBECUED BEEF ("SLOPPY JOE")



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BARBECUED BEEF

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, boneless, ground	90.00 (3 bags 30.00 lb)	150.00 (5 bags 30.00 lb) Bag size = 15" X 29-1/2"	240.00 (8 bags 30.00 lb)	Beef for barbecued beef 30.00 lb
Onions, dehydrated, chopped	2.07	3.45	5.52	Onions, mustard, salt and sugar for barbecued beef
Mustard, prepared	2.91 (1 bag	4.85 (1 bag	7.76 (1 bag	
Salt, table	1.05 8.10 lb)	1.75 13.50 lb)	2.80 21.60 lb)	
Sugar, brown	2.07	3.45	5.52	
		Bag size = 15" X 29-1/2"		* lb
Catsup, tomato	21.39 (2 bags 10.685 lb)	35.65 (3 bags 11.89 lb) Bag size = 15" X 29-1/2"	57.04 (4 bags 14.26 lb)	Catsup for barbecued beef * lb
Vinegar, white	4.20 (1 bag 4.20 lb)	7.00 (1 bag 7.00 lb) Bag size = 15" X 29-1/2"	11.20 (1 bag 11.20 lb)	Vinegar for barbecued beef * lb

*Appropriate weight to be written is dependent on number of servings.

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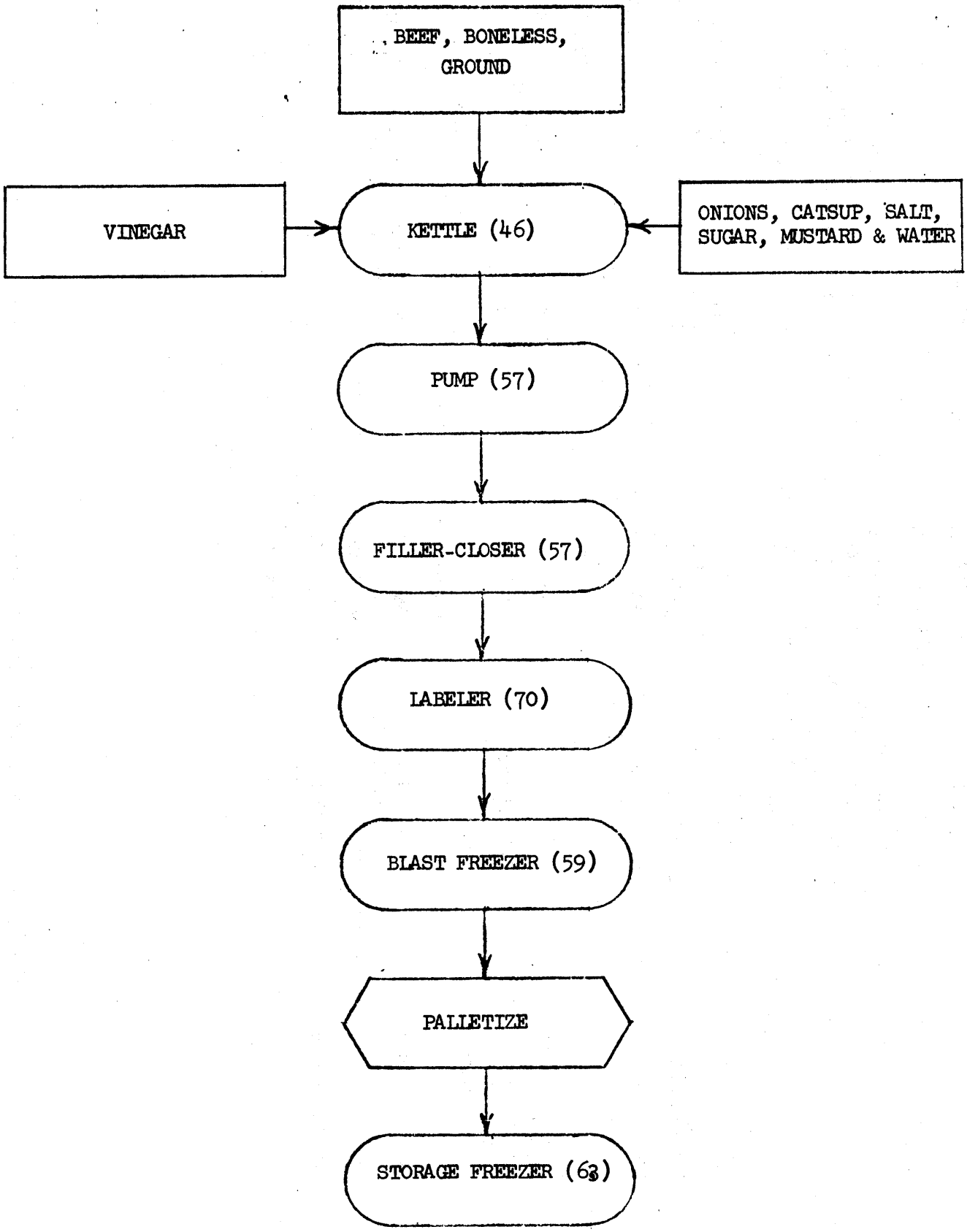
EQUIPMENT UTILIZATION

BARBEQUED BEEF (SLOPPY JOE)



OPERATIONAL GUIDE FOR BEEF STEW

INGREDIENTS & BATCH SIZE L-22

Controlling Equip: Steam Kettles
Container Wt: 6.25 lb

Servings/Container: 10 of 10 oz
Wt per gallon: 7.5 lb

Est. Prep Time: Approx. 4.7 hours
Approx. Yield: 300, 500, & 700 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	500 Servings 60-gal Kettle (lb)	700 Servings 80-gal Kettle (lb)	Utensils
1	Beef, Bnls, diced 3/4" cubes	290	30.00	90.00	150.00	210.00	Breading Machine
2	Dredging Mixture						
	Flour	8300	0.50	1.50	2.50	3.50	Kettle
	Salt	15850	0.35	1.05	1.75	2.45	
	Pepper	15480	0.02	0.06	0.10	0.14	
	Sugar	9930	0.20	0.60	1.00	1.40	
3	Shortening	14080	0.75	2.25	3.75	5.25	
4	Water		12.50	37.50	62.50	87.50	
	Spices						
	Salt	15850	0.35	1.05	1.75	2.45	5-gal Pot
	Thyme	15990	0.01	0.03	0.05	0.07	Whip
	Bay Leaves	14310	0.01	0.03	0.05	0.07	
	Col-F10 67, starch	SP**	0.44	1.32	2.20	3.08	
	Tomatoes, whole, canned	6420	7.00	21.00	35.00	49.00	
	Water		12.50	37.50	62.50	87.50	
	Vegetables: Fresh						
	Carrots - 1/2-inch slice	4210	8.00	24.00	40.00	56.00	Stirring Equip
	Celery - 3/4-inch pieces	4270	4.00	12.00	20.00	28.00	Mechanical
	Potatoes - 3/4-inch cubes	5970	8.00	24.00	40.00	56.00	or Manual paddle
	Onions - 3/4-inch	5320	3.00	9.00	15.00	21.00	

* FSC Group 89 Subsistence Catalog (1 Jan 77) (C8900-SL)
** Special Purchase

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	500 Servings 60-gal Kettle (lb)	700 Servings 80-gal Kettle (lb)	Utensils
5	Water, hot		To make 8.35 gal	To make 25.00 gal	To make 41.75 gal	To make 58.50 gal	Measuring stick
6	Chilling						
7 & 8	Filling & Closing						
9	Marking & Labelling						
10	Freezing						
11	Storage						

OPERATIONAL GUIDE FOR BEEF STEW L-22

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components and ingredients as to number and amounts received from Prep. Area.		10
00-	Deliver beef and dredging mixture to "Breader". Deliver vegetables to "pass thru steamer".		
1&2-	Load "breader" with dredging mixture and run beef thru "breader".		15
3-	Transfer dredged beef to kettle with shortening - Turn steam on, melt shortening; add beef stirring to brown beef (approximately 15 min).		15
4-	Add water, starch, spices, and crushed tomatoes to beef in kettle; mix thoroughly; heat and simmer for 60 minutes or longer until beef is tender.		60
5-	Put vegetables in pass thru steamer at 15 PSI as follows: Carrots for 6 min, approximately Celery for 7 min, approximately Onions for 6 min, approximately Potatoes for 12 min, approximately The vegetables should be firm but cooked. Transfer vegetables to the beef-tomato mixture in kettle. Mix thoroughly.		
6-	Raise level (volume) of product in kettle with water to required number of gallons, using measuring stick. Mix thoroughly. Shut off steam.		10
7-	Transfer product to Filler tank.		20
8-	Fill half-size table pans with 6.25 lb of Beef Stew.		10
9-	Pass Pans thru lidding machine to cover and close.		10
10-	Pass pans thru labelling machine. Labels should read:		10

Beef Stew
Net Wt. - 6.25 lb

Date Prepared_____
Servings: 10 of 10 oz

Check Points	Time (Minutes)

Reconstitution Instructions:

Heat covered pans in preheated ovens for approximately 1 hour and 15 minutes

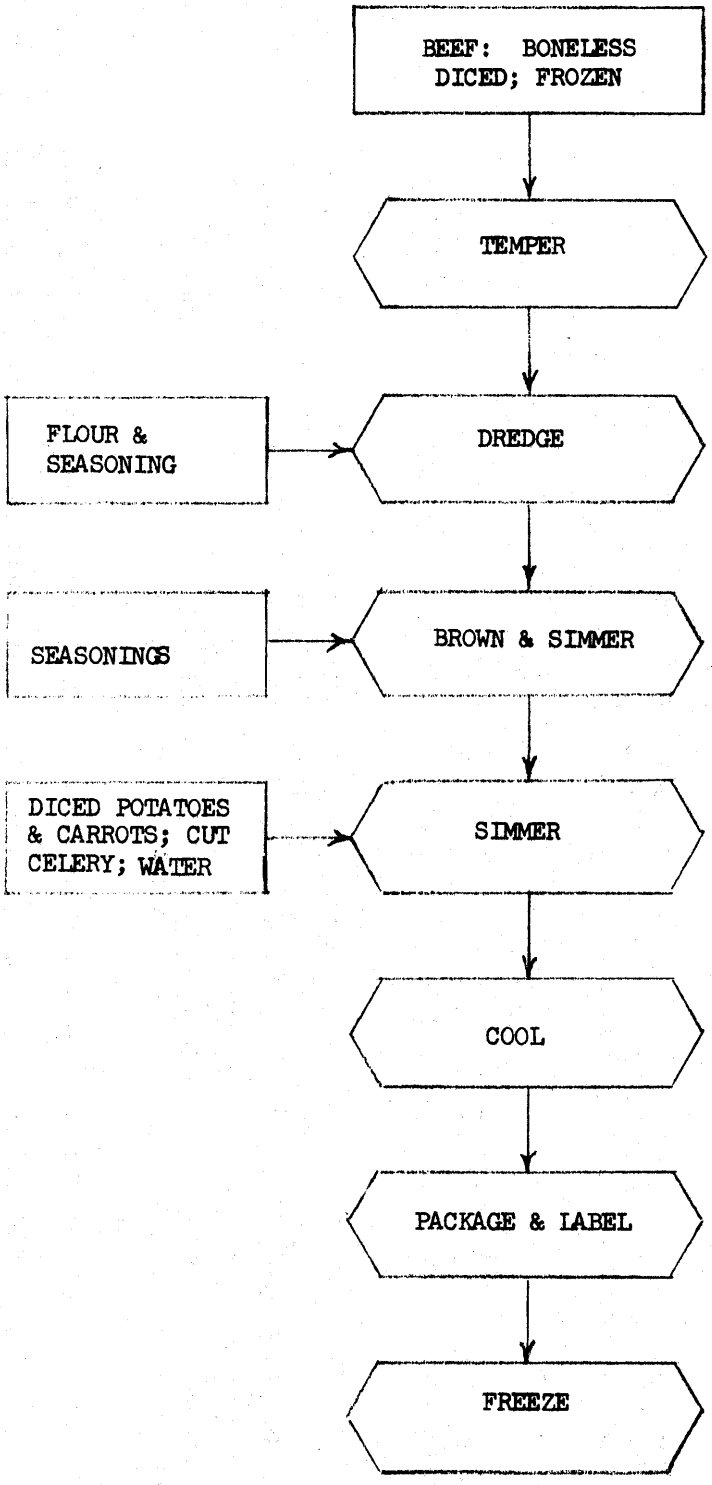
Convection oven - approximately 1 hour and 30 minutes

Conventional (ordinary) oven - Product temperature should be 160°F.

Alternatively this product may be poured into steam kettle and heated to 160°F.

MATERIAL FLOW

BEEF STEW



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BEEF STEW

REVISION 1

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	700 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, Bnls, diced, 3/4" cubes	90.00 (3 - 30 lb bags)	150.00 (5 - 30 lb bags) Bag size = 15" X 29-1/2"	210.00 (7 -30 lb bags)	Beef, diced for beef stew 30.00 lbs
DREDGING MIXTURE				
Flour	1.50	2.50	3.50	Flour, salt, pepper and sugar for beef stew (Dredging Mixture)
Salt	1.05 (1 bag	1.75 (1 bag	2.45 (1 bag	
Pepper	0.06 3.21 lbs)	0.10 5.35 lbs)	0.14 7.49 lbs)	
Sugar	0.60	1.00	1.40	
		Bag size = 10" X 18"		* lbs
Shortening	2.25 (1 bag 2.25 lbs)	3.75 (1 bag 3.75 lbs) Bag size = 10" X 18"	5.25 (1 bag 5.25 lbs)	Shortening for beef stew (Dredging Mixture) * lbs
SPICES				
Salt	1.05	1.75	2.45	Salt, thyme, bay leaves and starch for beef stew (Spices)
Thyme	0.03 (1 bag	0.05 (1 bag	0.07 (1 bag	
Bay Leaves	0.03 2.43 lbs)	0.05 4.05 lbs)	0.07 5.67 lbs)	
Col-Flo 67, starch	1.32	2.20	3.08	
		Bag size = 10" X 18"		* lbs

*Appropriate weight to be written is dependent on number of servings.

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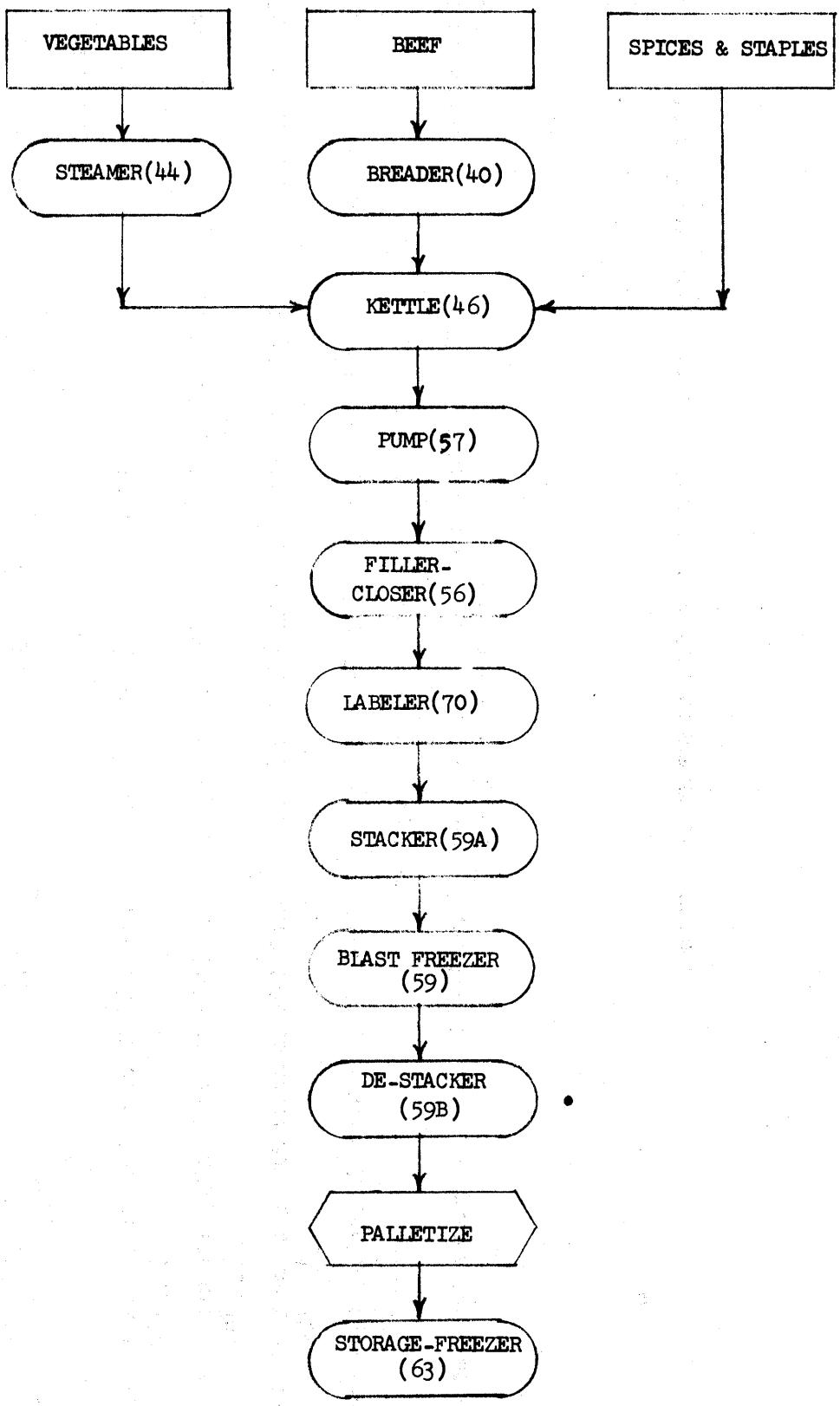
Ingredients	300 Servings (lbs)	500 Servings (lbs)	700 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
VEGETABLES: FRESH				
Carrots	24.00(2-12 lb bags)	40.00(4-10 lb bags)	56.00(4-14 lb bags)	Carrots for beef stew * lbs
Celery	12.00(1-12 lb bag)	20.00(2-10 lb bags)	28.00(2-14 lb bags)	Celery for beef stew * lbs
Potatoes	24.00(2-12 lb bags)	40.00(4-10 lb bags)	56.00(4-14 lb bags)	Potatoes for beef stew * lbs
Onions	9.00(1-9 lb bag)	15.00(1-15 lb bag) Bag size = 15" X 29-1/2"	21.00(2-10.5 lb bags)	Onions for beef stew * lbs
Tomatoes, whole, canned	21.00(2-10.5 lb bags)	35.00(2-17.5 lb bags) Bag size = 15" X 29-1/2"	49.00(4-12.25 lb bags)	Tomatoes for beef stew * lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

BEEF STEW



OPERATIONAL GUIDE FOR BARBECUED BEEF CUBES L-18

INGREDIENTS & BATCH SIZE

Controlling Equip: Kettle
Container Net Wt.: 5 lb 4 oz

Standard Servings: 14 of 6 oz

Est. Prep Time: 5.4 hours
Approx. Yield: 300, 500, 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40 gal Kettle (lb)	500 Servings 40 gal Kettle (lb)	800 Servings 60 gal Kettle (lb)	Utensils
1	Beef, Bnls, diced 1-inch x 1½-inch pieces	290	30.00	90.00	150.00	240.00	Breader
	Flour, wheat	8300	1.00	3.00	5.00	8.00	Fryer
	Pepper, black	15480	0.01	0.03	0.05	0.08	
	Salt, table	15850	0.13	0.39	0.65	1.04	
	Water		7.50	22.50	37.50	60.00	Kettle
2	Sauce						
	Onion, dehyd, sliced	5290	0.50	1.50	2.50	4.00	
	Chili powder	14480	0.14	0.42	0.70	1.12	
	Mustard, grd, dry	15280	0.08	0.24	0.40	0.64	
	Sugar, light brown	9860	0.26	0.78	1.30	2.08	
	Salt, table	15850	0.13	0.39	0.65	1.04	
	Tomato paste (26% solids)	6460	3.80	11.40	19.00	30.40	
	Worcestershire sauce	16030	0.26	0.78	1.30	2.08	Pot & Whip
	Hot sauce, Tabasco	15180	0.06	0.18	0.30	0.48	
	Col-Flo 67, starch	SP**	0.60	1.80	3.00	4.80	
	Water		7.50	22.50	37.50	60.00	
3	Vinegar	16000	0.76	2.28	3.80	6.08	
	Water		To make 5.25 gal	To make 15.75 gal	To make 26.25 gal	To make 42.00 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 1977

** Special Purchase

OPERATIONAL GUIDE FOR BARBECUED BEEF CUBES L-18

INSTRUCTIONS

		Check Points	Time (Minutes)
NOTE:	This product cannot be pumped, pieces are too large. Piece size is maintained to preserve product integrity and add variation to menu.		
0-	Verify components, ingredients and spices as to number and amounts received from Prep. Area.		10
00-	Deliver diced beef, flour, pepper, and salt to breading area and remaining ingredients and spices to Kettle Area.		10
1-	Combine flour, salt, and pepper; mix well and load breading machine. Preheat deep fat fryer (360°F). Pass diced beef pieces thru breader and fryer to brown (sear) until all pink color disappears (about 3-5 minutes). Transfer browned beef pieces to kettle, add water, cover and simmer for 55 minutes.		90
2-	Combine all dry seasonings, starch, tomato paste, worcestershire sauce, hot sauce, and water in a pot; mix well to make slurry; crush all lumps. Add slurry to beef in kettle; mix well and simmer for 25 minutes or until meat is tender.		35
3-	Add vinegar to mixture in kettle; mix well. Raise level (volume) of product in kettle with water to required number of gallons using measuring stick; mix well. Shut off steam.		10
4-	Place 5 lb 4 oz of well mixed product in half-size steam table aluminum pans.		30
5-	Pass filled pans of Barbecued Beef chunks thru lidding machine to cover and close.		10
6-	Pass covered pans thru labelling machine. Labels should read:		10

Barbecued Beef Cubes
Net Wt: 5 lb 4 oz

Date Prepared_____
Servings: 14 of 6 oz

Check Points	Time (Minutes)

Reconstitution instructions:

Heat covered pans in 325°F preheated ovens to internal temperature of 160°F.

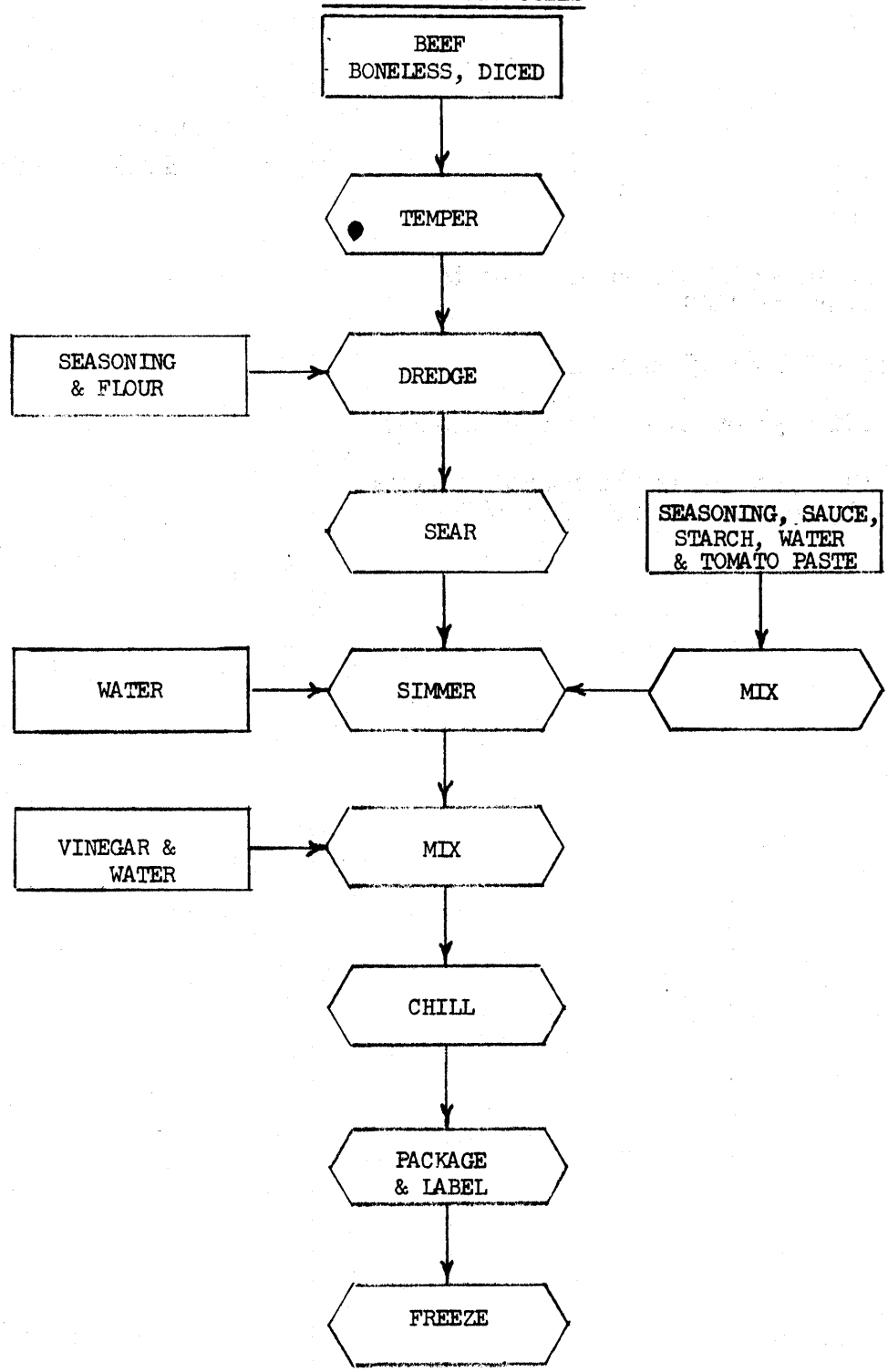
Convection ovens - 1 hour 15 minutes

Conventional (ordinary) ovens - 1 hour 30 minutes

Alternatively, this product may be poured (removed from foil pans) in kettle and warmed to 160°F.

MATERIAL FLOW

BARBECUED BEEF CUBES



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BARBECUED BEEF CUBES

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

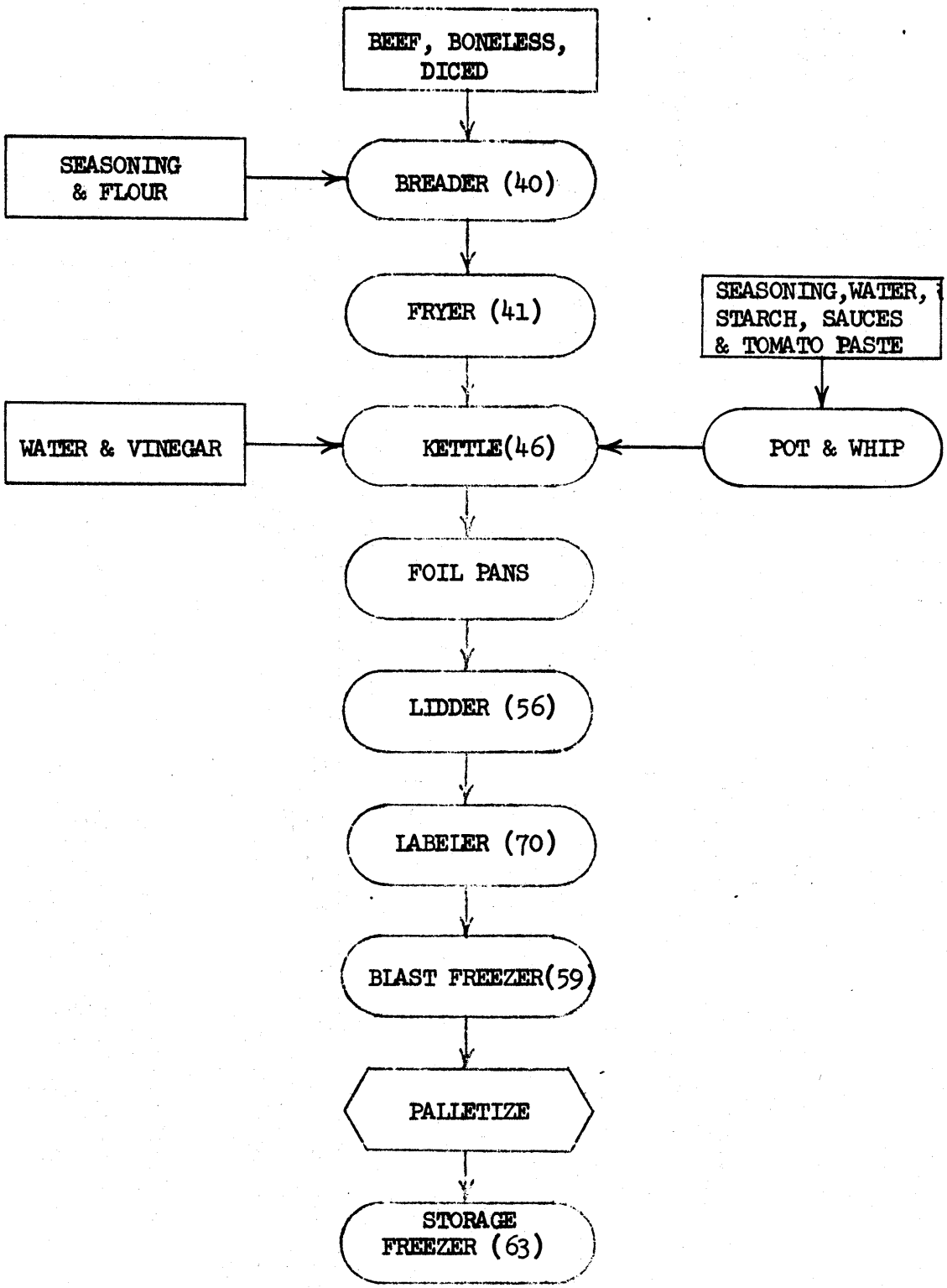
Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, boneless, diced, 1" X 1-1/2" pieces	90.00 (3 bags 30.00 lbs)	150.00 (5 bags 30.00 lbs) Bag size = 15" X 29-1/2"	240.00 (8 bags 30.00 lbs)	Beef for barbecued beef cubes 30.00 lbs
Flour, wheat	3.00 (1 bag	5.00 (1 bag	8.00 (1 bag	Flour, salt and pepper for barbecued beef cubes
Pepper, black	0.03 3.42 lbs)	0.05 5.70 lbs)	0.08 9.12 lbs)	
Salt, table	0.39	0.65	1.04	
		Bag size = 10" X 18"		* lbs
Sauce				
Tomato paste (26% solids)	11.40 (1 bag 11.40 lbs)	19.00 (2 bags 9.50 lbs) Bag size = 15" X 29-1/2"	30.40 (3 bags 10.13 lbs)	Tomato paste for barbecued beef cubes (sauce) * lbs
Onions, dehydrated, sliced	1.50	2.50	4.00	Onions, chili powder, mustard, sugar, salt, worcestershire sauce, hot sauce and starch for barbecued beef cubes (sauce)
Chili powder	0.42	0.70	1.12	
Mustard, ground, dry	0.24 (1 bag	0.40 (1 bag	0.64 (2 bags	
Sugar, light brown	0.78 6.07 lbs)	1.30 10.15 lbs)	2.08 8.12 lbs)	
Salt, table	0.39	0.65	1.04	
Worcestershire sauce	0.78	1.30	2.08	
Hot sauce, tabasco	0.18	0.30	0.48	
Col-Flo 67, starch	1.80	3.00	4.80	
		Bag size = 15" X 29-1/2"		* lbs
Vinegar	2.28 (1 bag 2.28 lbs)	3.80 (1 bag 3.80 lbs) Bag size = 10" X 18"	6.08 (1 bag 6.08 lbs)	Vinegar for barbecued beef cubes * lbs

*Appropriate weight to be written is dependent on number of servings.

22 Jul 77

EQUIPMENT UTILIZATION

BARBECUED BEEF CUBES



OPERATIONAL GUIDE FOR BRAISED BEEF CUBES L-148

INGREDIENTS & BATCH SIZE

Controlling Equip: Kettle
Container Net Wt.: 5 lb

Standard Servings: 14 of 2/3 cup

Est Prep Time: 4.3 hours
Approx. Yield: 300, 500, 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 20 gal Kettle (lb)	500 Servings 40 gal Kettle (lb)	800 Servings 60 gal Kettle (lb)	Utensils
1	Beef, Bnls, diced, 3/4 inch x 3/4 inch	290	30.00	90.00	150.00	240.00	Kettle
2	Gravy						
	Salt, table	15850	0.12	0.36	0.60	0.96	
	Pepper, black	15480	0.01	0.03	0.05	0.08	
	Onion, dehydrated, chopped	5290	0.50	1.50	2.50	4.00	
	Garlic powder	4700	0.01	0.03	0.05	0.08	
	Soup & Gravy Base, Beef	11440	0.58	1.74	2.90	4.64	
	Thyme, ground	15980	0.01	0.03	0.05	0.08	
	Bay leaves, ground	14310	0.01	0.03	0.05	0.08	
	Water, tap		16.60	49.80	83.00	132.80	
3	Col-Flo 67, starch	SP**	1.49	4.47	7.45	11.92	Pot
	Flour, wheat	8300	0.50	1.50	2.50	4.00	Whip
	Water		8.30	24.90	41.50	66.40	
4	Water		To make 4.25 gal	To make 12.75 gal	To make 21.25 gal	To make 34 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR BRAISED BEEF CUBES L-148

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients, and spices as to number and amounts received from Prep. Area.		
00-	Deliver all components, ingredients, and spices to Kettle Area.		10
1-	Place diced beef in steam kettle with slow agitation, turn on steam and brown beef. Shut off steam, and drain and discard fat from product.		20
2-	Gravy:		
	Add the following to brown beef in kettle: Water, salt, pepper, onion, garlic powder, thyme, beef base, and ground bay leaves. Cover kettle and simmer for 1 hour (about 200°F). Stir occasionally. (Small amounts of water may be added periodically to aid in cooking.)		60
3-	Mix flour, Col-Flo 67 starch, and water in a pot to make a slurry. Add slurry to beef mixture in kettle and cook until starch thickens (approximately 5 minutes).		10
4-	Raise level (volume) of kettle with water to required amount of gallons using measuring stick. Mix thoroughly. Shut off steam.		10
5-	Transfer product to filler.		10
6-	Measure 5 lb of braised beef cubes into half-size steam table pan.		15
7-	Pass pans thru lidding machine to cover and close.		
8-	Pass covered pans thru labelling machine. Labels should read:		10

Braised Beef Cubes — Date Prepared_____
Net Wt.: 5 lb — Servings: 14 of 2/3 cup

Check Points	Time (Minutes)

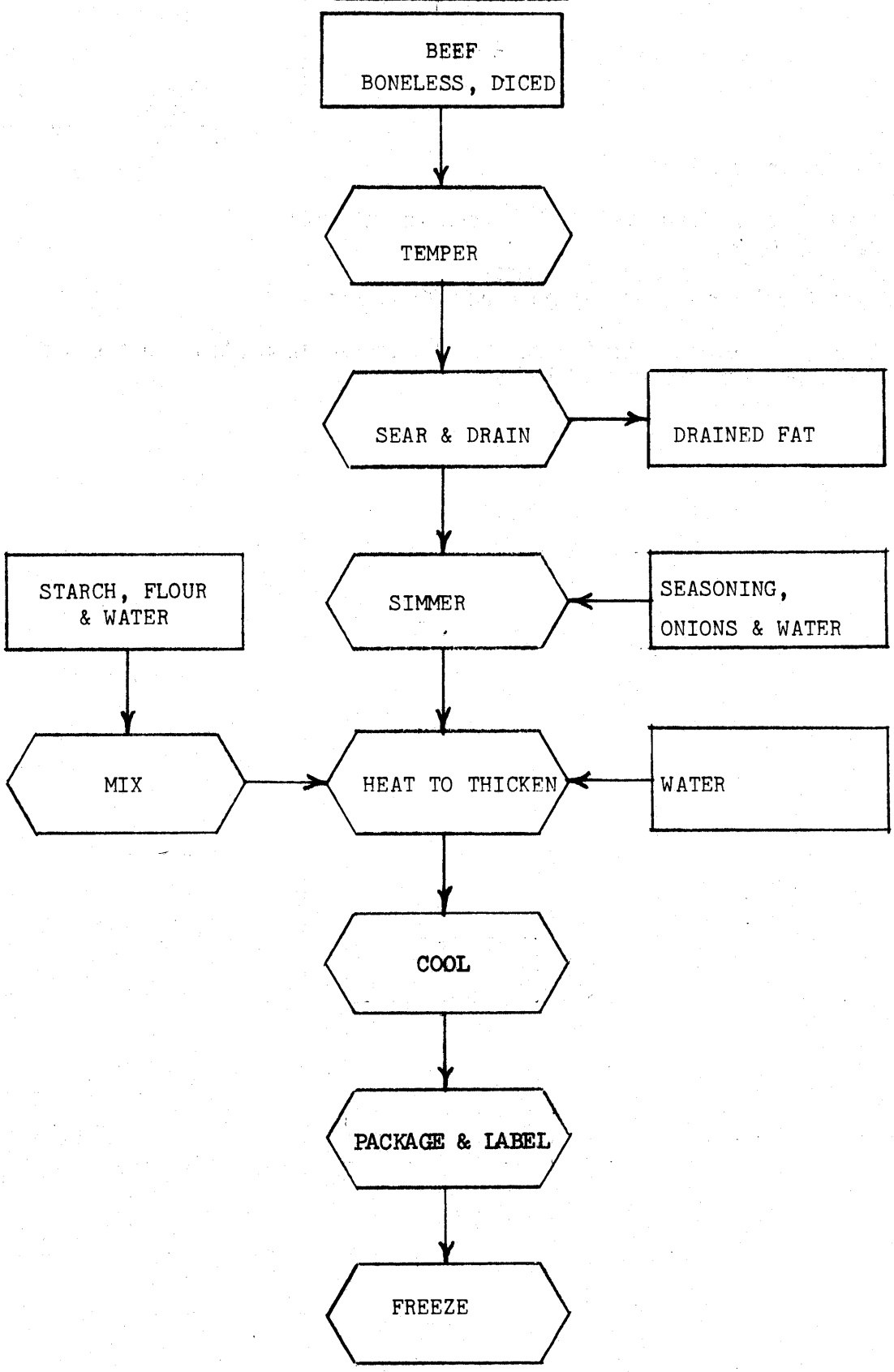
Reconstitution Instructions:

Heat covered pans in preheated 325°F ovens to internal temperature of 160°F.
Convection oven - 1 hour and 15 minutes
Conventional (ordinary) oven - 1 hour and 30 minutes

Alternatively, the braised beef cubes may be poured into steam kettle and heated to product temperature of 165°F.

MATERIAL FLOW

BRAISED BEEF CUBES



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BRAISED BEEF CUBES

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, boneless, diced 3/4" X 3/4"	90.00 (3 bags 30.00 lb)	150.00 (5 bags 30.00 lb)	240.00 (8 bags 30.00 lb)	Beef for braised beef cubes
		Bag size = 15" X 29-1/2"		30.00 lb
GRAVY				
Salt, table	0.36	0.60	0.96	Salt, pepper, onions, garlic, soup and gravy base, thyme, and bay leaves for braised beef cubes (gravy)
Pepper, black	0.03	0.05	0.08	
Onion, dehydrated,chopped	1.50 (1 bag	2.50 (1 bag	4.00 (1 bag	
Garlic powder	0.03 3.72 lb)	0.05 6.20 lb)	0.08 9.92 lb)	
Soup & gravy base, beef	1.74	2.90	4.64	
Thyme, ground	0.03	0.05	0.08	
Bay leaves, ground	0.03	0.05	0.08	
		Bag size = 10" X 18"		* lb
Col-Flo 67 starch	4.47 (1 bag	7.45 (1 bag	11.92 (1 bag	Starch and flour for braised beef cubes
Flour, wheat	1.50 5.97 lb)	2.50 9.95 lb)	4.00 15.92 lb)	
		Bag size = 15" X 29-1/2"		* lb

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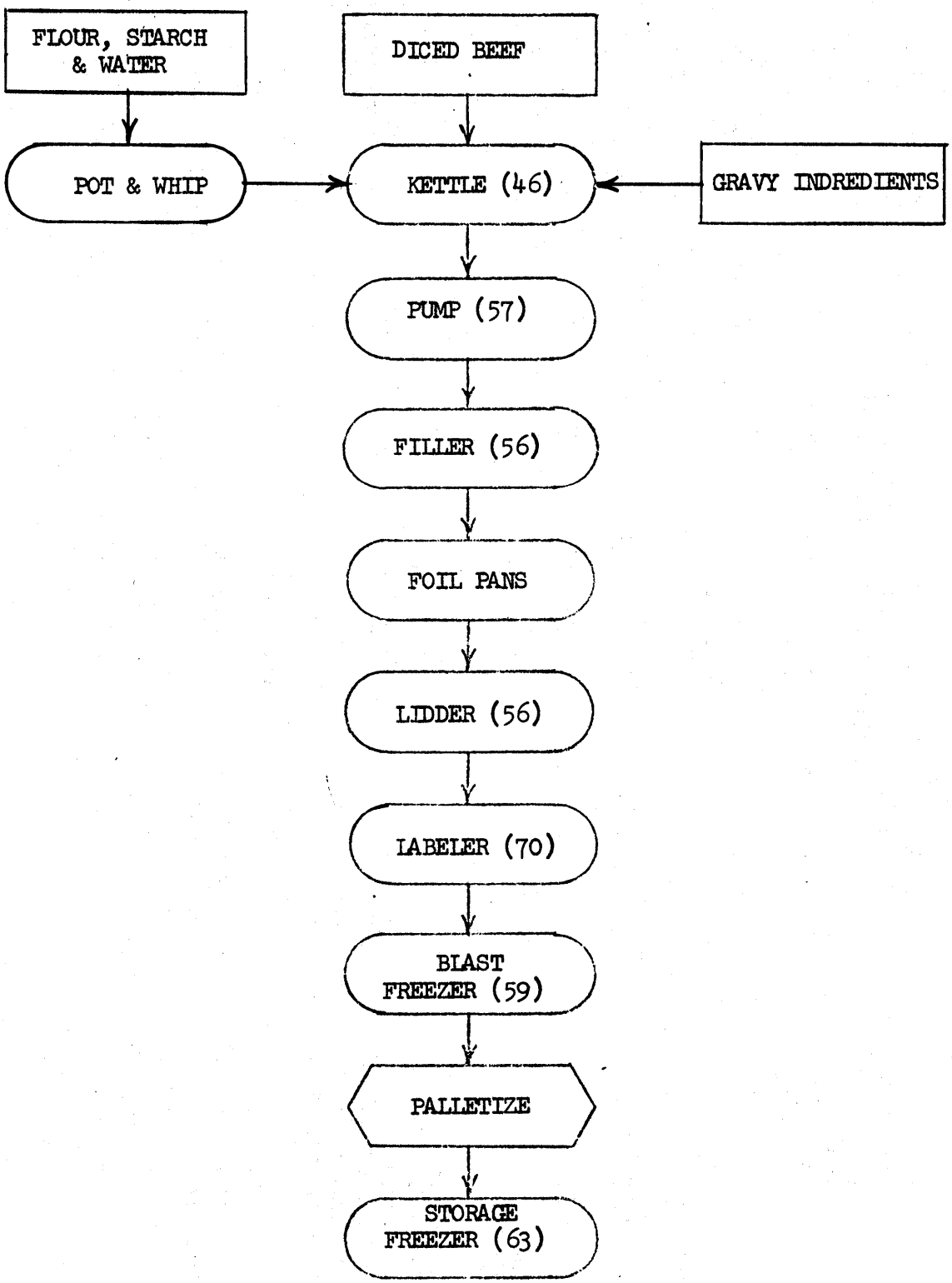
*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

BRAISED BEEF CUBES



OPERATIONAL GUIDE FOR CREAMED GROUND BEEF L-30

INGREDIENTS AND BATCH SIZE

Controlling Equip: Steam Kettle
Container Wt: 6.25 lb

Servings/Container: 10 of 10 oz

Est. Prep Time: Approx 3.9 hours
Approx. Yield: 400, 600, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	400 Servings 40 gal Kettle (lb)	600 Servings 60 gal Kettle (lb)	800 Servings 80 gal Kettle (lb)	Utensils
1	Beef, Bnls, Ground	310	24.00	96.00	144.00	192.00	Kettle with mixing Paddle
2	Celery, ground	**SP	0.01	0.04	0.06	0.08	
	Pepper, black, ground	15480	0.03	0.12	0.18	0.24	
	Soup & Gravy base, beef	11440	1.65	6.60	9.90	13.20	
	Onion, dehydrated, chopped	5290	1.01	4.04	6.06	8.08	
3	Col-Flo 67, starch	**SP	1.70	6.80	10.20	13.60	Stock pot whip
	Flour, wheat	8300	1.88	7.52	11.28	15.04	
	Water, tap		20.00	80.00	120.00	160.00	
4	Non-fat dry milk	3050	6.35	25.40	38.10	50.80	Stock pot whip
	Water, tap		23.28	93.12	139.68	186.24	
5	Water, tap		To make 6.25 gal	To make 25.00 gal	To make 37.50 gal	To make 50.00 gal	Measuring stick

* FSC Group 89 Subsistence Catalog 1 Jan 77 (C8900-SL)

** Special Purchase

OPERATIONAL GUIDE FOR CREAMED GROUND BEEF L-30

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify component and ingredients as to number and amounts received from Prep. Area.		
00-	Deliver beef and ingredients to steam kettle area.		10
1-	Place ground beef in steam kettle, turn steam on and activate mixer at low speed, brown beef. Drain, discard liquid.		10
2-	Add celery, pepper, soup and gravy base, and onions to browned beef. Mix thoroughly.		5
3-	In a separate pot, mix starch, flour and 1/5 of water to make a slurry; mix well; crush all lumps.		5
	Turn off steam on kettle. While still agitating add flour-starch slurry to beef mixture in kettle with remaining water from step 3. After thorough blending, turn on steam, heat to thicken (about 20 minutes at 190°F).		20
4-	In separate pot mix the dry milk powder with about 1/5 of water to rehydrate the milk; crush all lumps. Add rehydrated milk to beef mixture. To kettle with slow agitation also add remaining water (not used in rehydrating milk). Heat to 170°F. CAUTION: DO NOT SCORCH BY HEATING TO RAPIDLY.		
5-	Raise level (volume) of beef mixture in kettle with tap water to the required number of gallons, using measuring stick. Mix thoroughly, shut off steam.		10
6-	Transfer cream ground beef to filler tank.		20
7-	Fill half-size steam table pans with 6.25 pounds of creamed ground beef.		10
8-	Pass pans thru lidding machine to cover and close.		10

	Check Points	Time (Minutes)
10- Pass pans thru labelling machine. Labels should read:		10

Creamed Ground Beef Date Prepared_____

Net Wt.: 6.25 lb Servings 10 of 10 oz

Reconstitution Instructions:

Heat covered pans in oven at 350°F (176°C) until internal temperature of the product reaches a minimum of 160°F (71°C).

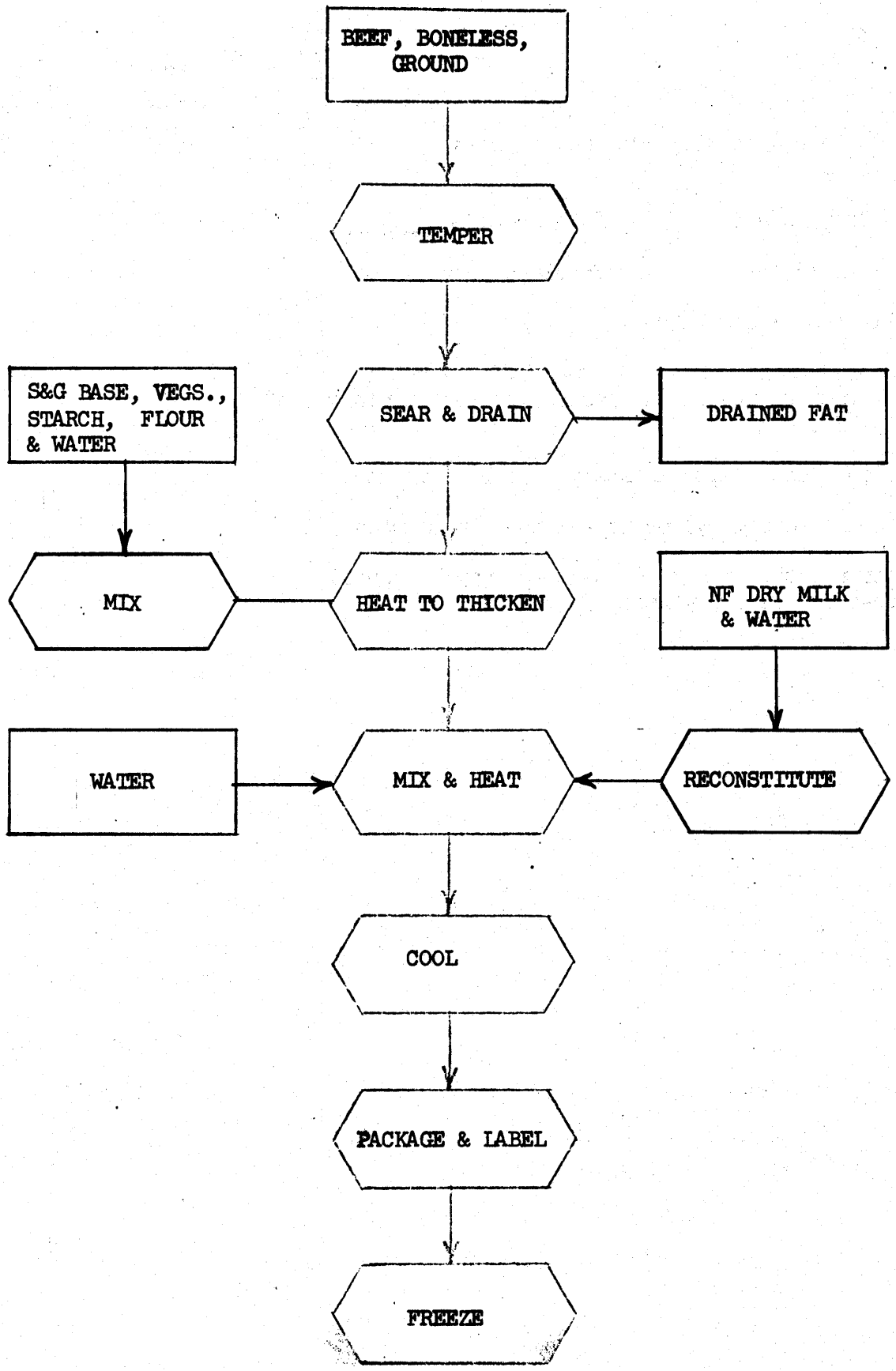
Convection ovens - approximately 1 hour 15 minutes

Conventional (ordinary) ovens - 1 hour 30 minutes

Alternatively the Creamed Ground Beef may be poured into steam kettle and warmed to 160°F.

MATERIAL FLOW

CREAMED GROUND BEEF



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - CREAMED GROUND BEEF

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire tie; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

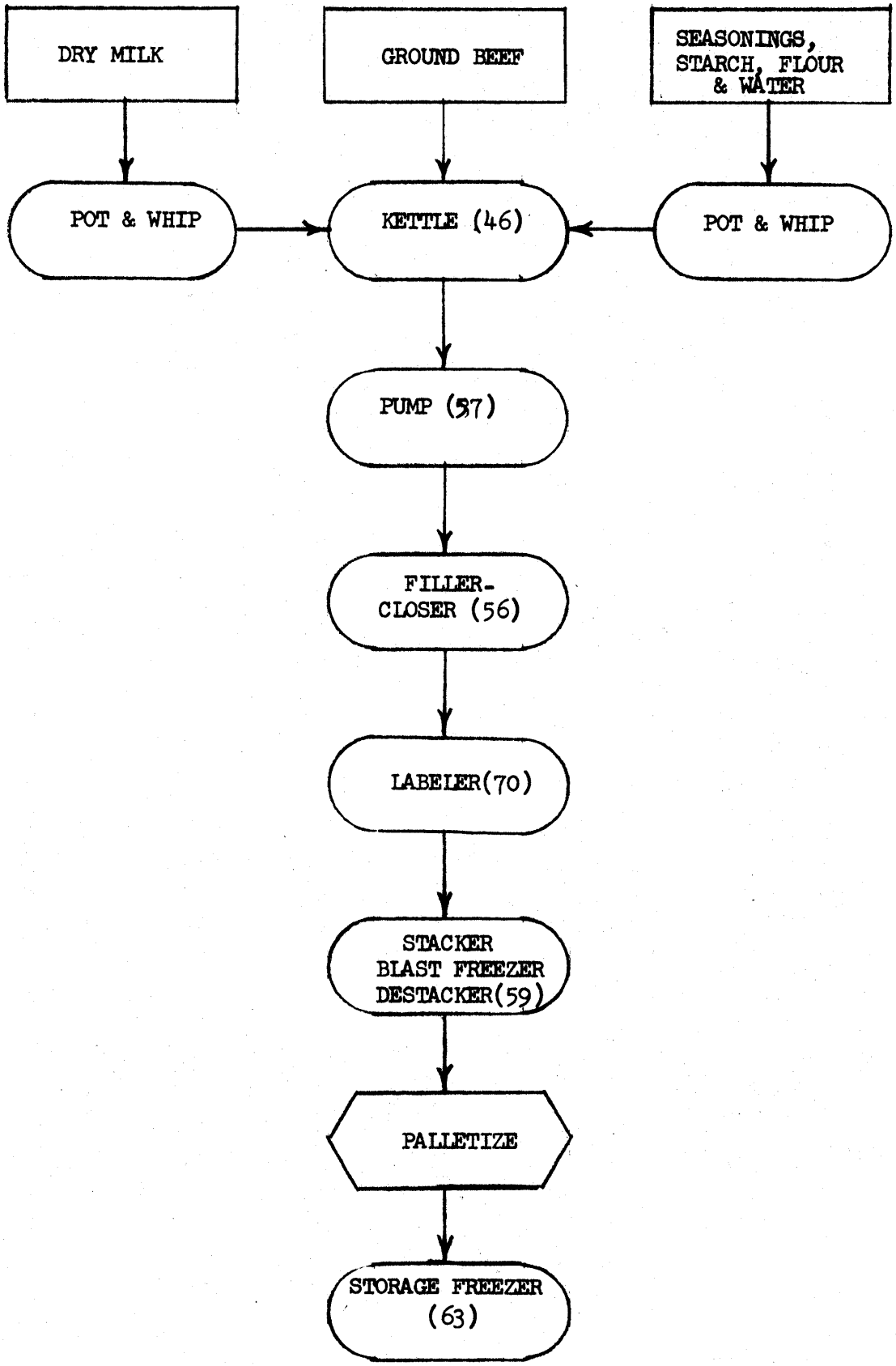
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	400 Servings (lb)	600 Servings (lb)	800 Servings (lb)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, boneless, ground	96 (4 bags 24.00 lb)	144 (6 bags 24.00 lb)	192 (8 bags 24.00 lb)	Beef for creamed ground beef 24.00 lb
		Bag size = 15" X 29-1/2"		
Celery, ground	0.04 (1 bag	0.06 (1 bag	0.08 (1 bag	Celery, pepper, gravy base & onions for creamed ground beef * lb
Pepper, black, ground	0.12 7.80 lb)	0.18 16.20 lb)	0.24 21.60 lb)	
Soup & gravy base, beef	6.60	9.90	13.20	
Onion, dehydrated, chopped	1.04	6.06	8.08	
		Bag size = 15" X 29-1/2"		
Col-Flo 67 starch	6.80 (1 bag	10.20 (1 bag	13.60 (1 bag	Starch and flour for creamed ground beef * lb
Flour, wheat	7.52 14.32 lb)	11.28 21.48 lb)	15.04 28.64 lb)	
		Bag size = 15" X 29-1/2"		
Non-fat dry milk	25.40 (1 bag 25.40 lb)	38.10 (2 bags 19.05 lb)	50.80 (1 bag 25.40 lb)	Milk for creamed ground beef * lb
		Bag size = 15" X 29-1/2"		

*Appropriate weight to be written on label is dependent on number of servings.

EQUIPMENT UTILIZATION

CREAM GROUND BEEF



OPERATIONAL GUIDE FOR CHICKEN

FRIED BEEF PATTIES L-152

INGREDIENTS & BATCH SIZE

Controlling Equip: Breader-fryer
Container Net Wt:

Standard Servings: 2 patties

Est. Prep Time: 2.4 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Utensils
1	Flour, wheat	8300	3.00	9.00	15.00	24.00	
	Monosodium Glutamate	15260	0.06	0.18	0.30	0.48	
	Salt	15850	4.00	12.00	20.00	32.00	Pot & Whip
	Pepper	15480	0.02	0.06	0.09	0.14	
2	Beef Patties (3 oz) 2 patties per serving	340	38.00	114.00	190.00	304.00	Breader-fryer Baking sheets
3	Milk, nonfat, dry	3050	0.41	1.23	2.05	3.28	
	Water, tap		3.75	11.25	18.75	30.00	
	Eggs, whole, slightly beaten	2620	2.00	6.00	10.00	16.00	
(a)	Bread crumbs, dry		4.50	13.50	22.50	36.00	
	Salt	15850	0.25	0.75	1.25	2.00	
	Pepper	15480	0.02	0.	0.09	0.14	

*FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

OPERATIONAL GUIDE FOR
CHICKEN FRIED BEEF PATTIES L-152
INSTRUCTIONS

		Check Points	Time (Minutes)
NOTE:	This product requires that the patties be dredged in flour, dipped in egg wash and dredged (breaded) with bread crumbs.		
0-	Verify components, ingredients including (1) flour mixture, (2) Beef Patties, (3a) Egg wash and (3b) breading mixture		10
1-	Load dry section of breading machine with (1) flour mixture.		10
2-	Pass beef patties thru breading machine to dredge. Place dredged patties on baking sheets.		30
3-	When all patties have been dredged, remove flour mixture from breading machine and replace with bread crumb mixture (3b) in dry section. Place egg wash (3a) in wet section of breading machine. Place breading machine in line with preheated (375°F) deep fat fryer. Pass flour dredged patties thru breader-fryer and cook patties to 165°F (about 2-3 minutes).		50
4-	Overlap or shingle 16 patties in half-size steam table aluminum pans.		20
5-	Pass filled pans thru lidding machine to cover and close.		10
6-	Pass covered pans thru labelling machine. Labels should read:		10

Chicken Fried Beef Patties
Net Wt:

Date Prepared:_____
Servings: 8 of 2 patties

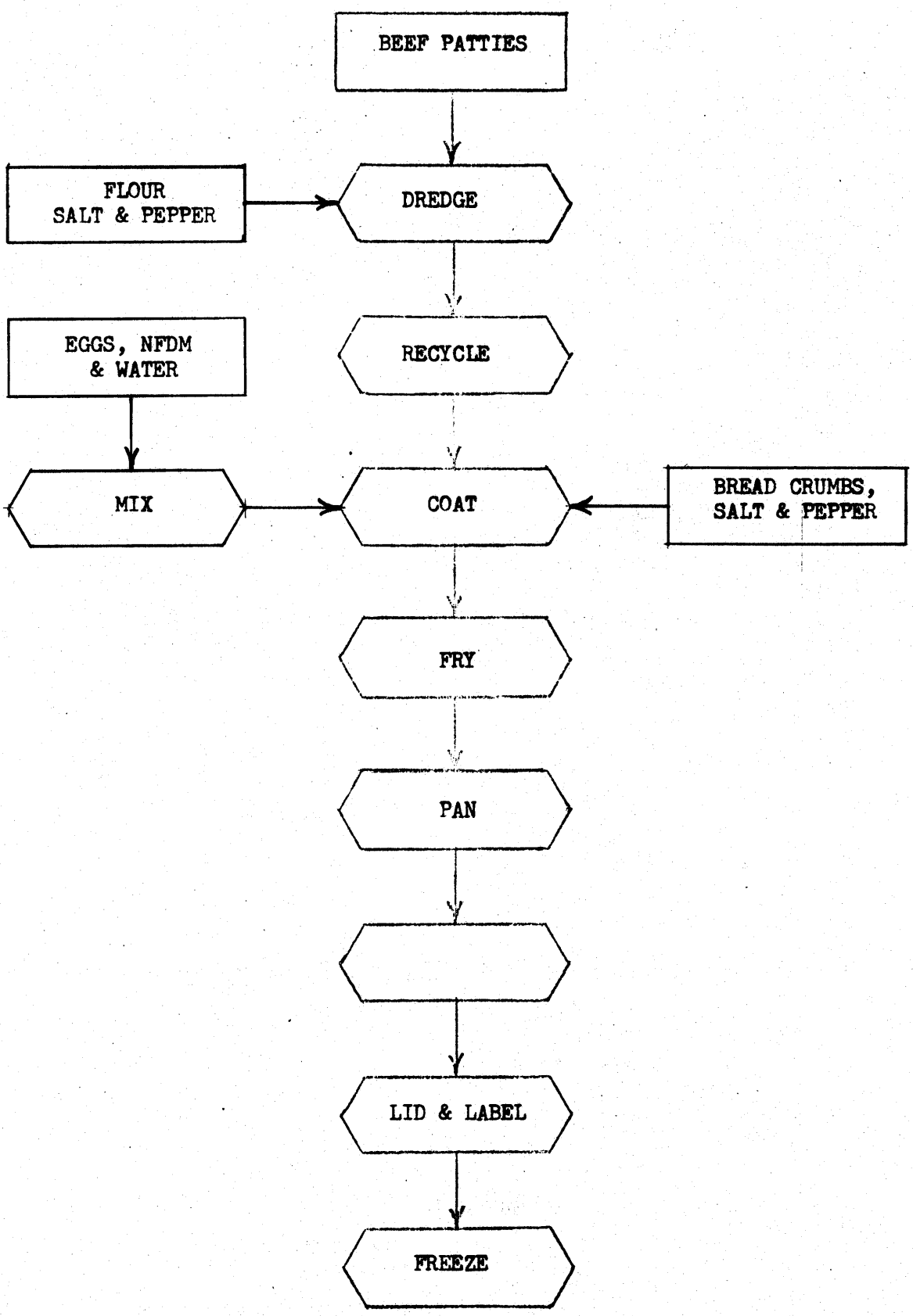
Reconstitution Instructions:

Place covered pans in 325°F preheated oven and heat to internal temperature of 165°F.

Convection Oven - 1 hour, 15 minutes
Conventional (ordinary) ovens - 1 hour, 30 minutes

MATERIAL FLOW

CHICKEN FRIED BEEF PATTIES



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - CHICKEN FRIED BEEF PATTIES

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Label Instructions for Polyethylene Bag or Box (if used)
Flour, wheat	9.00 (1 bag 9.00 lb)	15.00 (1 bag 15.00 lb)	24.00 (1 bag 24.00 lb)	Flour for chicken fried beef patties * lb
	Bag size = 15" X 29-1/2"			
Monosodium Glutamate	0.18 (1 bag	0.30 (1 bag	0.48 (2 bags	Monosodium glutamate, salt and pepper for chicken fried beef patties * lb
Salt	12.00 12.234 lb)	20.00 70.39 lb)	32.00 16.32 lb)	
Pepper	0.054	0.09	0.144	
	Bag size = 15" X 29-1/2"			
Beef patties (3 oz) 2 patties per serving	114.00 (6 bags 19.00 lb)	190.00 (10 bags 19.00 lb)	304.00 (16 bags 19.00 lb)	Beef patties for chicke fried beef patties) 19.00 lb
	Bag size = 15" X 29-1/2"			
Milk, nonfat, dry	1.23 (1 bag	2.05 (2 bags	3.28 (2 bags	Milk and eggs for chicken fried beef patties * lb
Eggs, whole, slightly beaten	6.00 7.23 lb)	10.00 6.03 lb)	16.00 9.64 lb)	
	Bag size = 15" X 29-1/2"			
Bread crumbs, dry	13.50 (1 bag	22.50 (1 bag	36.00 (2 bags	Bread crumbs, salt and pepper for chicken fried beef patties * lb
Salt	0.75 14.304 lb)	1.25 23.84 lb)	2.00 19.072 lb)	
Pepper	0.054	0.09	0.144	
	Bag size = 15" X 29-1/2"			

*Appropriate weight to be written is dependent on number of servings.

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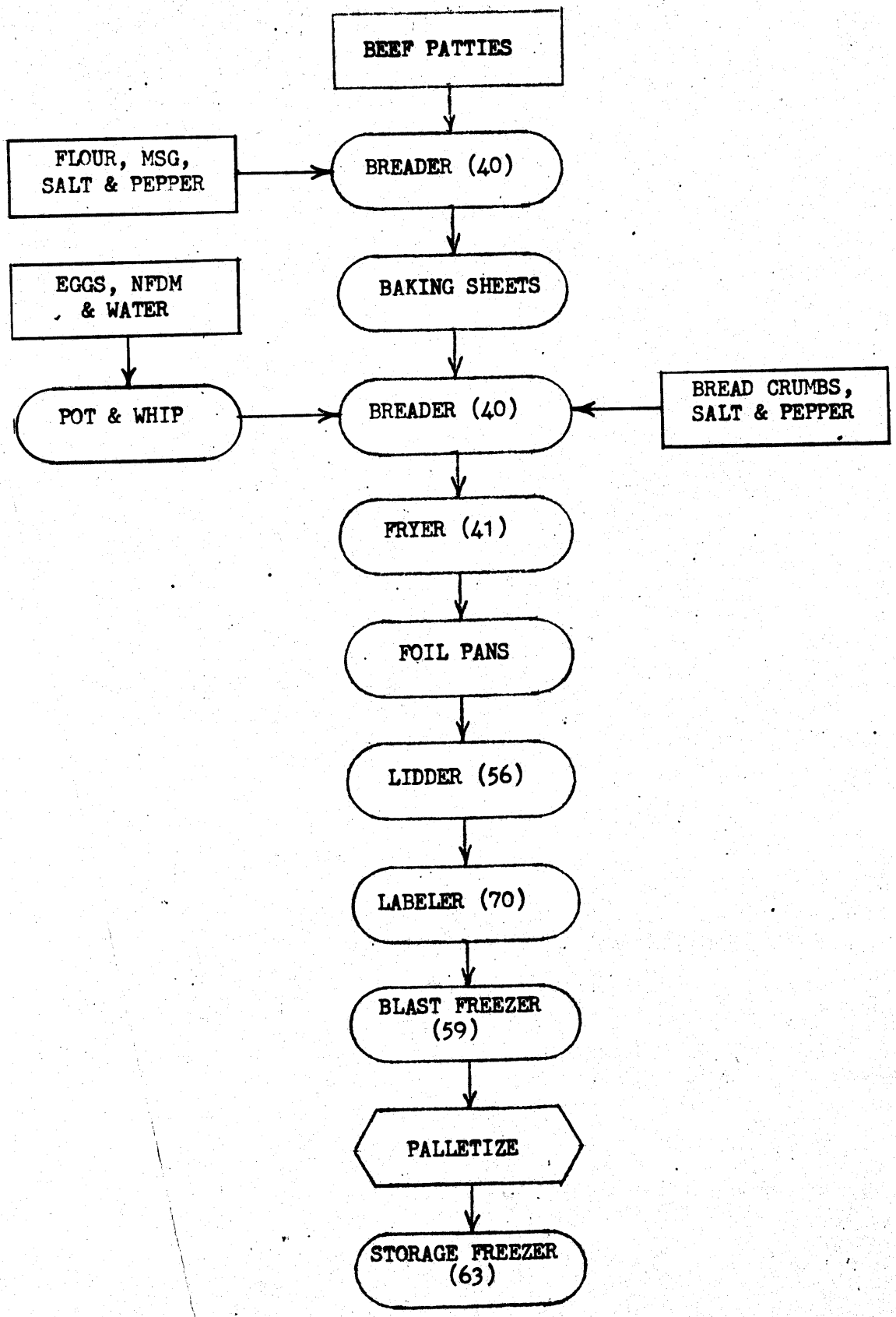
EQUIPMENT UTILIZATION

CHICKEN FRIED BEEF PATTIES



OPERATIONAL GUIDE FOR

SIMMERED CORNED BEEF L-44

INGREDIENTS & BATCH SIZE

Controlling Equip: Kettles
Container Net Wt:

Standard Servings: 4 oz

Est. Prep Time: 9.0 hours
Approx. Yield: 300 & 600 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 80 gal Kettle (lb)	600 Servings 2-80 gal Kettles (lb)	Utensils
1	Corned Beef, whole	250	45.00	135.00	270.00	Kettles
	Water, cold		To cover	To cover	To cover	Skimmer or Strainer
2	Bay leaves, chopped or whole	14320	0.01	0.03	0.06	
	Garlic, dehydrated, ground	4700	0.04	0.12	0.72	Baking sheets
	Salt, table	15850	0.63	1.89	3.78	
	Sugar, gran., white	9930	1.00	3.00	6.00	Meat slicer

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 1977

OPERATIONAL GUIDE FOR
SIMMERED CORNED BEEF L-44
INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients and spices as to number and amounts received from Prep. Area.		10
00-	Deliver corned beef and other items to Kettle Area.		
1-	Place whole pieces of corned beef in steam kettle with enough water to cover. Add all seasonings.		10
2-	Heat to boil, reduce heat to simmer and cook for approximately five hours to an internal temperature of 180°F. During the cooking period remove scum that rises to the surface.		300
3-	At the end of cook shut off steam. Turn cooling water on kettle, cooling corned beef for one hour in its own liquid. Remove pieces of corned beef from kettle and place on baking sheets to cool down. Reserve some liquid for step 4 below. Corned beef may be refrigerated overnight prior to slicing.		60
4-	Trim excess fat off cooled corned beef and slice 3/16 inch thick across the grain to prevent shredding. Place 2-½ pounds of the sliced product in half-size steam table aluminum pans and add ½ pound of cooking liquid over meat.		40
5-	Pass panned sliced corned beef thru lidding machine to cover and close.		10
6-	Pass covered pans thru labelling machine. Labels should read:		10

Sliced Corned Beef — Date Prepared:_____
Container Net Wt: — Servings: 10 of 4oz each

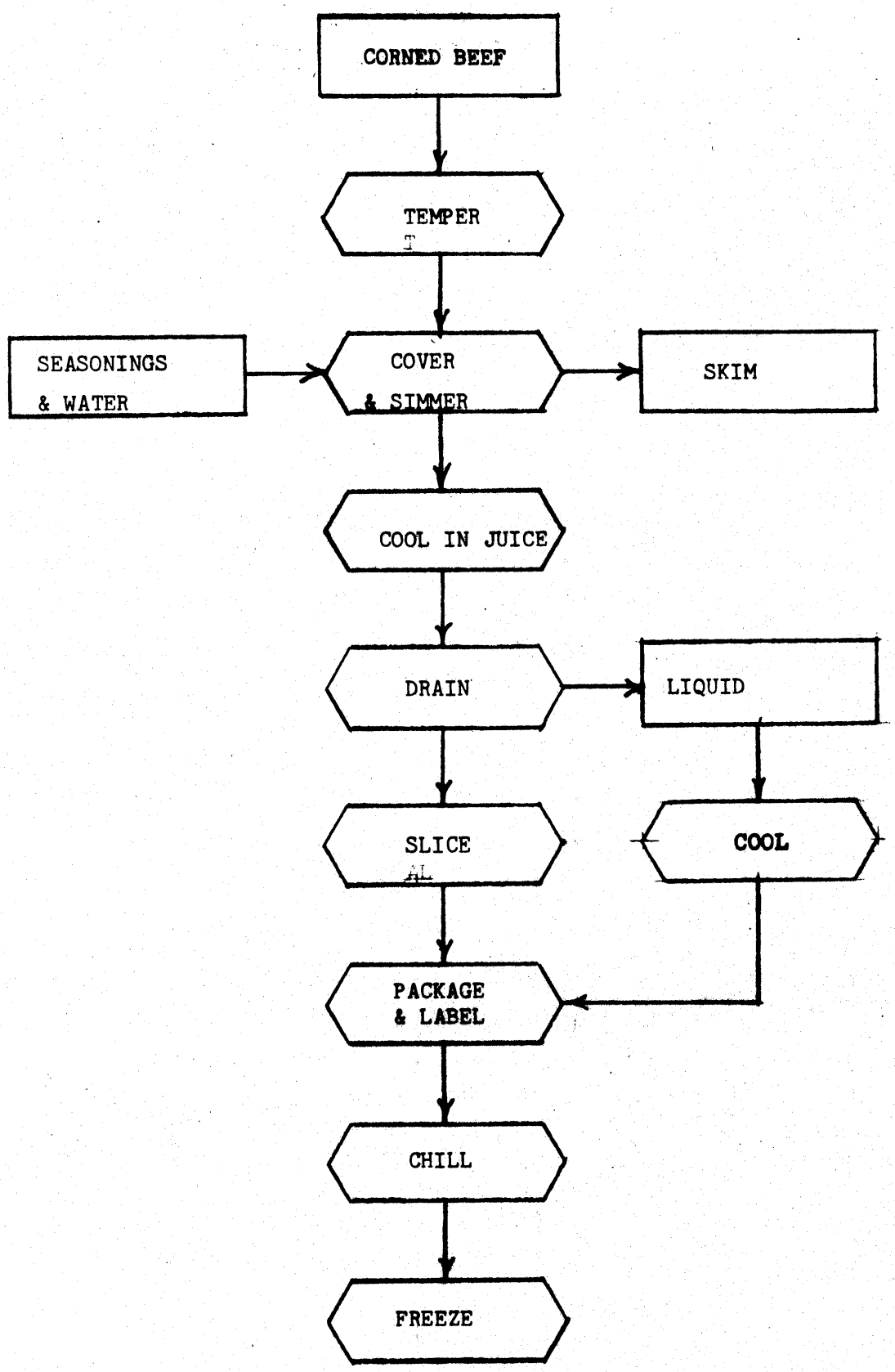
Reconstitution Instructions:

Heat covered pans in preheated 325°F ovens to internal temperature of 165°F.

	Check Points	Time (Minutes)
Convection ovens - 1 hour 15 minutes		
Conventional (ordinary) ovens - 1 hour 30 minutes		
Alternatively, covered pans may be heated in 15 psi steam cooker to 165°F.		

MATERIAL FLOW

SIMMERED CORNED BEEF



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SIMMERED CORN BEEF

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

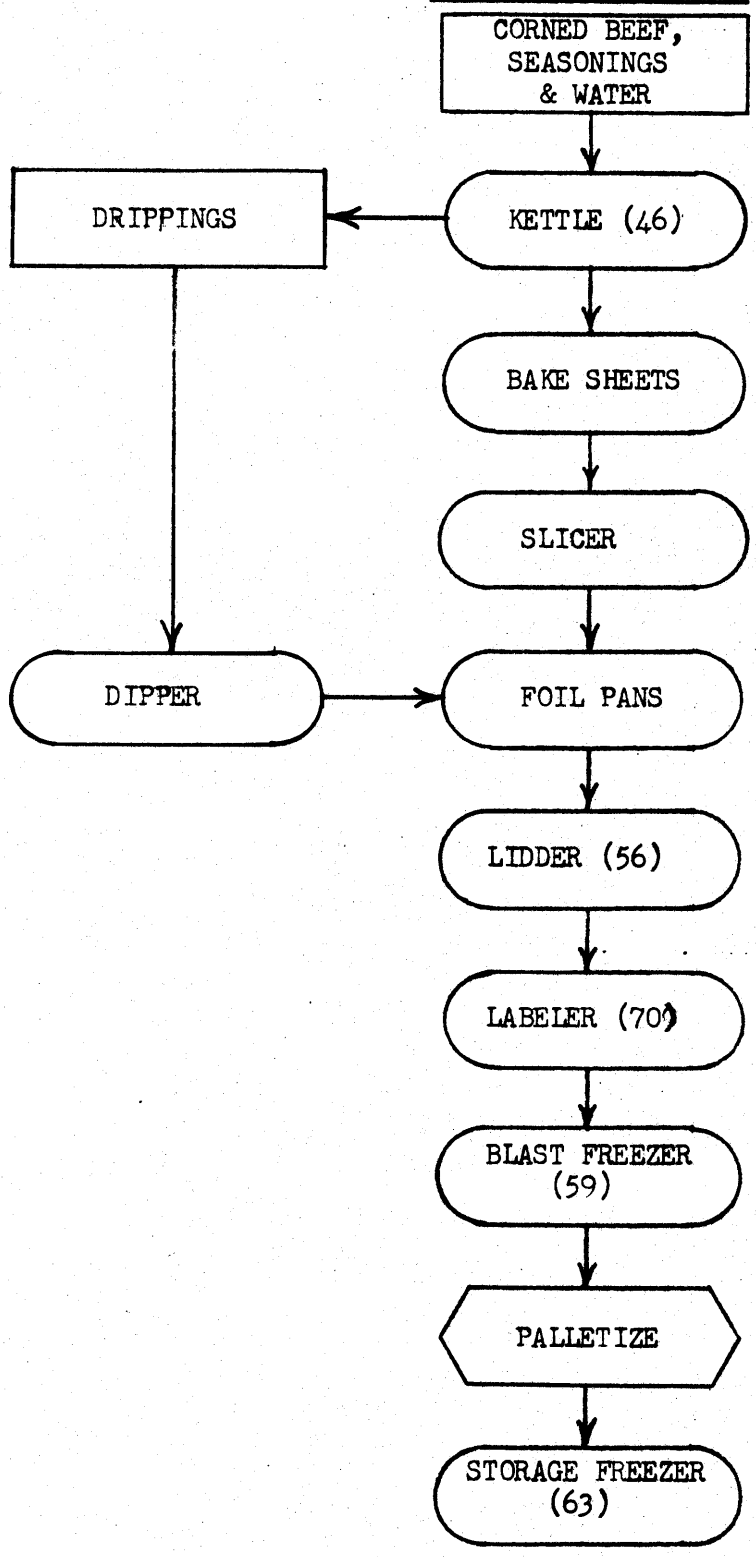
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lb)	600 Servings (lb)	Label Instructions for Polyethylene Bag or Box (if used)
Corned beef, whole	135.00 (6 bags 22.50 lb)	270.00 (12 bags 22.50 lb)	Corned beef for simmered corn beef
	Bag size = 15" X 29-1/2"		22.50 lb
Bay leaves, chopped or whole	0.03	0.06	Bay leaves, garlic, salt and sugar for simmered corn beef
Garlic, dehydrated, ground	0.12 (1 bag	0.24 (2 bags	
Salt, table	1.89 5.04 lb)	3.78 5.04 lb)	
Sugar, granulated, white	3.00	6.00	
	Bag size = 10" X 18"		5.04 lb

26 August 77

EQUIPMENT UTILIZATION

SIMMERED CORNED BEEF



OPERATIONAL GUIDE FOR YANKEE POT ROAST L-10-2
INGREDIENTS & BATCH SIZE

Controlling Equip: Ovens
Container Net Wt:

Standard Servings: 4 oz meat & 4 oz gravy

Est. Prep Time: 5.9 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Utensils
1	Beef, Boneless Roast	170	40.00	120.00	200.00	320.00	OVENS
	Water, tap (½ inch in bottom of pans)						Roast pans Baking Sheets Slicer
2	Carrots, sliced, ½in.	4210	5.14	15.42	25.70	41.12	
3	GRAVY			40-gal Kettle	40-gal Kettle	60-gal Kettle	
	Drippings & Water		20.50	61.50	102.50	164.00	Kettle (agitating)
	Tomatoes, whole, canned in heavy puree	SP**	9.35	28.05	46.75	74.80	
	Onions, dry, diced ½ x ½ in.	5320	2.70	8.10	13.50	21.60	
	Vinegar, cider	16000	1.39	4.17	6.95	11.12	
	Salt, table	15850	0.49	1.47	2.45	3.92	
	Parsley, dehydrated	5440	0.07	0.21	0.35	0.56	
	Sugar, granulated	9930	0.18	0.54	0.90	1.44	
	Pepper, black, grd	15480	0.02	0.06	0.10	0.16	
	Garlic, fresh, chopped	4710	0.01	0.03	0.05	0.08	Pot
	Thyme, ground	15990	0.01	0.03	0.05	0.08	Whip
	Bay leaves, ground	14320	0.001	0.003	0.005	0.008	
	Clove, ground	14540	0.004	0.012	0.020	0.032	
4	Col-Flo 67, starch	SP**	0.69	2.07	3.45	5.52	
	Flour, wheat	8300	0.49	1.47	2.45	3.92	
	Water, tap		3.00	9.00	15.00	24.00	
5	Water		To make 3.25 gal	To make 9.75 gal	To make 16.25 gal	To make 26. gal	Measuring Stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77
** Special Purchase

OPERATIONAL GUIDE FOR YANKEE POT ROAST L-10-2

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients and spices as to number and amounts received from Prep. Area.		10
00-	Deliver beef roasts to oven area and all other items to kettle area.		
1-	Place roasts on racks in large roasting pans with about ½ inch of water covering bottom of pans. Bake in preheated 350°F. Add additional water during cooking to maintain the ½-inch level in pan bottoms. Remove roasts from oven and transfer to baking sheets to cool. Reserve drippings for step 3 below. Slice pot roasts when cool on meat slicer about 3/16 inch thick. Place 2-½ pounds of sliced roast in half-size steam aluminum pans. Hold for step 7 below.		150
2-	Steam sliced carrots until slightly tender in preheated pass thru steamer (about 5 minutes); drain and hold for step 5 below.		10
3-	Place drippings and water in steam kettle and add tomatoes, onions, vinegar, salt, sugar, parsley, pepper, garlic, thyme, bay leaves (crushed fine), cloves; mix well and heat to 160°F.		20
4-	In a pot make slurry of water, flour, and starch; mix well; crush all lumps; add to tomato mixture in kettle. Heat to 180°F for five minutes with agitation.		15
5-	Add carrots to gravy mixture in kettle, mix well. Shut off steam. Raise (volume) level of product in kettle with water to required number of gallons using measuring stick.		10
6-	Transfer gravy to filler.		10
7-	Top (fill) panned beef roast slices with 2-½ pounds of gravy.		10
8-	Pass panned Pot Roast thru lidding machine to cover and close.		10
9-	Pass covered pans thru labelling machine.		

	Check Points	Time (Minutes)

Labels should read:

Yankee Pot Roast
Container Net Wt:

Date Prepared:_____
Servings: 10 of 4 oz of roast and 4 oz of gravy

Reconstitution Instruction:

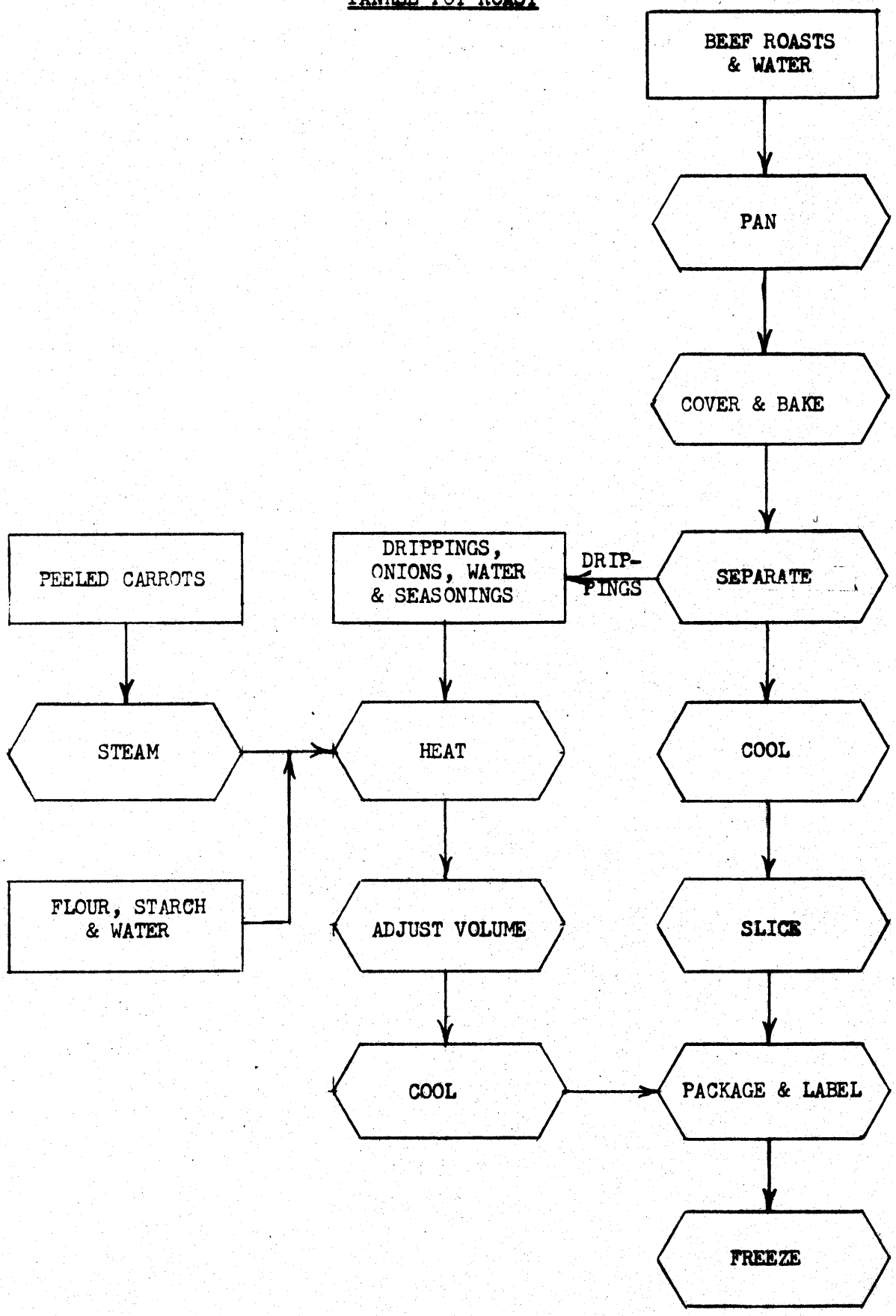
Heat covered pans in preheated 325°F ovens to internal temperature of 165°F.

Convection oven - 1 hour 15 minutes

Conventional (ordinary) oven - 1 hour 30 minutes

MATERIAL FLOW

YANKEE POT ROAST



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - YANKEE POT ROAST

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, boneless roast	120.00 (6 bags 20.00 lb)	200.00 (10 bags 20.00 lb)	320.00 (16 bags 20.00 lb)	Beef for yankee pot roast 20.00 lb
	Bag size = 15" X 29-1/2"			
Carrots, sliced, 1/2"	15.42 (1 bag 15.42 lb)	25.70 (2 bags 12.85 lb)	41.12 (4 bags 13.71 lb)	Carrots for yankee pot roast * lb
	Bag size = 15" X 29-1/2"			
GRAVY				
Tomato, whole, canned in heavy puree	28.05 (2 bags 14.03 lb)	46.75 (3 bags 15.58 lb)	74.80 (5 bags 14.96 lb)	Tomatoe for yankee pot roast (Gravy) * lb
	Bag size = 15" X 29-1/2"			
Onions, dry, diced, 1/2 X 1/2 inch	8.10 (1 bag 8.10 lb)	13.50 (1 bag 13.50 lb)	21.60 (2 bags 10.80 lb)	Onions for yankee pot roast (Gravy) * lb
	Bag size = 15" X 29-1/2"			
Vinegar, cider	4.17	6.95	11.12	Vinegar, salt, parsley, sugar, pepper, garlic, thyme, bay leaves and clove for yankee pot roast (Gravy)
Salt, table	1.47	2.45	3.92	
Parsley, dehydrated	0.21	0.35	0.56	
Sugar, granulated	0.54 (1 bag 6.525 lb)	0.90 (2 bags 5.44 lb)	1.44 (2 bags 8.70 lb)	
Pepper, black, ground	0.06	0.10	0.16	
Garlic, fresh, chopped	0.03	0.05	0.08	
Thyme, ground	0.03	0.05	0.08	
Bay leaves, ground	0.003	0.005	0.008	
Clove, ground	0.012	0.02	0.032	
	Bag size = 10" X 18"			* lb

*Appropriate weight to be written is dependent on number of servings.

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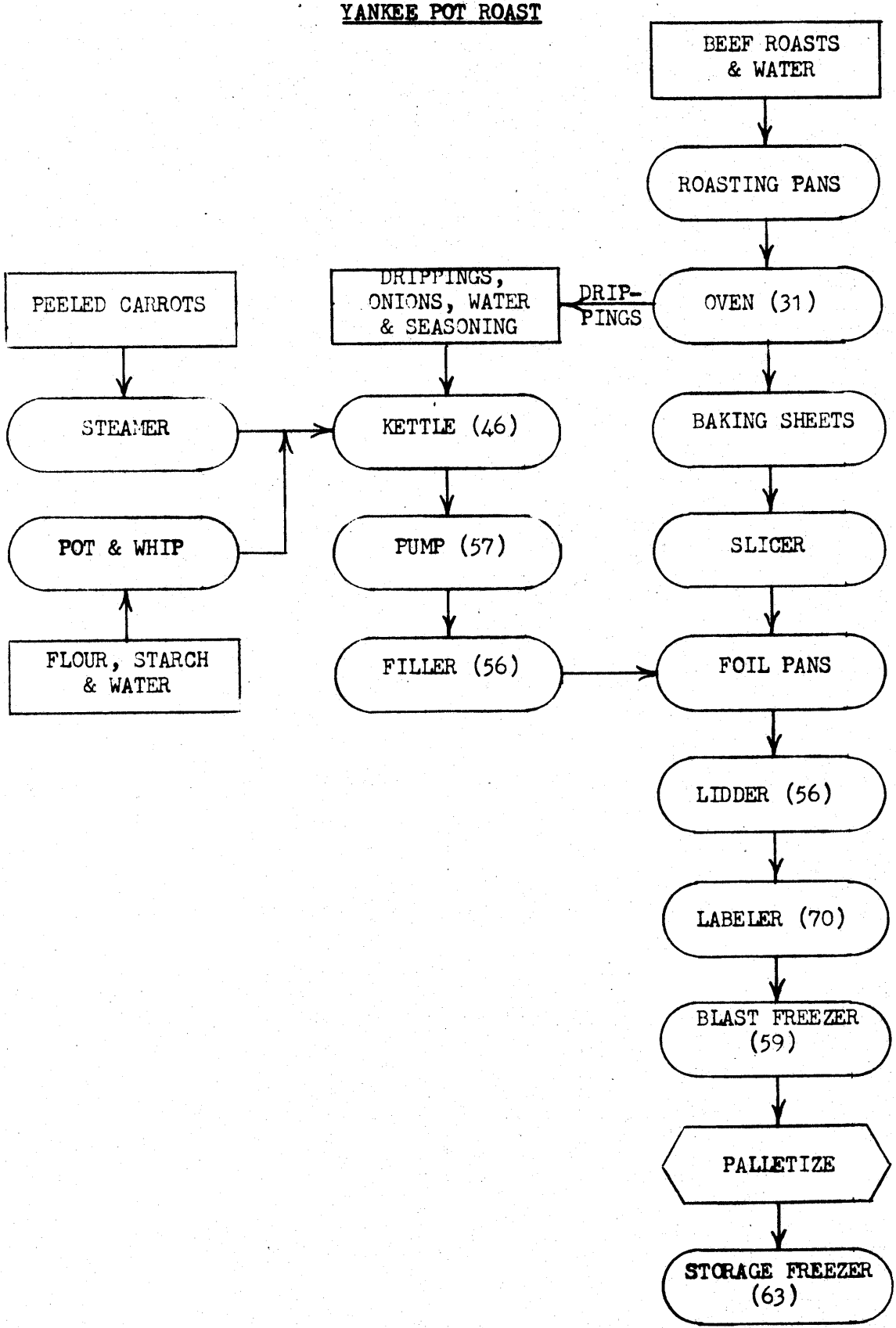
GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - YANKEE POT ROAST (Cont'd)

Ingredients	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Label Instructions for Polyethylene Bag or Box (if used)
GRAVY (Cont'd)				
Col-Flo 67, starch	2.07 (1 bag	3.45 (1 bag	5.52 (1 bag	Starch and flour for
Flour, wheat	1.47 3.54 lb)	2.45 6.90 lb)	3.92 9.44 lb)	yankee pot roast (Gravy)
	Bag size = 10" X 18"			* lb

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

YANKEE POT ROAST



OPERATIONAL GUIDE FOR PRECOOKED ROAST BEEF L-5

(FOR SLICED BEEF AND GRAVY)

INGREDIENTS & BATCH SIZE

Controlling Equip: Tank, (Boiled-in-Bag)
Container Net Wt: 5 lb

Servings/Container - 10 of 4 oz Beef; 4 oz gravy

Est. Prep Time: 7.5 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Utensils
1	Beef, Bnls, oven Roast	360	40.00	120.00	200.00	320.00	Cooking Bags
	Salt, table	15850	0.38	1.14	1.90	3.04	Vacuum closure
	Pepper, black	15480	0.02	.06	0.10	0.16	Meat slicer
2	Gravy			40-gal Kettle	40-gal Kettle	40-gal Kettle	
(A)	Drippings or Shortening	14080	1.63	4.89	8.15	13.04	Kettle Whip
	Flour, wheat	8300	0.93	2.79	4.65	7.44	
	Water, tap		22.31	66.93	111.55	178.48	
	Soup & Gravy Base, Beef	11440	0.50	1.50	2.50	4.00	
	Caramel Coloring Powder	SP**	0.01	0.03	0.05	0.08	
	Col-flo 67, starch	SP**	0.62	1.86	3.10	4.96	
	Pepper, black	15480	0.02	0.06	0.10	0.16	
3	Water, tap		To make 3.5 gal	To make 10.5 gal	To make 17.5 gal	To make 28.0 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-S1) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR
PRECOOKED ROAST BEEF L-5
(FOR SLICED BEEF AND GRAVY)

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients and spices as to number and amounts received from Prep. Area.		
00-	Deliver oven roasts to "Boil-in-Bag Tank" area and remaining ingredients to kettle area.		10
1-	Rub roast with salt and pepper, place in cooking bags, taking care not to soil sealing area when inserting roasts. Vacuum seal bags. Place bagged vacuum-closed roasts in "Boil-in-Bag Tank" filled with preheated 190°F water and heat until internal temperature reaches 145°F (about 3 hours depending on weight of roasts). If roasts are not hung (suspended in water or separated in baskets), some agitation of the cooking water by air or steam should be utilized. Take care not to puncture bags while handling.		200
	(a) Immediately cool roast with ice cold water when internal temperature reaches 145°F. Roast should be water-cooled for at least one hour to prevent further cooking. Bagged roast may be cooled (held) in 40°F box for a period not to exceed 16 hours prior to slicing.		90
	(b) Remove cooled roasts from cooking bags, save drippings for gravy. Slice roasts 3/16" thick with mechanical slicer. Place 2-½ lb of sliced beef in half-size steam table aluminum pans. Hold for Step 5.		30
2-	Place drippings (or shortening) in 40-gal kettle; heat while sprinkling in flour with constant stirring to make smooth roux, cooking for ten minutes. In separate pot blend starch with cold water add remaing seasonings and coloring. Blend thoroughly. Heat mixture to 180°F with agitation to thicken and produce a smooth gravy.		20

	Check Points	Time (Minutes)
3- Raise level (volume) of product in kettle with water to required number of gallons. Mix well to blend. Shut off Steam.		10
4- Transfer cooled gravy to filling machine.		10
5- Top (fill) panned beef slices with 2-½ pounds of gravy.		10
6- Pass panned beef slices and gravy thru lidding machine to cover and close.		10

7- Pass covered pans thru labelling machine.
Labels should read:

Beef Slices and Gravy
Net Wt:

Date Prepared:_____
Servings: 10 of 4 oz beef
4 oz gravy

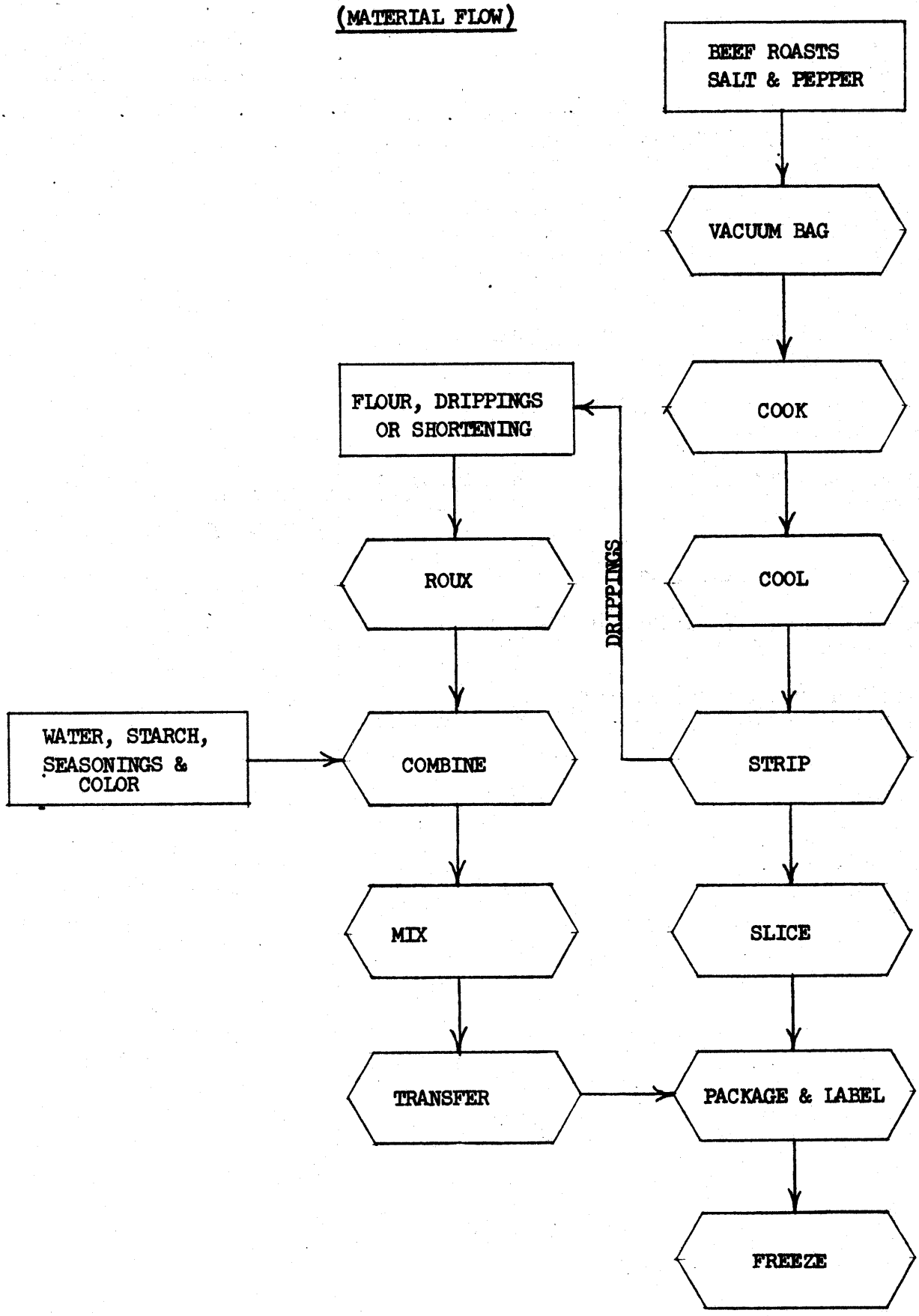
Reconstitution Instructions:

Heat covered pans in preheated 325°F ovens to internal temperature of 165°F.

Convection oven-1 hour 15 minutes
Conventional (ordinary) oven - 1 hour 30 minutes

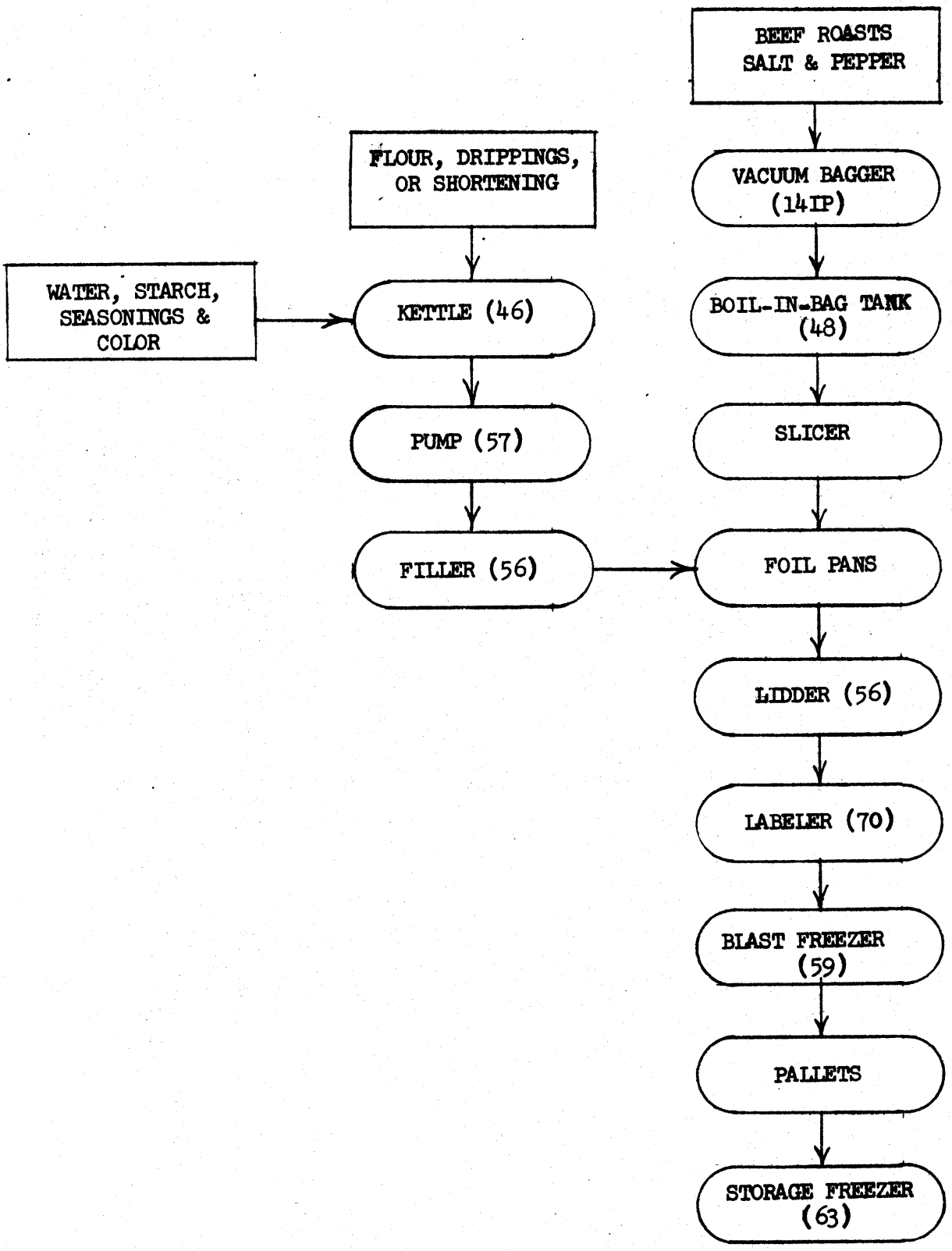
PRECOOKED ROAST BEEF

(MATERIAL FLOW)



PRECOOKED ROAST BEEF

(EQUIPMENT UTILIZATION)



OPERATIONAL GUIDE FOR CHILI CON CARNE
WITH BEANS L-28(2)

INGREDIENTS & BATCH SIZE

Controlling Equip: Kettles
Container Net Wt:

Standard Servings: 10 of 9 oz

Est. Prep Time: 4.3 hours
Approx. Yield: 300, 500, & 700 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	500 Servings 60-gal Kettle (lb)	700 Servings 80-gal Kettle (lb)	Utensils
1	Beef, bnls, ground	310	19.00	57.00	95.00	133.00	Kettles
2	Beef Soup & Gravy Base	11440	0.60	1.80	3.00	4.20	Pot
	Chili powder, ground	14480	0.52	1.56	2.60	3.64	
	Salt, table	15850	0.16	0.48	.80	1.12	
	Garlic powder	4700	0.01	.03	.05	0.07	
	Pepper, cayenne	15510	0.01	.03	.05	0.07	
	Paprika, ground	15440	0.08	.24	.40	0.56	
	Onion powder	SP**	0.05	.15	.25	0.35	
	Monosodium glutamate	15265	0.01	.03	.05	0.07	
	Cumin, ground	14660	0.01	.03	.05	0.07	
	Water, tap		19.50	58.50	97.50	136.50	
	Col-Flo 67, starch	SP**	0.20	0.60	1.00	1.40	
3	Tomato Paste, canned	6460	1.80	5.40	9.00	12.60	
	Tomatoes, canned, crushed	6420	5.20	15.60	26.00	36.40	
4	Beans, Red Kidney, canned, drained	3790	20.00	60.00	100.00	140.00	Strainer
5	Water		To make 6.75 gal	To make 20.25 gal	To make 33.75 gal	To make 47.25 gal	Measuring Stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR CHILI CON CARNE WITH BEANS L-28(2)

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components and ingredients as to number and amounts received from Prep. Area.		10
00-	Deliver ground beef and ingredients to Kettle Area.		
1-	Place ground beef in kettle; activate agitator; turn on steam; brown in its own fat until all pink color has disappeared. Drain or skim excess fat and discard.		10
2-	Make a slurry of starch, water, and spices; crush all lumps; add to browned (seared) beef in kettle; mix well. Heat to 200°F and simmer for 10 minutes with constant agitation. (Do not boil).		15
3-	Mix tomato paste and crushed tomatoes and add to beef mixture in kettle; mix thoroughly; heat to 180°F and maintain temperature for 5 minutes.		15
4-	Add drained kidney beans to kettle; mix well.		10
5-	Raise level (volume) of product to required number of gallons with hot water using measuring stick. Mix thoroughly. Shut off steam.		10
6-	Transfer product to filler. Fil 5 ob 14 oz in half-size steam table pan.		30
7-	Pass pans thru lidding machine to cover and close.		10
8-	Pass pans thru labelling machine. Labels should read:		

Chili Con Carne With Beans — Date Prepared: _____
Net Wt: 5 lb 14 oz — Servings: 10 of 9 oz

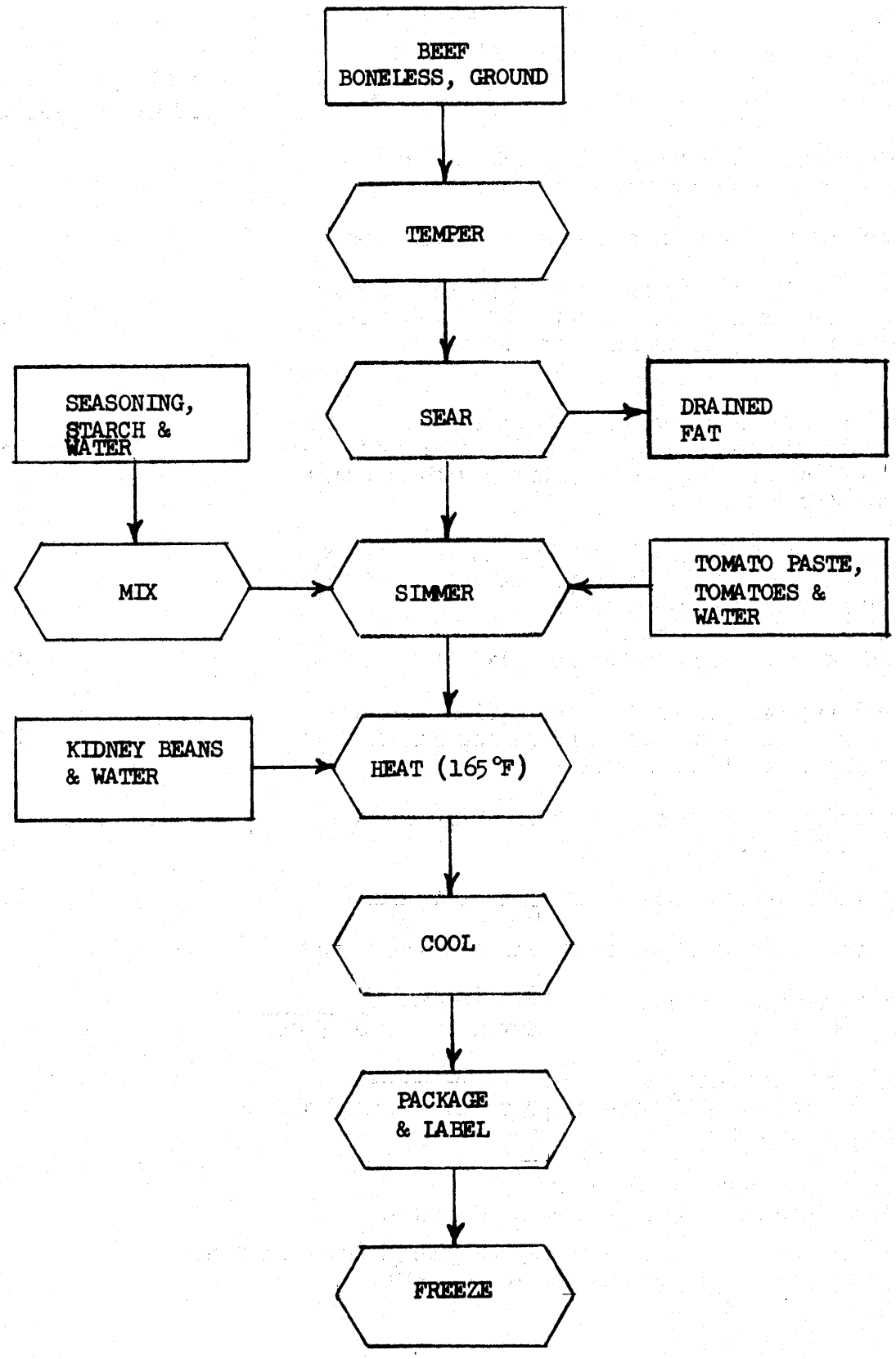
Reconstitution Instructions:
Heat pans covered in 325°F preheated ovens to internal temperature of 160°F.

Convection oven - 1 hour 15 minutes
Conventional (ordinary) oven - 1 hour 30 minutes

Alternatively the Chili Con Carne may be poured (removed from foil pans) in kettle or pot and heated in 160°F

MATERIAL FLOW

CHILI CON CARNE WITH BEANS



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - CHILI CON CARNE WITH BEANS

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

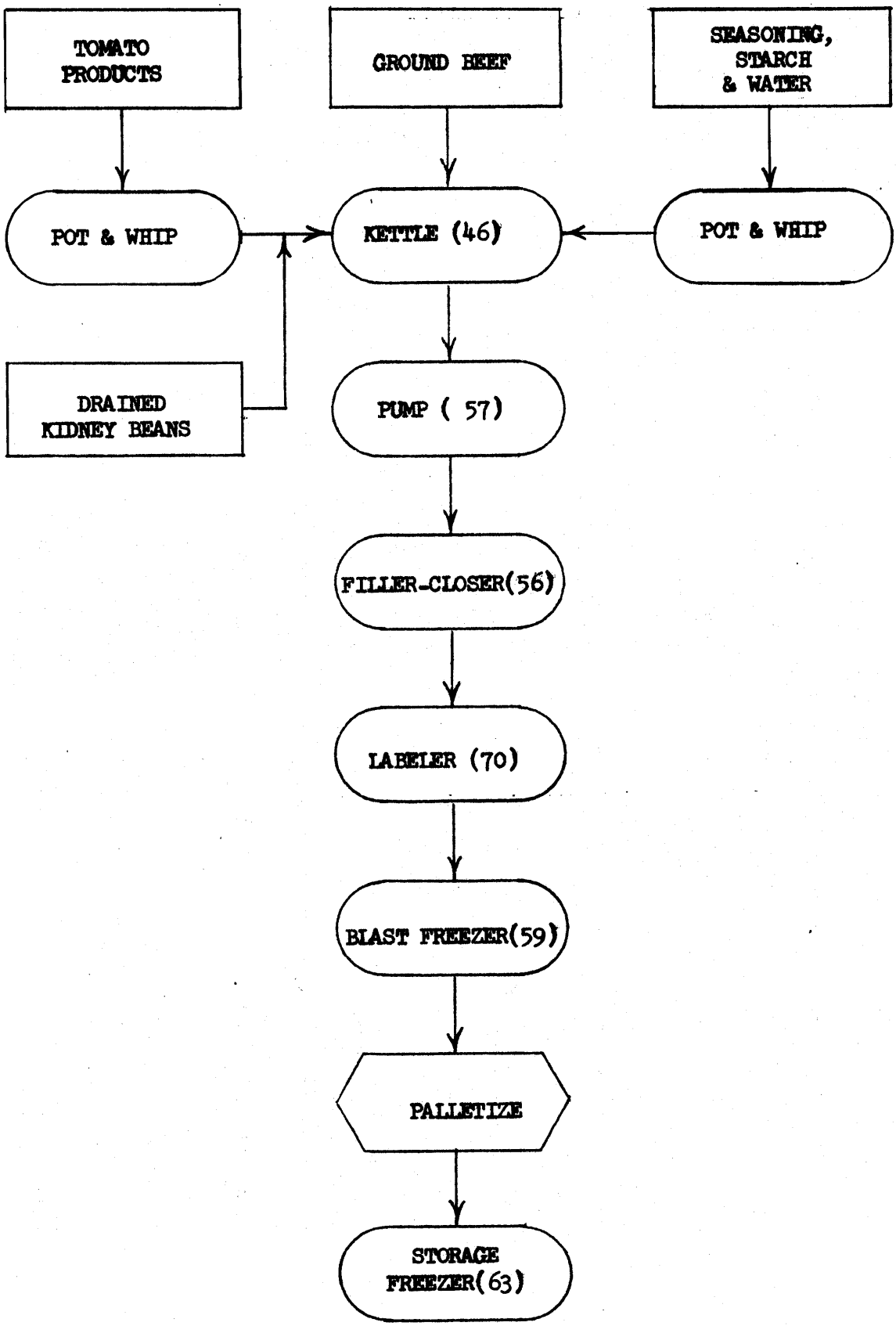
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lb)	500 Servings (lb)	700 Servings (lb)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, boneless, ground	57.00 (3 bags 19.00 lb)	95.00 (5 bags 19.00 lb) Bag size = 15" X 29-1/2"	133.00 (7 bags 19.00 lb)	Beef for chili con carne with beans 19.00 lb
Beef soup & gravy base	1.80	3.00	4.20	Soup & gravy base, chili, salt, pepper, garlic, paprika, onion powder, monosodium glutamate, cumin and starch for chili con carne with beans
Chili powder, ground	1.56	2.60	3.64	
Salt, table	0.48	0.80	1.12	
Garlic powder	0.03 (1 bag	0.05 (1 bag	0.07 (2 bags	
Pepper, cayenne	0.03	0.05	0.07	
Paprika, ground	0.24 4.95 lb)	0.40 8.25 lb)	0.56 5.75 lb)	
Onion powder	0.15	0.25	0.35	
Monosodium glutamate	0.03	0.05	0.07	
Cumin, ground	0.03	0.05	0.07	
Col-Flo 67, starch	0.60	1.00	1.40	
		Bag size = 10" X 18"		* lb
Tomato paste, canned	5.40 (1 bag 5.40 lb)	9.00 (1 bag 9.00 lb) Bag size = 10" X 18"	12.60 (2 bags 6.30 lbs)	Tomato paste for chili con carne with beans * lb
Tomatoes, canned, crushed	15.60 (1 bag 15.60 lb)	26.00 (2 bags 13.00 lb) Bag size = 15" X 29-1/2"	36.40 (2 bags 18.20 lb)	Tomatoes for chili con carne with beans * lb
Beans, red kidney, canned, drained	60.00 (3 bags 20.00 lb)	100.00 (5 bags 20.00 lb) Bag size = 15" X 29-1/2"	140.00 (7 bags 20.00 lb)	Beans for chili con carne with beans 20.00 lb

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

CHILI CON CARNE WITH BEANS



OPERATIONAL GUIDE FOR CHILI CON CARNE

WITHOUT BEANS L-28
INGREDIENTS AND BATCH SIZE

Controlling Equip: Kettles
Container Wt: 5 lb 14 oz

Servings/Container: 10 of 9 oz

Est. Prep Time: Approx. 4.2 hours
Approx. Yield: 400, 600, & 900 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	400 Servings 40-gal Kettle (lb)	600 Servings 60-gal Kettle (lb)	900 Servings 80-gal Kettle (lb)	Utensils
1	Beef, ground	310	29.50	118.00	177.00	265.50	Kettle
2	Beef soup and gravy base	11440	0.80	3.20	4.80	7.20	Collander
	Chili powder	14480	0.69	2.76	4.14	6.21	Pot
	Salt, table	15850	0.20	0.80	1.20	1.80	Whip
	Garlic powder	4700	0.01	0.04	0.06	0.09	
	Pepper, red cayenne	15510	0.01	0.04	0.06	0.09	
	Paprika, ground	15440	0.09	0.36	0.54	0.81	
	Onion powder	SP**	0.06	0.24	0.36	0.54	
	Monosodium Glutamate	15265	0.01	0.04	0.06	0.09	
	Cumin, ground	14660	0.01	0.04	0.06	0.09	
	Col-Flo 67, starch	SP**	0.26	1.04	1.56	2.34	
	Water		25.00	100.00	150.00	225.00	
3	Tomato paste, canned (26% solids)	6460	2.15	8.60	12.90	19.35	Mixing Pot (15 gal) Whip
	Tomatoes, canned crushed	6420	7.00	28.00	42.00	63.00	
4	Water		To make 6.75 gal	To make 27 gal	To make 40.5 gal	To make 60.75 gal	Measuring Stick

* FSC Group 89 Subsistence Catalog 1 Jan 77 (C8900-SL)

** Special Purchase

OPERATIONAL GUIDE FOR CHILI CON CARNE WITHOUT BEANS L-28

INSTRUCTIONS

		Check Points	Time (Minutes)
1-	Verify components and ingredients as to number and amounts received from Prep. Area.		10
2-	Deliver ground beef and ingredients to Kettle Area.		
3-	Place ground beef in kettle; activate agitator; turn on steam; brown in its own fat until all pink color has disappeared. Drain or skim excess fat and discard.		10
4-	Make a slurry of starch, water and spices; crush all lumps; add to browned (seared) beef in kettle; mix well. Heat to 200°F and simmer for 10 minutes with constant agitation. (Do not boil.)		15
5-	Mix tomato paste and crushed tomatoes and add to beef mixture in kettle; mix thoroughly; heat to 180°F, and maintain temperature for 5 minutes.		15
6-	Raise level (volume) or product to required number of gallons with hot water using measuring stick. Mix thoroughly. Shut off steam.		10
7-	Transfer product to filler. Fill 5 lb 14 oz in half-size steam table pan.		30
8-	Pass pans thru lidding machine to cover and close.		10

9- Pass pans thru labelling machine. Labels should read:

Chili Con Carne Without Beans
Net Wt: 5 lb 14 oz

Date Prepared:_____
Servings: 10 of 9 oz

Reconstitution Instructions:

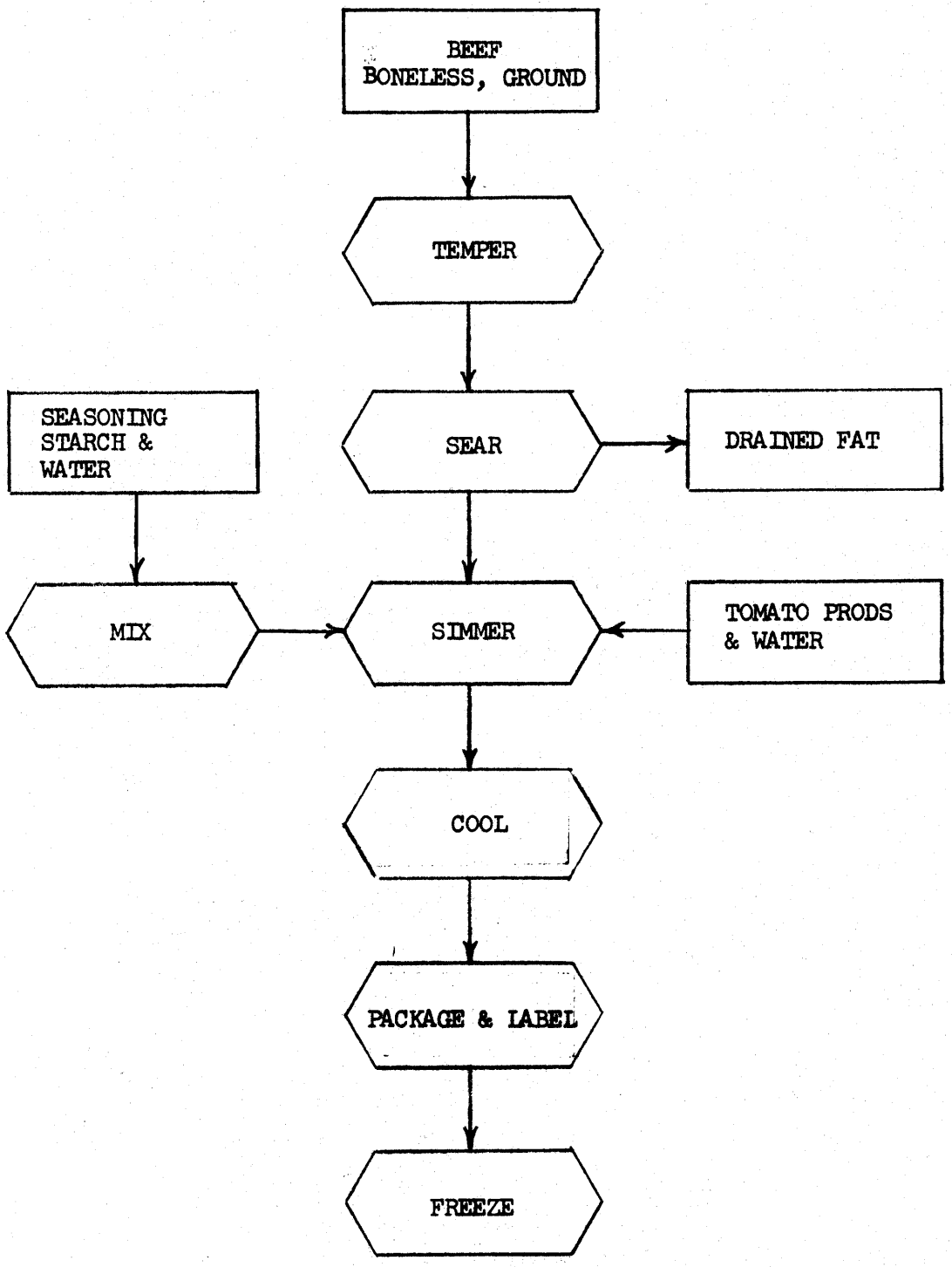
Heat pans covered in 325°F preheated ovens to internal temperature of 160°F.

Convection oven - 1 hour 15 minutes
Conventional (ordinary) oven - 1 hour 30 minutes

Alternatively the Chili Con Carne may be poured (removed from foil pans) in kettle or pot and heated to 160°F.

MATERIAL FLOW

CHILI CON CARNE W/O BEANS



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - CHILI CON CARNE

Prepa_ items for transportation in one of the following _nners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire tie; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

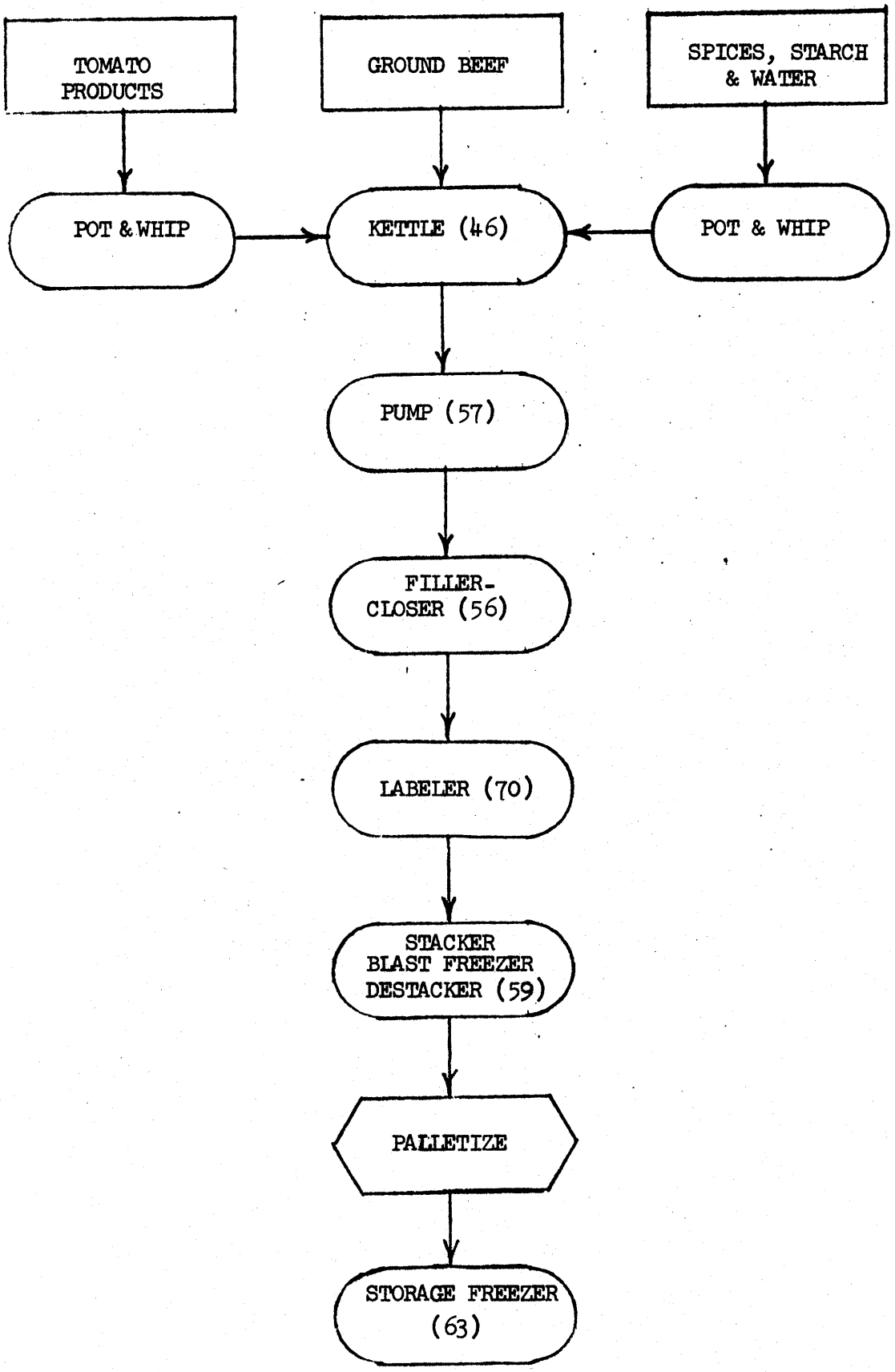
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	400 Servings (lbs)	600 Servings (lbs)	900 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, ground	118.00 (4 bags 29.50 lbs)	177.00 (6 bags 29.5 lbs) Bag size = 15" X 29-1/2"	265.50 (9 bags 29.5 lbs)	Beef for chili con carne * lbs
Beef soup and gravy base	3.20	4.80	7.20	Beef soup, spices and starch for chili con carne
Chili powder	2.76	4.14	6.20	
Salt, table	.80	1.20	1.00	
Garlic powder	.04 (1 bag	.06 (1 bag	.09 (1 bag	
Pepper, red cayenne	.04 8.56 lbs)	.06 12.84 lbs)	.09 19.25 lbs)	
Paprike, ground	.36	.54	.81	* lbs
Onion powder	.24	.36	.54	
Non sodium glutamate	.04	.06	.09	
Cumin, ground	.04	.06	.09	
Col-Flo 67 starch	1.04	1.56	2.34	
		Bag size = 15" X 29-1/2"		
Tomatoe paste, canned	8.60 (1 bag 8.60 lbs)	12.90 (1 bag 12.90 lbs) Bag size = 15" X 29-1/2"	19.35 (1 bag 19.35 lbs)	Tomatoe paste for chili con carne * lbs
Tomatoes, canned, crushed	28.00 (2 bags 14.00 lbs)	42.00 (3 bags 14.00 lbs) Bag size = 15" X 29-1/2"	63.00 (3 bags 21.00 lbs)	Tomatoes for chili con carne * lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

CHILI CON CARNE WITHOUT BEANS



OPERATIONAL GUIDE FOR CHILI MACARONI L-28-1

INGREDIENTS AND BATCH SIZE

Controlling Equip: Kettles
Container Wt: 5 lb

Servings/Container: 7 of 1-¼ cups

Est Prep Time: Approx. 3.7 hours
Approx. Yields: 300, 600, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	600 Servings 60-gal Kettle (lb)	800 Servings 80-gal Kettle (lb)	Utensils
1	Macaroni, dry	8410	6.00	18.00	36.00	48.00	Kettle, Colander
2	Salt, table	15850	0.02	0.60	1.20	1.60	Holding container
	Water, tap		48.00	144.00	288.00	364.00	
2	Beef, Bnls, ground	310	24.00	72.00	144.00	192.00	Kettle (agitating)
3	Garlic, Dehyd, powder	4700	0.01	0.03	0.06	0.08	
	Onions, Dehyd, chopped	5290	0.25	0.75	1.50	2.00	
	MSG	15260	0.02	0.06	0.12	0.16	
	Paprika, ground	15440	0.13	0.39	0.78	1.04	
	Pepper, cayenne, red	15510	0.01	0.03	0.06	0.08	
	Salt, table	15850	0.63	1.89	3.78	5.04	
	Chili powder	14480	0.37	1.11	2.22	2.96	
	Bay leaves ground	14320	0.01	0.03	0.06	0.08	
	Tomatoes, canned, crushed	6420	12.21	36.63	73.26	97.68	
	Tomato paste (26% solids)	6460	3.34	10.02	20.04	26.72	
4	Water		To make 8 gal	To make 24 gal	To make 48 gal	To make 64 gal	Measuring Stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

OPERATIONAL GUIDE FOR CHILI MACARONI L-28-1

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients, and spices as to number and amounts received from Prep. Area.		10
00-	Deliver Macaroni, Beef, tomato products, and spices to kettle area.		
1-	Place water and salt in kettle heat to a rolling boil. Slowly add macaroni to boiling water and continue to boil for approximately 15 minutes. Macaroni should be cooked but firm. Rinse and drain (colander) macaroni; place in holding pans for Step 4.		25
2-	Place beef in kettle and brown in its own fat until color has vanished. Shut steam off; drain liquid and fat; discard.		
3-	Add dry seasonings, onions, and tomato products; mix thoroughly; turn steam on and simmer for 20 minutes.		25
4-	Add drained macaroni; mix thorougly. Raise level (volume) of kettle to required number of gallons with hot water using measuring stick. Shut off steam.		10
5-	Weigh 5 lb of Chili Macaroni into each half-size table pan.		10
6-	Pass pans thru lidding machine to cover and close.		10
7-	Pass closed pans thru labelling machine. Labels should read:		10

Chili Macaroni
Net Wt

Date Prepared:_____
Servings: 7 of 1 1/4 cups

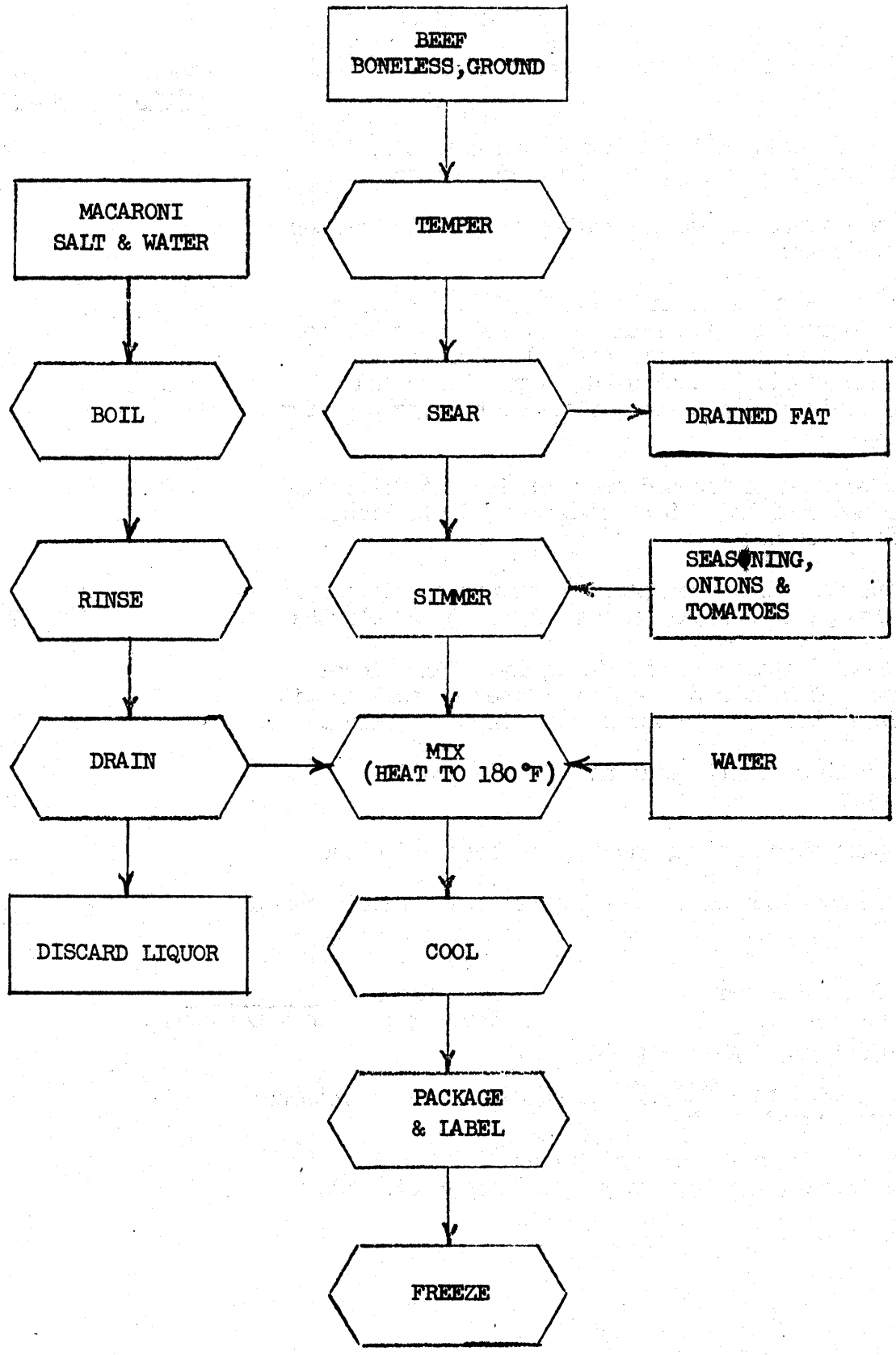
Reconstitution Instructions:

Heat covered pans in 325°F preheated ovens to internal temperature of 160°F.

Convection oven - 1 hour 15 minutes
Conventional oven (ordinary) - 1 hour 30 minutes

MATERIAL FLOW

CHILI MACARONI



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - CHILI MACARONI

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire tie; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

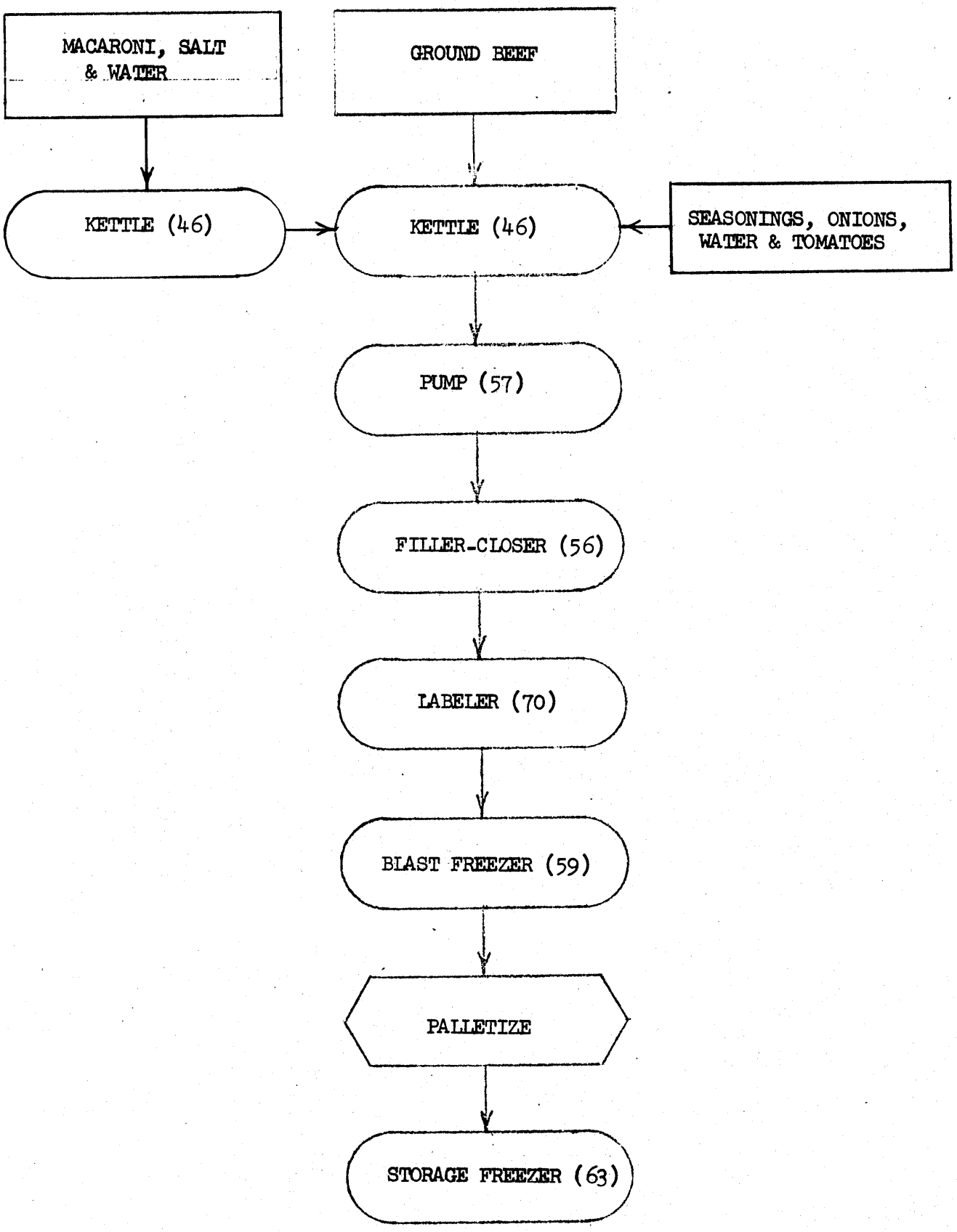
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	600 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Macaroni, dry	18.00 (1 bag	36.00 (2 bags	48.00 (4 bags	Macaroni and salt for chili macaroni
Salt, table	0.60 18.60 lbs)	1.20 18.60 lbs)	1.60 12.4 lbs)	* lbs
		Bag size = 15" X 29-1/2"		
Beef, Bnls, ground	72.00 (3 bags 24.00 lbs)	144.00 (6 bags 24.00 lbs)	192.00 (8 bags 24.00 lbs)	Beef for chili macaroni
		Bag size = 15" X 29-1/2"		* lbs
Garlic, dehyd, powder	.03	.06	.08	Spices for chili macaroni
Onions, dehyd, chopped	.75	1.50	2.00	
MSG	.06	.12	0.16	
Paprika, ground	.39 (1 bag	.78 (1 bag	1.04 (1 bag	
Pepper, cayenne, red	.03 4.29 lbs)	.06 8.58 lbs)	.08 11.44 lbs)	
Salt, table	1.89	3.78	5.04	* lbs
Chili powder	1.11	2.22	2.96	
Bay leaves, ground	0.03	0.06	.08	
		Bag size = 15" X 29-1/2"		
Tomatoes, canned, crushed	36.63 (2 bags 18.31 lbs)	73.26 (2 bags 18.31 lbs)	97.68 (4 bags 24.42 lbs)	Tomatoes for chili macaroni
		Bag size = 15" X 29-1/2"		* lbs
Tomatoe paste (26% solids)	10.02 (1 bag 10.02 lbs)	20.04 (1 bag 20.04 lbs)	26.72 (1 bag 26.72 lbs)	Tomato paste for chili macaroni
		Bag size = 15" X 29-1/2"		* lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

CHILI MACARONI



OPERATIONAL GUIDE FOR BAKED LASAGNA L-25

INGREDIENTS & BATCH SIZE

Controlling Equip: Kettle
Container Wt: 5 lb 3½ oz

Servings/Container: 8 of 10 oz

Est. Prep Time: 4.67 hours
Approx. Yield: 200, 300, & 400 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	200 Servings 40-gal Kettle (lb)	300 Servings 40-gal Kettle (lb)	400 Servings 40-gal Kettle (lb)	Utensils
1	Sauce						
	Beef, Bnls, grd	310	11.25	22.50	33.75	45.00	Kettle
	Oil	14000	0.20	0.40	0.60	0.80	
	Tomato paste, canned	6460	9.00	18.00	27.00	36.00	
	Tomato crushed, canned	6420	12.00	24.00	36.00	48.00	
	Water, tap		10.00	20.00	30.00	40.00	
	Bay leaves, grd	14320	0.01	0.02	0.03	0.04	
	Oregano, grd	15420	0.04	0.08	0.12	0.16	
	Pepper, cayenne red	15510	0.01	0.02	0.03	0.04	
	Salt	15850	0.25	0.50	0.75	1.00	
	Sugar, gran.	9930	0.25	0.50	0.75	1.00	
	Pepper, black	15480	0.01	0.02	0.03	0.04	
	Onion dehyd, chpd	5290	0.50	1.00	1.50	2.00	
	Garlic powder	4700	0.01	0.02	0.03	0.04	
	Thyme, grd	15990	0.03	0.06	0.09	0.12	
	Col-flo 67 starch	SP**	0.25	0.50	0.75	1.00	
	Water		To make 4.75 gal	To make 9.50 gal	To make 14.25 gal	To make 19.00 gal	Measuring stick

Steps	Ingredients	*Index No.	100 Servings (lb)	200 Servings 40-gal Kettle (lb)	300 Servings 40-gal Kettle (lb)	400 Servings 40-gal Kettle (lb)	Utensils
2	Noodles						
	Noodles, lasagna, whole	8930	4.50	9.00	13.50	18.00	Kettle w/basket
	Salt, table	15850	0.31	0.62	0.93	1.24	
	Oil, vegetable	14000	0.25	0.50	0.75	1.00	
	Water		80.00	160.00	240.00	320.00	
3	Filling						
	Eggs, whole, beaten	2620	2.75	5.50	8.25	11.00	Pot whip
	Cheese, cottage drained	2440	6.50	13.00	19.50	26.00	
	Cheese, parmesan grated	2480	0.75	1.50	2.25	3.00	
	Parsley, dehyd. flaked	5400	0.02	0.04	0.06	0.08	
4	Cheese						
	Cheese, Mozzarella, sliced or shredded	2490	3.25	6.50	9.75	13.00	
	Cheese, parmesan, grated	2480	1.25	2.50	3.75	5.00	

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR BAKED LASAGNA L-25

INSTRUCTIONS

		Check Points	Time (Minutes)
NOTE:	This product requires two different kettles and space for assembling final product.		
0-	Verify components, ingredients, and spices as to number and amounts received from Prep. Area.		10
00-	Deliver Beef, noodles, tomato products, spices, and starches to kettle area; eggs, cheese, and parsley to assembling area.		
	MEAT SAUCE		
1-	Coat steam kettle with oil, place beef in kettle and heat while mixing until meat loses red color. Drain excess fat. Mix all remaining ingredients with water and tomato products, mixing well to make slurry; crush all lumps. Add slurry to beef in kettle; mix well; heat to boil and simmer 30 minutes, stirring occasionally. Raise level (volume) of kettle to required amount of water using measuring stick. Shut off steam. Hold for panning (Step 5).		20
	NOODLES		
2-	Combine water, salt, and oil in kettle; bring to a rolling boil. Add lasagna noodles slowly, using slow agitation; continue to cook for 18-20 minutes until noodles are tender. DO NOT OVERCOOK.		25
	Rinse noodles thoroughly with cold water and then cool noodles in cold water. Drain and hold for panning (Step 5).		30
	FILLING		
3-	Mix beaten eggs, cheeses, and parsley well. Keep refrigerated if not used immediately.		15
	CHEESE		
4-	Lay out cheeses to be used in panning lasagna.		5
	PANNING		
5-	Lasagna is made of 11 layers.		
	(a) In half-size steam table pans, spread about 1 lb of meat sauce over bottom.		

	Check Points	Time (Minutes)
(b) Spread approximately 6 oz of noodles over sauce.		
(c) Spread approximately 6 oz of egg, cheese filling over noodles.		35
(d) Lay Mozzarella cheese (approximately 2 oz) evenly over noodles.		
(e) Continue to fill pans by repeating a, b, c, and d.		
(f) Then place a layer of noodles over Mozzarella cheese.		
(g) Spread layer of meat sauce (1 lb) to cover entire surface of noodles.		
(h) Spread parmesan cheese (1-1/2 oz) evenly over meat sauce.		
6- Pass pans thru lidding machine to cover and close.		10
7- Place pans in 325°F oven and heat to internal temperature of 165°F (30 minutes).		30
8- Pass pans thru labelling machine. Labels should read:		10

Lasagna
Net Wt:

Date Prepared: _____
Servings: 8 of 10 oz

Reconstitution Instructions:

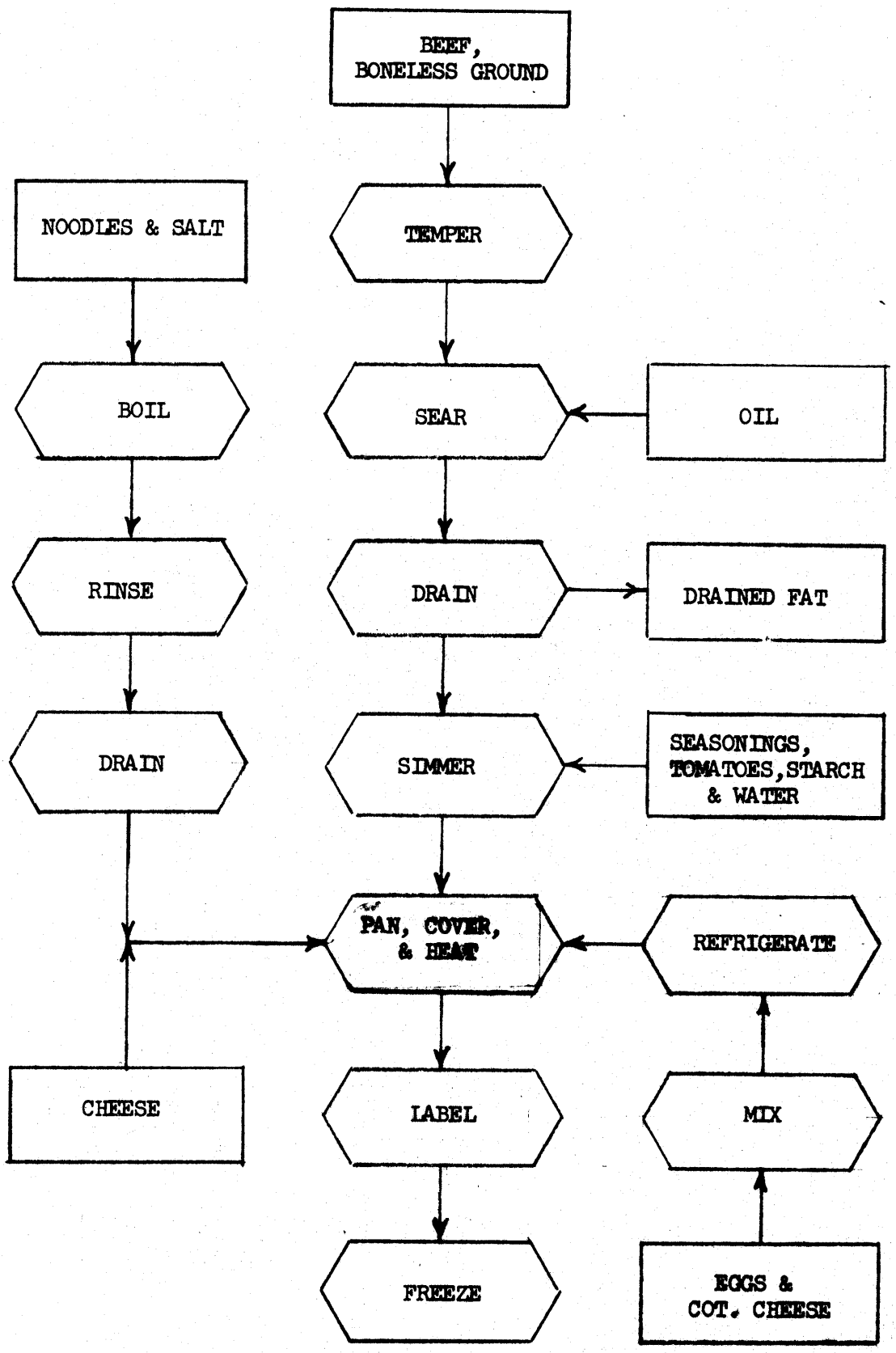
Heat covered pans in 350°F preheated ovens to internal temperature of 160°F.

Convection ovens: 1 hour 15 minutes

Conventional (ordinary) ovens: 1 hour 30 minutes

MATERIAL FLOW

BAKED LASAGNA



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BAKED LASAGNA

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire tie; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	200 Servings (lbs)	300 Servings (lbs)	400 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Sauce				
Beef, Bnls, ground Oil	22.50 (1 bag .40 22.90 lbs)	33.75 (2 bags .60 16.88 lbs) Bag size = 15" X 29-1/2"	45.00 (2 bags .80 22.90 lbs)	Beef and oil for baked lasagna (sauce) * lbs
Tomato paste, canned	18.00 (1 bag 18.00 lbs)	27.00 (1 bag 27.00 lbs) Bag size = 15" X 29-1/2"	36.00 (2 bags 18.00 lbs)	Tomato paste for baked lasagna (sauce * lbs
Tomatoes, crushed, canned	24.00 (1 bag 24.00 lbs)	36.00 (2 bags 18.00 lbs) Bag size = 15" X 29-1/2"	48.00 (2 bags 24.00 lbs)	Tomatoes for baked lasagna (sauce) * lbs
Bay leaves, ground	.02	.03	.04	Spices and starch for baked lasagna (sauce)
Oregano, ground	.08	.12	.16	
Pepper, cayenne, red	.02	.03	.04	
Salt	.50 (1 bag	.75 (1 bag	1.00 (1 bag	* lbs
Sugar, granulated	.50 2.72 lbs)	.75 4.08 lbs)	1.00 5.44 lbs)	
Pepper, black	.02	.03	.04	
Onion, dehydrated, chopped	1.00	1.50	2.00	
Garlic powder	.02	.03	.04	
Thyme, ground	.06	.09	.12	
Col-Flo 67 starch	.50	.75 Bag size = 10" X 18"	1.00	

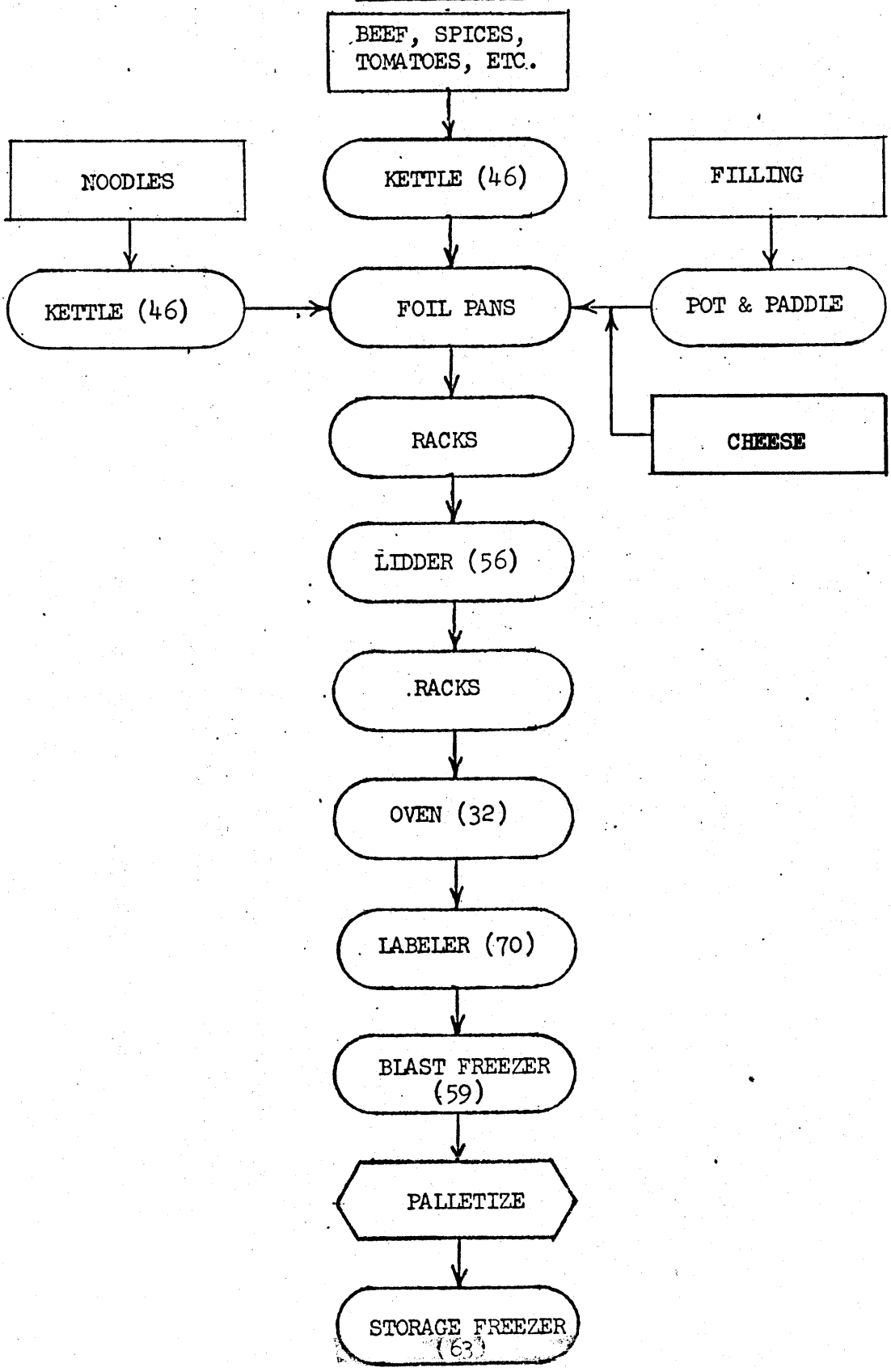
GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BAKED LASAGNA (cont'd)

Ingredients	200 Servings (lbs)	300 Servings (lbs)	400 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Noodles				
Noodles, lasagna, whole	9.00 (1 bag 9.00 lbs)	13.50 (1 bag 13.50 lbs) Bag size = 15" X 29-1/2"	18.00 (1 bag 18.00 lbs)	Noodles for baked lasagna (noodles) * lbs
Salt, table Oil, vegetable	0.62 (1 bag 0.50 1.12 lbs)	0.93 (1 bag 0.75 1.68 lbs) Bag size = 10" X 18"	1.24 (1 bag 1.00 2.24 lbs)	Salt and oil for baked lasagna (noodles) * lbs
Filling				
Eggs, whole, beaten	5.50	8.25	11.00	Eggs, cheese and parsley for baked lasagna (filling)
Cheese, cottage, drained	13.00 (1 bag 20.04 lbs)	19.50 (2 bags 15.03 lbs)	26.00 (2 bags 20.04 lbs)	
Cheese, parmesan, grated	1.50	2.25	3.00	* lbs
Parsley, dehydrated, flaked	0.04	0.06 Bag size = 15" X 29-1/2"	0.08	
Cheese				
Cheese, mozzarella, sliced	6.50 (1 bag	9.75 (1 bag	13.00 (1 bag	Cheese for baked lasagna (cheese)
Cheese, parmesan, grated	2.50 9.00 lbs)	3.75 13.50 lbs) Bag size = 15" X 29-1/2"	5.00 18.00 lbs)	* lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

BAKED LASAGNA



OPERATIONAL GUIDE FOR MEAT BALLS AND

SAUCE (FOR SPAGHETTI & MEATBALLS) L-39

INGREDIENTS & BATCH SIZE

Controlling Equip: Oven & Kettle
Container Wt: 5 lb 10 oz

Servings/Container: 7 of 5 meatballs, 3/4 cup sauce

Est. Prep Time: 2.8 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings OVEN (lb)	500 Servings OVEN (lb)	800 Servings OVEN (lb)	Utensils
1	Meatballs (1.25 oz ea)						
	Onions, dehyd, chopped	5290	0.61	1.83	3.05	4.88	Pans OVEN
	Water, tap		2.23	6.69	11.15	17.84	
	Beef, Bnls, ground	310	30.00	90.00	150.00	240.00	
	Bread crumbs, dry	6980	2.32	6.96	11.15	18.56	
	Nonfat dry milk	3050	2.32	6.96	11.15	18.56	
	Eggs, whole beaten	2620	1.31	3.93	6.55	10.48	
	Pepper, black	15480	0.01	0.03	00.05	0.08	
	Salt, table	15850	0.52	1.56	2.60	4.16	
				40-gal Kettle	40-gal Kettle	60-gal Kettle	
2	Sauce						
	Garlic powder	4700	0.01	0.03	0.05	0.08	Kettle Agitating
	Onion, dehyd, chopped	5290	0.40	1.20	2.00	3.20	
	Bay leaves, ground	14320	0.01	0.03	0.05	0.08	
	Oregano, ground	15420	0.04	0.12	0.20	0.32	
	Pepper cayenne, Red	15510	0.01	0.03	0.05	0.08	
	Tomatoes, canned, crushed	6420	20.00	60.00	100.00	160.00	
	Tomato paste, (26% solids)	6460	7.22	21.66	36.10	57.76	
	Salt, table	15850	0.70	2.10	3.50	5.60	
	Sugar, white	9930	2.74	8.22	13.70	21.92	
	Thyme, ground	15990	0.04	0.12	0.20	0.32	
	Water, tap		19.00	57.00	95.00	152.00	
	Water, tap		To make 5.5 gal	To make 16.5 gal	To make 27.5 gal	To make 44.00 gal	Measuring Stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

OPERATIONAL GUIDE FOR MEAT BALLS
(FOR SPAGHETTI AND MEAT BALLS) L-39
PREPARATION AREA

MEAT BALLS (1.25 oz ea)

1- Meat balls shall be prepared from ingredients and spices as listed in Step 1 of Ingredients and Batch Size of Operational Guide.

   (a) Place beef, ingredients, and spices in meat mixer and mix lightly to blend.

   (b) Pass meat thru the meatball forming machine (Patty maker) to form meatballs 1.25 oz each.

   (c) Place meatballs on baking sheet pans which fit in ovens located in Central Kitchen area.

   (d) Keep refrigerated until shipped to Central Kitchen.

OPERATIONAL GUIDE FOR MEAT BALLS SAUCE
(FOR SPAGHETTI AND MEAT BALLS) L-39
INSTRUCTIONS

NOTE: This product requires two different kettles.	Check Points	Time (Minutes)
0- Verify components, (including meatballs), ingredients and spices as to number and amounts received from Prep. Area.		10
00- Deliver meatballs to oven area, tomato products and spices to Kettle Area.		
1- Place meatballs in preheated 325°F oven and bake uncovered for approximately 20 minutes, or until internal temperature reaches 165°F. Remove and hold for step 4a below.		25
2- Place all sauce ingredients, except tomato paste, in kettle; mix well; heat to 180°F with slow agitation. Simmer for 30 minutes. Add tomato paste and mix well. Raise level (volume) of Kettle with water to required number of gallons. Shut off steam. Transfer to filler.		20
3- Fill half-size steam table pans by placing 35 meatballs in pans. Cover with 3.5 pounds of sauce.		10
4- Pass pans thru lidding machine to cover and close.		10

5- Pass closed pans thru labelling machine.
Labels should read:

Meat Balls & Sauce
Net Wt: 5 lb 10 oz

Date Prepared:_____
Servings: 7 Meatballs
3/4 cup Sauce

Reconstitution Instructions:

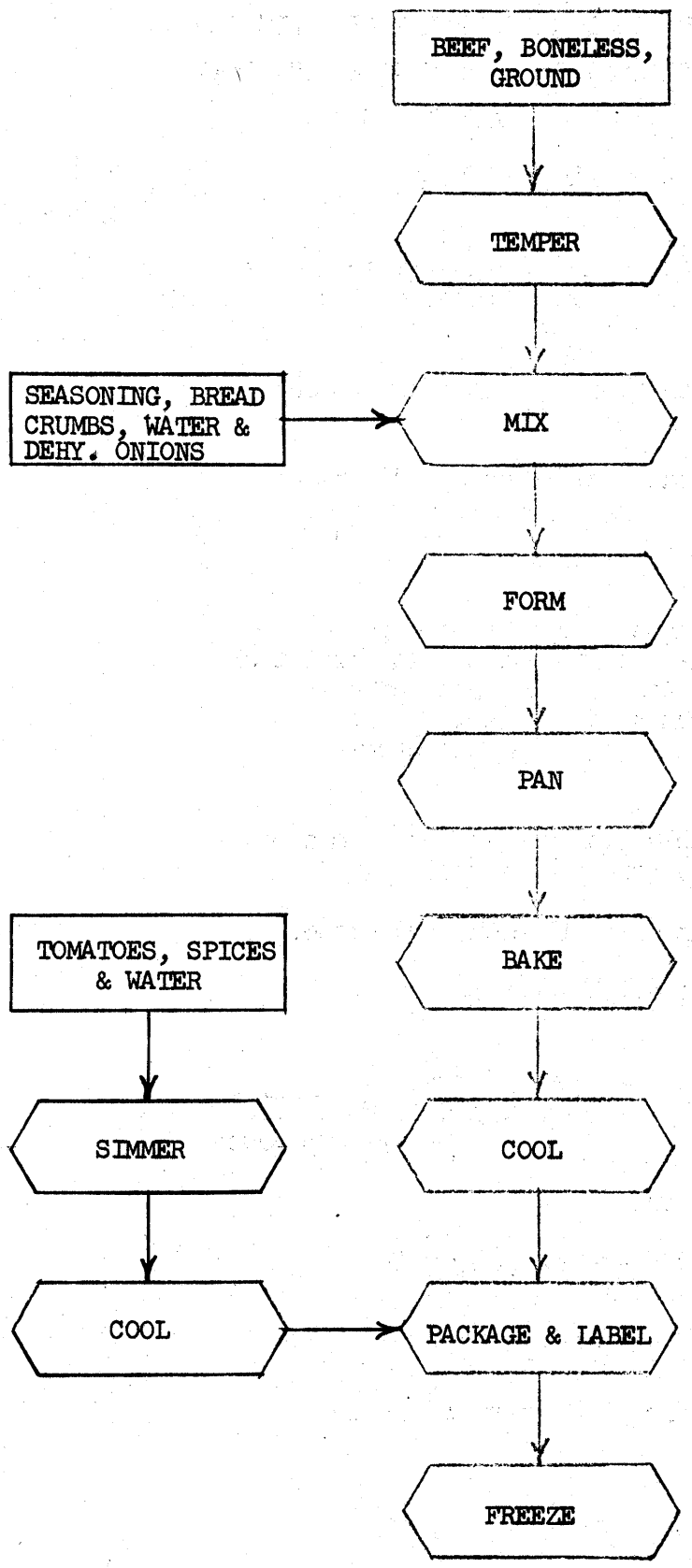
Heat covered pans in 325°F preheated oven to internal temperature of 160°F.

Convection oven: 1 hour 15 minutes

Conventional oven (ordinary): 1 hour 30 minutes

MATERIAL FLOW

MEAT BALLS AND SAUCE



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - MEAT BALLS AND SPAGHETTI SAUCE

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire tie; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Meat Balls				
Beef, bnls, ground	90.00 (3 bags 30.00 lbs)	150.00 (5 bags 30.00 lbs)	240.00 (8 bags 30.00 lbs)	Beef for meat balls and spaghetti sauce (meat balls)
		Bag size = 15" X 29-1/2"		* lbs
Onions, dehydrated, chopped	1.83	3.05	4.88	Ingredients and spices for meat balls and spaghetti sauce (meat balls)
Bread crumbs, dry	6.96	11.15	18.56	
Nonfat dry milk	6.96 (1 bag	11.15 (2 bags	18.56 (3 bags	
Eggs, whole, beaten	3.43 21.27 lbs)	6.55 17.28 lbs)	10.48 18.91 lbs)	
Pepper, black	0.03	0.05	0.08	* lbs
Salt, table	1.56	2.60	4.16	
		Bag size = 15" X 29-1/2"		
Sauce				
Garlic powder	0.03	0.05	0.08	Spices for meat balls and spaghetti sauce (sauce)
Onion, dehyd, chopped	1.20	2.00	3.20	
Bay leaves, ground	0.03 (1 bag	0.05 (1 bag	0.08 (2 bags	
Oregano, ground	0.12 11.85 lbs)	0.20 19.75 lbs)	0.32 15.80 lbs)	
Pepper, Cayenne, red	0.03	0.05	0.08	
Salt, table	2.10	3.50	5.60	* lbs
Sugar, white	8.22	13.70	21.92	
Thyme, ground	0.12	0.20	0.32	
		Bag size = 15" X 29-1/2"		

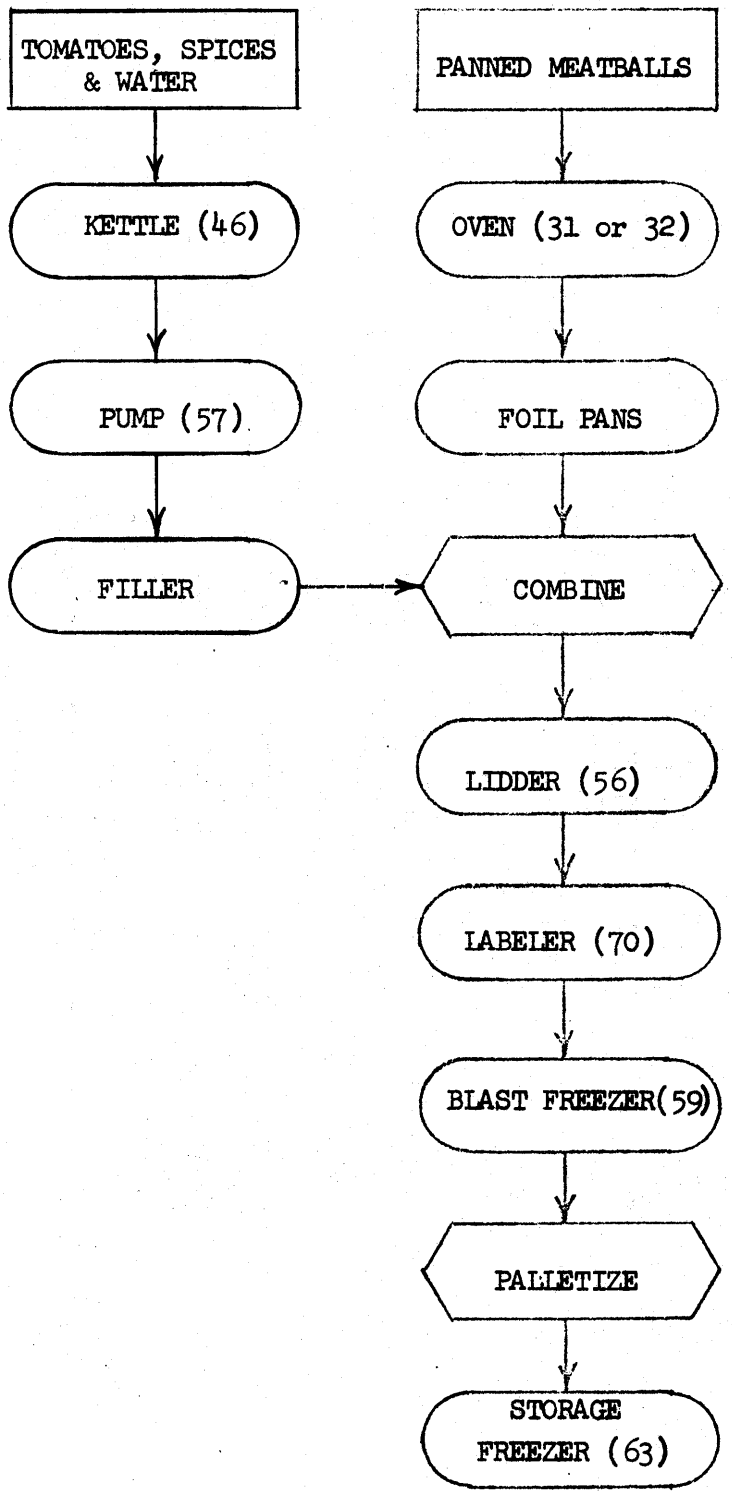
GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - MEAT BALLS AND SPAGHETTI SAUCE (Cont'd)

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Sauce (Cont'd)				
Tomato paste (26% solids)	21.66 (1 bag 21.66 lbs)	36.10 (2 bags 18.05 lbs)	57.76 (3 bags 19.28 lbs)	Tomato paste for meat balls and spaghetti sauce (sauce) * lbs
		Bag size = 15" X 29-1/2"		
Tomatoes, canned, crushed	60.00 (3 bags 20.00 lbs)	100.00 (5 bags 20.00 lbs)	160.00 (8 bags 20.00 lbs)	Tomatoes for meat balls and spaghetti sauce (sauce) * lbs
		Bag size = 15" X 29-1/2"		
Spaghetti				
Spaghetti, dry	38.79 (2 bags 19.39 lbs)	64.65 (3 bags 21.55 lbs)	103.44 (4 bags 25.86 lbs)	Spaghetti for meat balls and spaghetti * lbs
		Bag size = 15" X 29-1/2		
Salt, table Oil, vegetable	0.93 (1 bag 1.23 2.16 lbs)	1.55 (1 bag 2.05 3.60 lbs)	2.48 (1 bag 3.28 5.76 lbs)	Salt and oil for meat balls and spaghetti * lbs
		Bag size = 10" X 18"		

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

MEATBALLS AND SAUCE



OPERATIONAL GUIDE FOR SWEDISH MEATBALLS

WITH GRAVY L-41

INGREDIENTS & BATCH SIZE

Controlling Equip: Oven & Kettles
Container Net Wt: 4 lb 10 oz

Servings/Container: 7 of 5 Meatballs and 5 oz gravy

Est. Prep Time: 3.6 hours
Approx Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings OVEN (lb)	500 Servings OVEN (lb)	800 Servings OVEN (lb)	Utensils
1	Meatballs (1.25 oz ea)						
	Onions, dehyd, chopped	5290	0.42	1.26	2.10	3.36	Pan
	Nonfat dry milk	3050	0.32	0.96	1.60	2.56	Oven
	Water, tap		6.45	19.35	32.25	51.60	
	Bread crumbs, dry	6980	2.88	8.64	14.40	23.04	
	Eggs, whole, beaten	2620	1.00	3.00	5.00	8.00	
	Pepper, black	15480	0.01	0.03	0.05	0.08	
	Salt, table	15850	0.25	0.75	1.25	2.00	
	Beef, bnls, ground	310	30.50	91.50	152.50	244.00	
			Kettle	40-gal Kettle	50-gal Kettle	60-gal Kettle	
2	Gravy						
	Flour, wheat	8300	0.76	2.28	3.80	6.08	Kettle agitating
	Water, tap		31.50	94.50	157.50	252.00	Pot
	Col-flo 67 starch	**SP	0.76	2.28	3.80	6.08	Whip
	Beef, Soup & Gravy Base	11440	1.43	4.29	7.15	11.44	
	Garlic, dry	4700	0.01	0.03	0.05	0.08	
	Nutmeg, ground	15340	0.01	0.03	0.05	0.08	
	Oregano, ground	15420	0.01	0.03	0.05	0.08	
	Pepper, black	15480	0.01	0.03	0.05	0.08	
	Paprika, ground	15440	0.02	0.06	0.10	0.16	
	Water		To make 4.5 gal	To make 13.5 gal	To make 22.5 gal	To make 36.0 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR SWEDISH MEATBALLS L-41
PREPARATION AREA

SWEDISH MEATBALLS (1.25 oz ea)

1- Swedish meatballs shall be prepared from components and spices as listed in Step 1 of "Ingredients and Batch Size of Operational Guide."

(a) Place water, dehydrated onions, and non-fat dry milk in mixer; blend and let stand 10 minutes.

(b) Combine ground beef and remaining ingredients with milk and onions in meat mixer, and mix lightly but thoroughly.

(c) Pass meat mixture through meatball forming machine (Patty Maker) to form meatballs of 1.25 oz each.

(d) Place meatballs on baking sheet pans which fit in ovens located in Central Kitchen area.

(e) Keep refrigerated until shipped to Central Kitchen.

OPERATIONAL GUIDE FOR SWEDISH MEATBALLS WITH GRAVY L-41

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify component (including meatballs), ingredients, and spices as to number and amounts received from Prep. Area.		10
00-	Deliver meatballs to oven area; flour, starch, and remaining spices to the Kettle Area.		
1-	Place meatballs in preheated 325°F oven and bake uncovered for approximately 20 minutes or until internal temperature reaches 165°F. Remove from oven and hold for step 3 (a) below.		25
2-	Gravy: Add about half of formula water to kettle and combine all remaining ingredients except flour and starch, mixing well to break up lumps. Heat to 180°F; shut off steam. Combine flour and starch with remaining water in separate pot to make a slurry. Add slurry to steam kettle slowly while mixing. Heat to 200°F., with constant stirring for 20 minutes. Raise level (volume) of kettle with water to required amt. of gallons using measuring stick. Transfer gravy to filling machine. Hold for step 3 (b) below.		70
3-	Filling, half-size table pans.		
	(a) Place 35 meatballs in each pan.		10
	(b) Cover panned meatballs with 2 ½ lb of gravy.		10
4-	Pass filled pans thru lidding machine to cover and close.		10
5-	Pass closed pans thru labelling machine. Labels should read:		10

Swedish Meatballs with Gravy
Net Wt: 4 lb 10 oz

Date Prepared: _____
Servings: 7 of 5 Meatballs-5 oz gravy

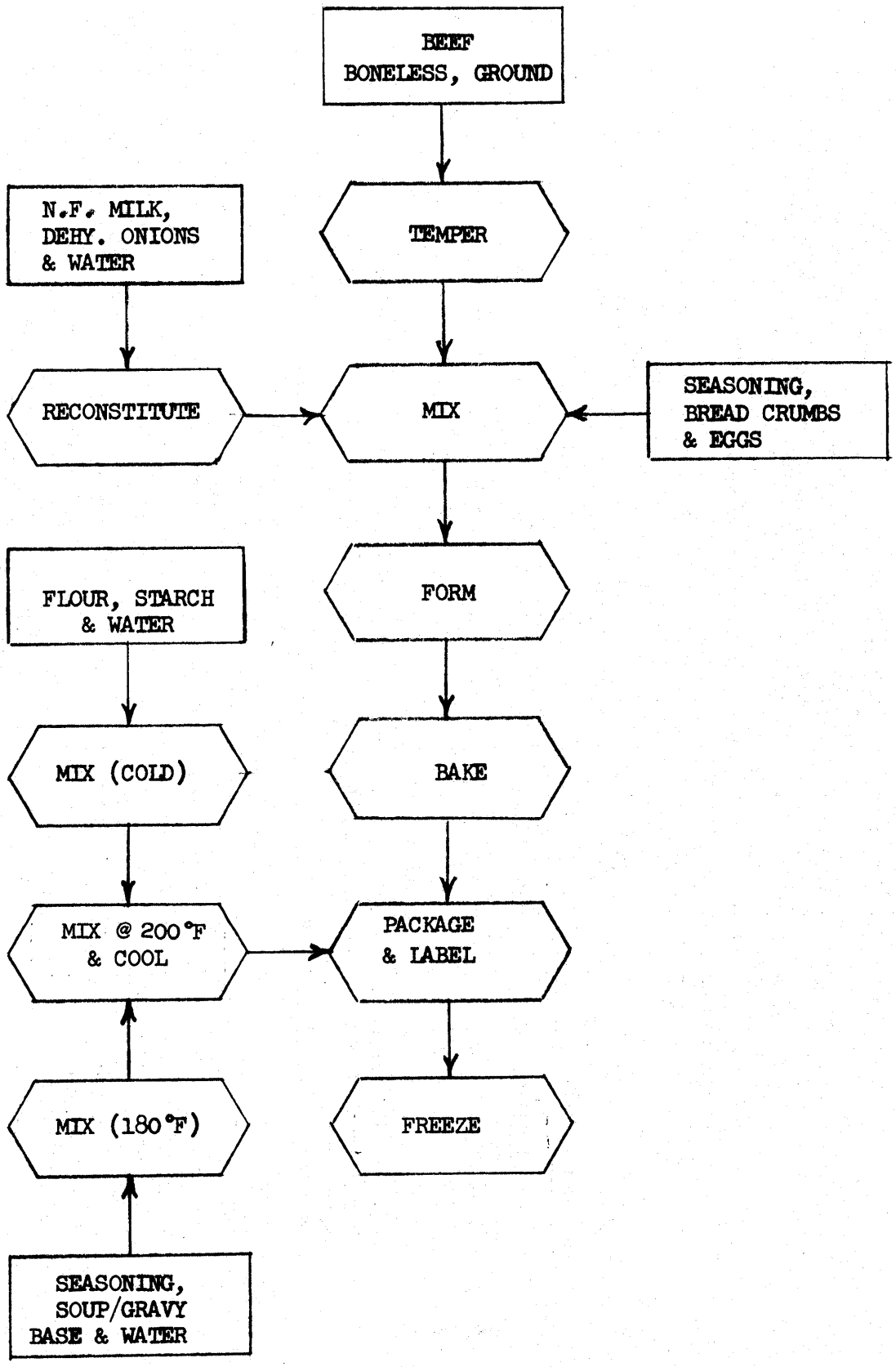
Reconstitution Instructions:

Heat covered pans in 325°F preheated oven to internal temperature of 160°F.

Convection oven - 1 hour 15 minutes
Conventional (ordinary) oven - 1 hour 30 minutes

MATERIAL FLOW

SWEDISH MEAT BALLS



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SWEDISH MEAT BALLS WITH GRAVY

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire tie; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

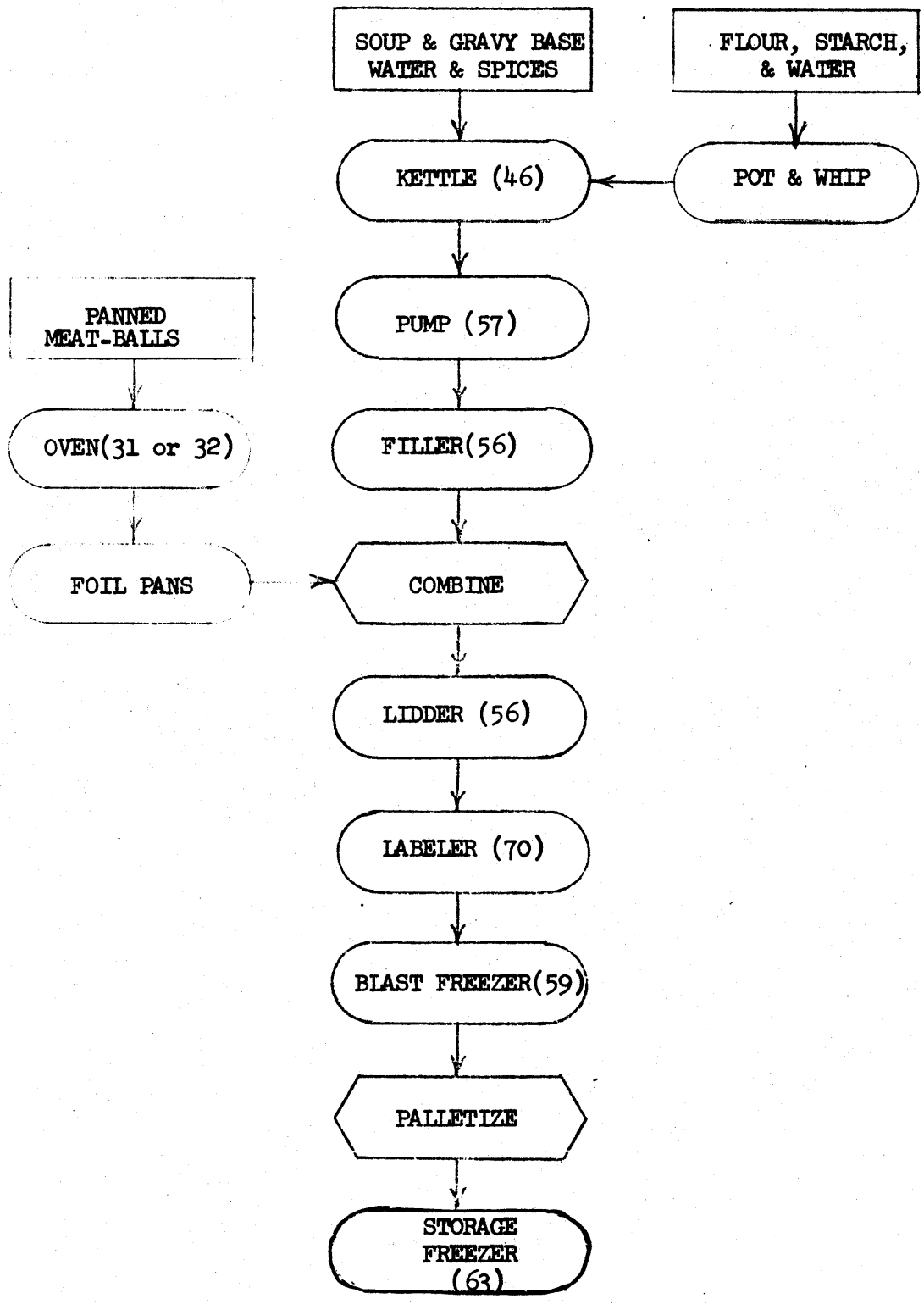
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Meat Balls				
Onions, dehydrated, chopped	1.26 (1 bag	2.10 (1 bag	3.36 (1 bag	Onions and milk for swedish meat balls with gravy (Meat Balls)
Low fat dry milk	0.96 2.22 lbs)	1.60 3.70 lbs)	2.56 5.92 lbs)	* lbs
		Bag size = 10" X 18"		
Bread crumbs, dry	8.64	14.40	23.04	Beef, bread crumbs, eggs, salt and pepper for swedish meat balls with gravy (meat balls)
Eggs, whole, beaten	3.00 (5 bags	5.00 (10 bags	8.00 (15 bags	
Pepper, black	.03 20.78 lbs)	0.05 17.32 lbs)	0.08 18.50 lbs)	
Salt, table	.75	1.25	2.00	
Beef, bnls, ground	91.50	152.50	244.00	
		Bag size = 15" X 29-1/2"		* lbs
Gravy				
Flour wheat	2.28	3.80	6.08	All gravy ingredients for swedish meat l ls with gravy
Col-Flo 67 starch	2.28	3.80	6.08	
Beef, soup & gravy base	4.29	7.15	11.44	
Garlic, dry	.03 (1 bag	.05 (1 bag	.08 (1 bag	
Nutmeg, ground	.03 9.03 lbs)	.05 15.05 lbs)	.08 24.08 lbs)	* lbs
Oregano, ground	.03	.05	.08	
Pepper, black	.03	.05	.08	
Paprika, ground	.06	.10	.16	
		Bag size = 15" X 29-1/2"		

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

SWEDISH MEAT-BALLS



OPERATIONAL GUIDE FOR MEAT LOAF

WITH BROWN GRAVY L-35(2)

INGREDIENTS & BATCH SIZE

Controlling Equip: Mixer, Oven
Container Net Wt:

Servings/Container: Loaf 13 of 6 oz ea
Gravy 13 of 4 oz ea

Est. Prep Time: 6.4 hours
Approx. Yield: 300 & 500 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings MIXER (lb)	500 Servings MIXER (lb)	Utensils
1	Onions, dehydrated, chopped	5290	0.18	0.54	0.90	Kettle
	Peppers, sweet, fresh chopped	5690	0.50	1.50	2.50	
	Celery, fresh, chopped	4270	1.00	3.00	5.00	
	Shortening	14080	0.50	1.50	2.50	Mixer
2	Beef, Bnls, ground	310	30.00	90.00	150.00	Meat Lugs
	Eggs, whole, beaten	2620	1.30	3.90	6.50	
	Salt, table	15850	0.40	1.20	2.00	
	Pepper, black	15480	0.03	0.09	0.15	
	Bread crumbs, dry	6980	4.00	12.00	20.00	
	Water, tap		6.00	18.00	30.00	
3	Shortening	14080	0.50	1.50	2.50	OVENS
	GRAVY			40-gal	40-gal	KETTLE
4	Meat drippings, liquids and water		1.50	4.50	7.50	
	Flour, wheat	8300	1.00	3.00	5.00	
5	Col-Flo 67, starch	SP**	0.50	1.50	2.50	Pot
	Water, tap		23.50	70.50	117.50	Whip
	Pepper, black	15480	0.01	0.03	0.05	
	Caramel coloring, liquid	14960	0.01	0.03	0.05	
	Beef soup & Gravy base	11440	0.40	1.20	2.00	
6	Water		To make 3-gal	To make 9-gal	To make 15-gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR MEAT LOAF WITH BROWN GRAVY L-35(2)

INTRODUCTION

Meat Loaf With Brown Gravy is produced in three parts as follows:

Part I - Meat Loaf - Preparation Area - Components, ingredients and spices are weighed. Meat Loaf is mixed and bulk shipped to Central Kitchen.

Part II - Meat Loaf (continued) Central Kitchen - Bulk meat loaf is weighed, panned cooked and prepared for freezer storage.

Part III - Brown Gravy - Central Kitchen - Brown Gravy is mixed, cooked and packaged (separately) for freezer storage.

OPERATIONAL GUIDE FOR MEAT LOAF WITH BROWN GRAVY L-35(2)

PREPARATION AREA INSTRUCTIONS

Part I	Check Points	Time (Minutes)
NOTE: This product must be prepared in an Area where mechanical mixer is located.		
1- Vegetables listed in operational guide, "Batch Size and ingredients" (Step 1) namely, rehydrated onions, chopped green peppers and chopped celery are sauteed in shortening, using kettle, until slightly browned.		20
2- Eggs are slightly beaten, and added with water, bread crumbs, salt, pepper to the ground beef in mixer. Also add sauteed vegetables (Step 1), start mixer, mix slightly, only enough to disperse all ingredients well. Over mixing destroys the texture in the finished product. Shut off mixer, transfer meat loaf mixture to containers for transfer to Central Kitchen. Keep refrigerated until transferred.		20

OPERATIONAL GUIDE FOR MEAT LOAF
WITH BROWN GRAVY L-35(2)
CENTRAL KITCHENS INSTRUCTIONS

Part II	Check Points	Time (Minutes)
0- Verify bulk meat loaf mixture and shortening received from Prep. Area as to quantity and state of refrigeration.		10
00- Note: Steps 1 and 2 are performed in Prep. Area and brown gravy is fabricated as Part III.		
3- Slightly grease half-size steam table aluminum pans with shortening. Load pans with 5-½ pounds of bulk meat loaf mixture. Pack pans well to eliminate air pockets and voids, pat top evenly and smoothly. CARE MUST BE EXERCISED NOT TO DISTORT ALUMINUM PANS WHILE HANDLING. COVERS WILL NOT FIT DISTORTED PANS. Bake filled pans in preheated 350°F oven to internal temperature of 165°F or approximately one hour fifteen minutes.		90
(a) Remove pans from oven, set aside to temper (cool to room temperature for easy handling). When tempered, drain excess fat and liquid from panned meat loaf, reserve liquids for gravy, Part III. NOTE: Pans need not be drained dry, fat covering bottom of pan will be beneficial during reconstitution.		30
(b) When loaves are cooled, pass pans thru lidding machine to cover and close.		10
(c) Pass covered pans thru labelling machine. Labels should read:		10

Meat Loaf — Date Prepared:_____
Net Wt: — Servings/Container: 13 of 6 oz

Reconstitution Instructions:

Heat covered pans in preheated 325°F ovens to internal temperature of 165°F.

Convection ovens - 1 hour 15 minutes

Conventional (ordinary) ovens - 1 hour 30 minutes

OPERATIONAL GUIDE FOR MEAT LOAF WITH BROWN GRAVY L-35(2)

Part III - Gravy	Check Points	Time (Minutes)
4- Load meat drippings and shortening in kettle; sprinkle flour evenly over flat and with constant agitation; cook for 10 minutes. Crush all lumps.		15
5- Combine starch, water, pepper, caramel coloring and beef soup and gravy, heat to dissolve beef base. Add starch mixture slowly to roux, mix thoroughly, and cook for 20 minutes with agitation.		15
6- Raise level (volume) of product in kettle to required number of gallons with water using measuring stick.		10
7- Transfer gravy to filling machine.		10
8- Fill pure-pak containers with 3.5 lb of gravy and close.		25
9- Pass containers thru labelling machine. Labels should read:		10

Brown Gravy for Meat Loaf
Net Wt: 4 lb

Date Prepared:_____
Servings: 13 of 4 oz

Reconstitution Instructions:

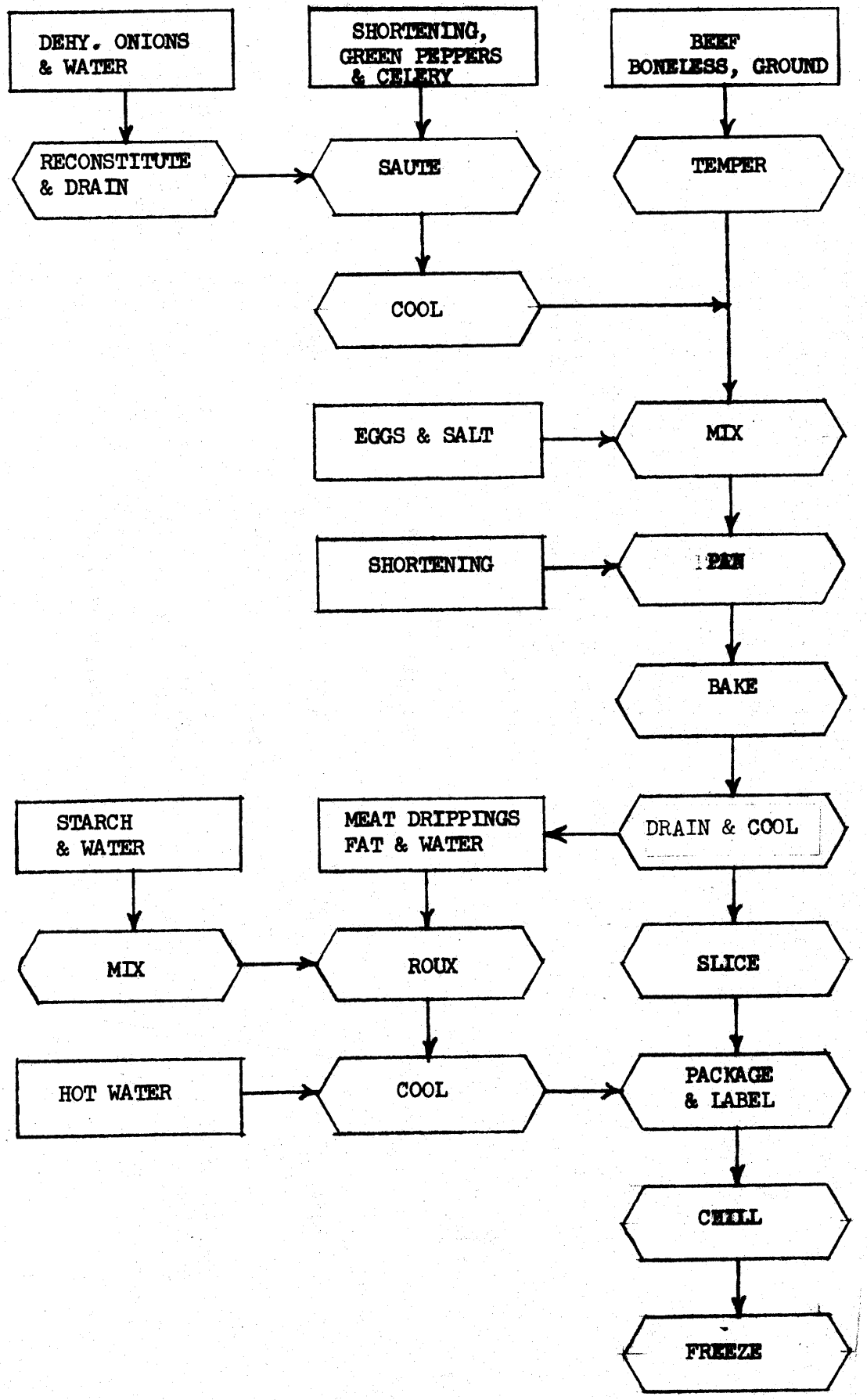
Heat covered pans in oven to internal temperature of 165°F.

Convection oven: 1 hour 15 minutes
Conventional (ordinary) oven: 1-½ hours

Alternatively this gravy may be poured (removed from pans) in kettle and heated to 165°F. (Do not scorch.)

MATERIAL FLOW

MEAT LOAF WITH BROWN GRAVY



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - MEAT LOAF WITH BROWN GRAVY

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Meat loaf mixture*	131.73 (6 bags 21.96 lbs)	219.55 (10 bags 12.96 lbs)	Meat loaf mixture for meat loaf with brown gravy
	Bag size = 15" X 29-1/2"		21.96 lbs
Shortening	1.50 (1 bag 1.50 lbs)	2.50 (1 bag 2.50 lbs)	Shortening for meat loaf with brown gravy
	Bag size = 10" X 18"		** lbs
GRAVY			
Flour, wheat	3.00 (1 bag 3.00 lbs)	5.00 (1 bag 5.00 lbs)	Flour for meat loaf with brown gravy (Gravy)
	Bag size = 10" X 18"		** lbs
Col-Flo 67, starch Pepper, black Caramel coloring, liquid Beef soup & gravy base	1.50 0.03 (1 bag 0.03 2.76 lbs) 1.20	2.50 0.05 (1 bag 0.05 4.60 lbs) 2.00	Starch, pepper, coloring and soup and gravy base for meat loaf with brown gravy (Gravy)
	Bag size = 10" X 18"		** lbs

*The mixture is prepared in Ingredients Preparation Area.
**Appropriate weight to be written is dependent on number of servings.

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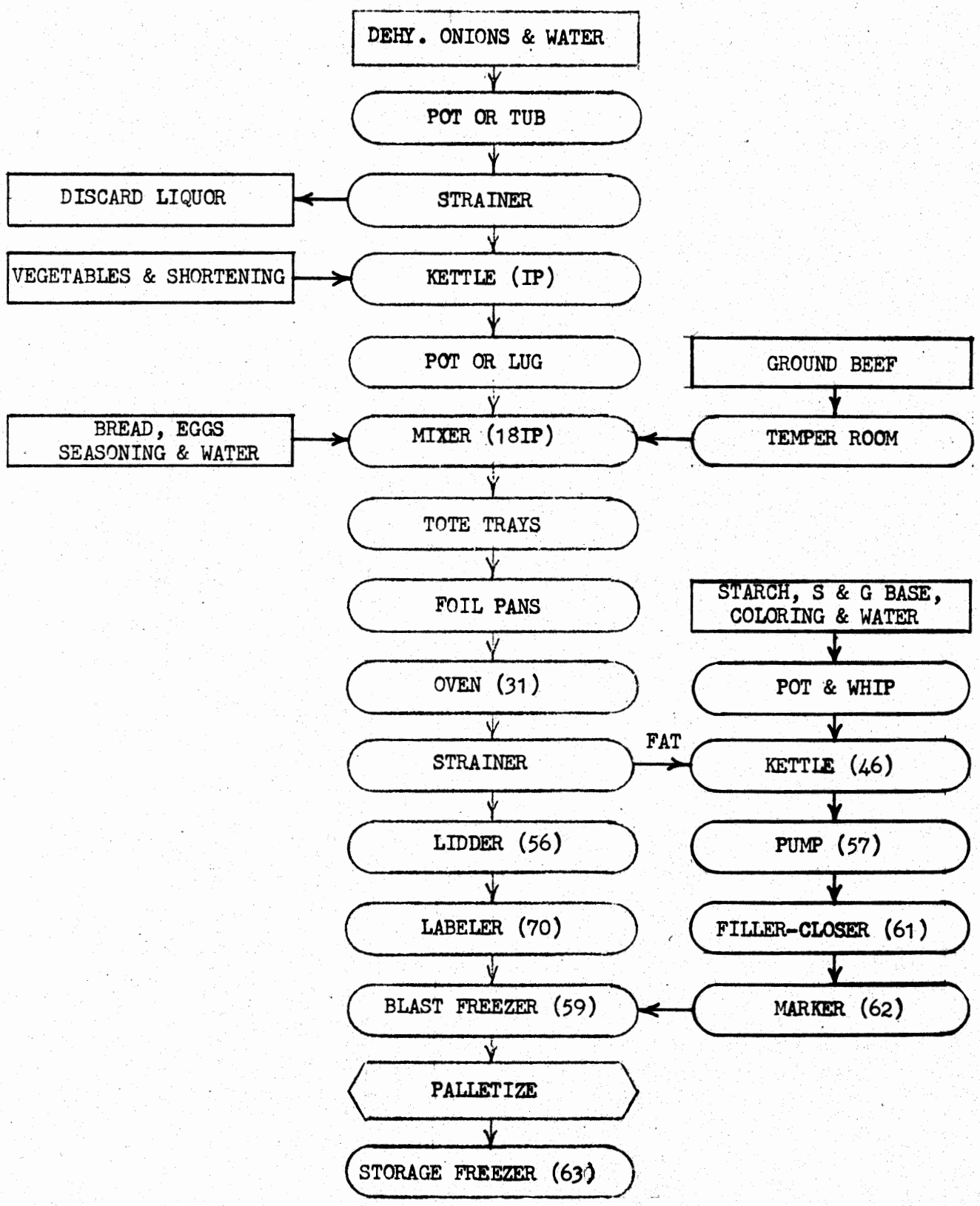
EQUIPMENT UTILIZATION

MEAT LOAF WITH BROWN GRAVY



OPERATIONAL GUIDE FOR MEAT SAUCE

(FOR SPAGHETTI) L-38

INGREDIENTS & BATCH SIZE

Controlling Equip: Kettle
Container Wt: Meat Sauce 5.0 lb

Servings/Container: 9 of 1 cup

Est. Prep Time: 3.3 hours
Approx. Yield: 200, 300, & 400 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	200 Servings 40-gal Kettle (lb)	300 Servings 40-gal Kettle (lb)	400 Servings 60-gal Kettle (lb)	Utensils
1	Meat Sauce						
	Beef, ground	310	25.00	50.00	75.00	100.00	Kettle agitating
2	Tomato paste (26% solids)	6460	11.50	23.00	34.50	46.00	Pot
	Tomatoes, canned, crushed	6420	25.50	51.00	76.50	102.00	Whip
	Garlic powder	4700	0.01	0.02	0.03	0.04	
	Salt, table	15850	0.46	0.92	1.38	1.84	
	Oregano, ground	15420	0.01	0.02	0.03	0.04	
	Pepper, cayenne, red	15510	0.01	0.02	0.03	0.04	
	Thyme, ground	15990	0.01	0.02	0.03	0.04	
	Sugar, white	9930	0.63	1.26	1.89	2.52	
	Bay leaves, ground	14320	0.01	0.01	0.03	0.04	
	Water, tap		15.85	31.70	47.55	63.40	
	Col-flo 67, starch	SP**	0.19	0.38	0.57	0.76	
	Water		To make 7.8 gal	To make 15.6 gal	To make 23.4 gal	To make 31.2 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR MEAT SAUCE
(FOR SPAGHETTI) L-38
INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients and spices as to number and amounts received from Prep. Area.		10
00-	Deliver ground beef and spices to the Kettle Area.		
1-	Place ground beef in kettle; heat and cook till all redness has disappeared. Drain excess liquid and discard.		10
2-	Combine all remaining ingredients with water; blend well; add to cooked beef in kettle. Heat to 180°F and simmer covered for 30 minutes with agitator on low speed. Stop agitator. Raise level (volume) of kettle to required number of gallons with water using measuring stick. Shut off steam.		30
3-	Weigh 5.0 lb of meat sauce in the half-size steam table pans.		10
4-	Pass meat tomato sauce pans thru lidding machine.		20
5-	Pass covered pans thru labelling machine.		20

Labels should read:

Meat Sauce Labels
Spaghetti Meat Sauce
Net Wt: 5 lb

Date Prepared:_____
Servings: 9 of 1 cup

Reconstitution Instructions:

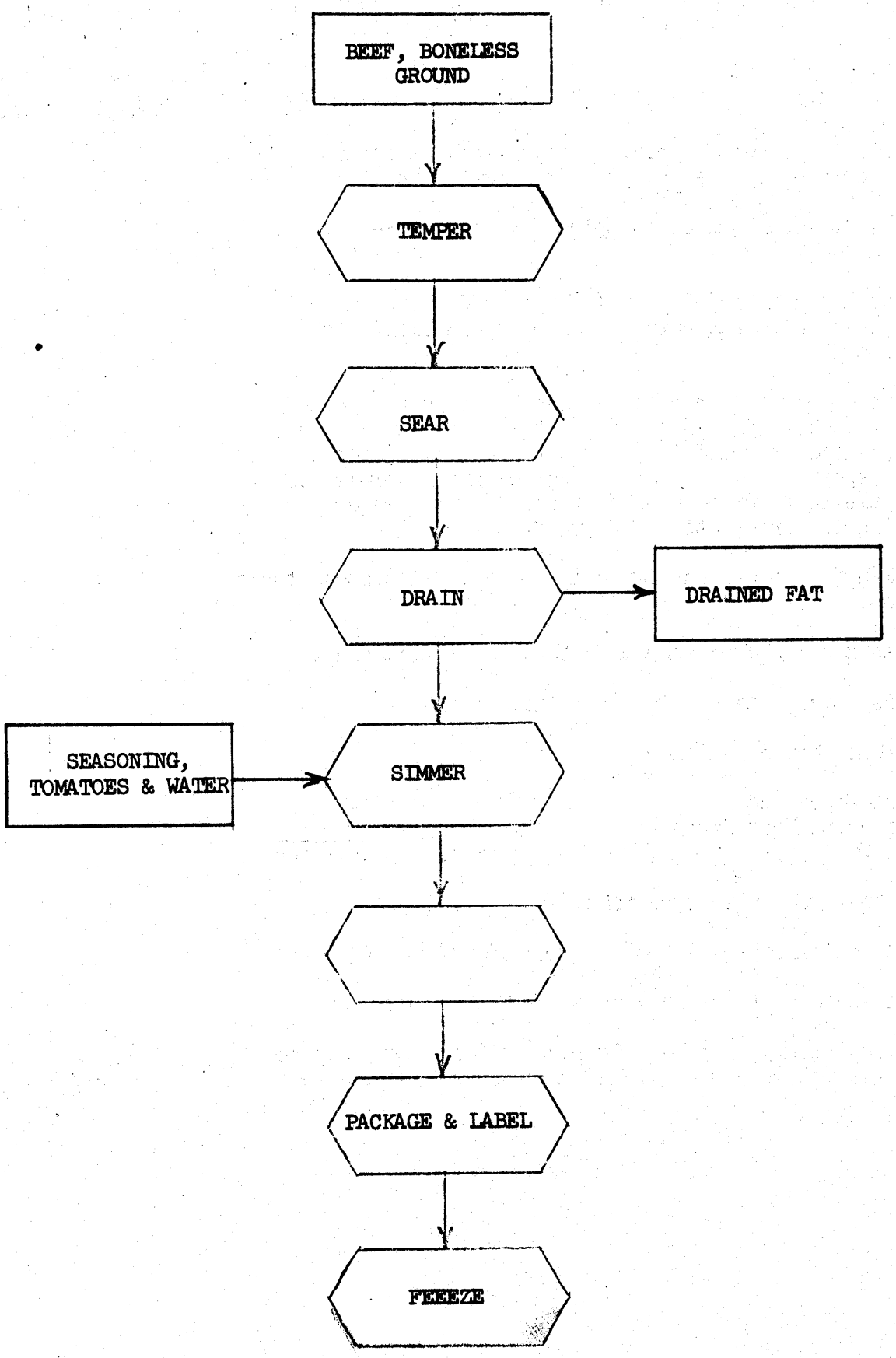
Convection oven - 1 hour 15 minutes

Conventional (ordinary) oven - 1 hour 30 minutes

Alternatively, the Meat Sauce (For Spaghetti) may be poured into steam kettle and warmed to 160°F.

MATERIAL FLOW

MEAT SAUCE FOR SPAGHETTI



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SPAGHETTI WITH MEAT SAUCE

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire tie; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

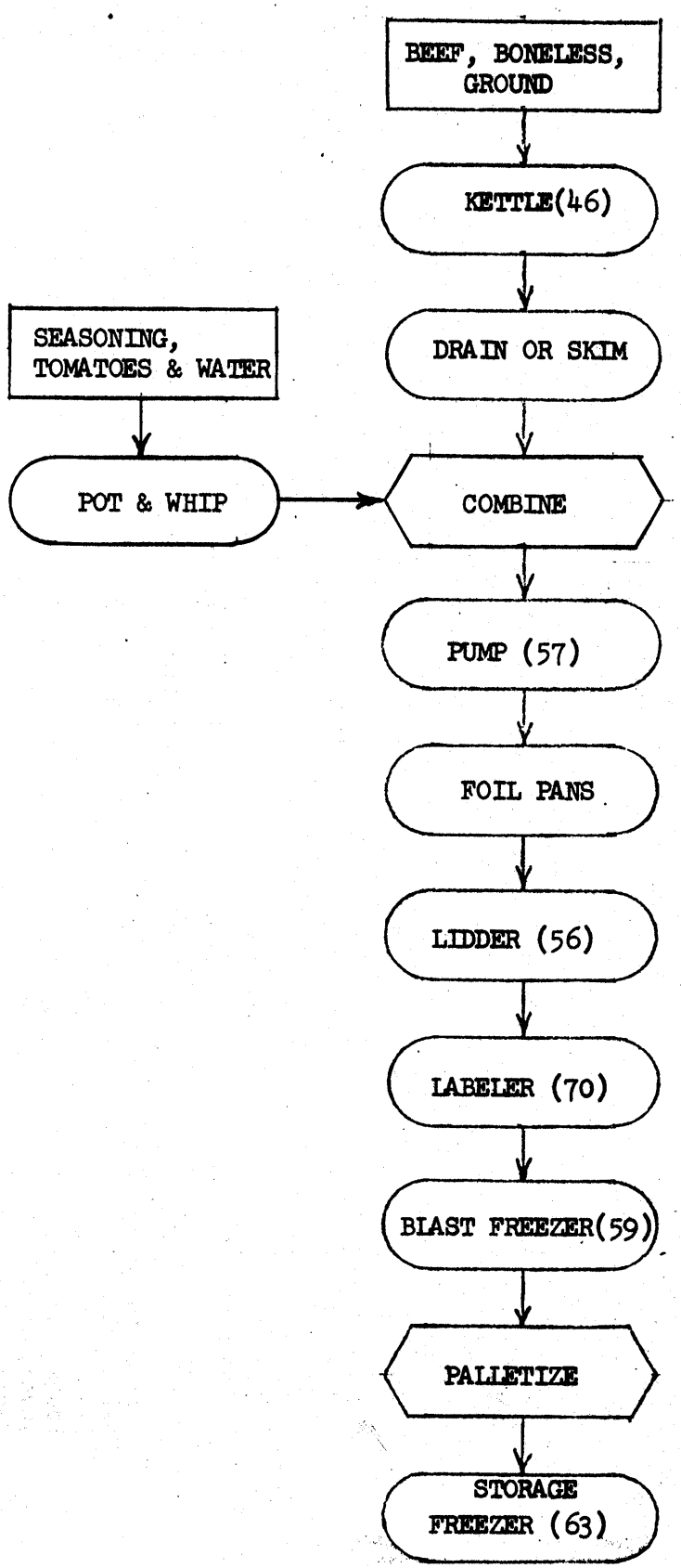
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	200 Servings (lbs)	300 Servings (lbs)	400 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Spaghetti, dry	24.52 (1 bag 24.52 lbs)	36.78 (2 bags 18.39 lbs) Bag size = 15" X 29-1/2"	49.04 (3 bags 16.35 lbs)	Spaghetti for spagh i with meat sauce * lbs
Salt, table Oil, vegetable	.62 (1 bag 1.00 1.62 lbs)	.93 (1 bag 1.50 2.43 lbs) Bag size = 10" X 18"	1.24 (1 bag 2.00 3.24 lbs)	Salt and oil for spaghetti w/meat sauce * lbs
Beef, ground	50.00 (2 bags 25.00 lbs)	75.00 (3 bags 25.00 lbs) Bag size = 15" X 29-1/2"	100.00 (4 bags 25.00 lbs)	Beef for spaghetti w/meat sauce 25.00 lbs
Tomato paste (26% solids)	23.00 (1 bag 23.00 lbs)	34.50 (2 bags 17.25 lbs) Bag size = 15" X 29-1/2"	46.00 (2 bags 23.00 lbs)	Tomato paste for spaghetti w/meat sauce * lbs
Tomatoes, canned, crushed	51.00 (2 bags 25.50 lbs)	76.50 (3 bags 25.5 lbs) Bag size = 15" X 29-1/2"	102.00 (4 bags 25.5 lbs)	Tomatoes for spaghetti w/meat sauce 25.50 lbs
Garlic powder Salt, table Oregano, ground Pepper, cayenne, red Thyne, ground Sugar, white Bay leaves, ground Col-Flo 67 starch	0.02 .92 .02 (1 bag .02 2.65 lbs) .02 1.26 0.01 0.38	0.03 1.38 .03 (1 bag .03 3.99 lbs) .03 1.89 .03 .57 Bag size = 10" X 18"	.04 1.84 .04 (1 bag .04 5.32 lbs) .04 2.52 .04 .76	Spice & starch for spaghetti w/meat sauce * lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

MEAT SAUCE FOR SPAGHETTI



OPERATIONAL GUIDE FOR CHICKEN FRIED

STEAKS L-12

INGREDIENTS & BATCH SIZE

Controlling Equip: Ovens
Container Net Wt:

Servings/Container: 10 of 1 steak each

Est. Prep Time: 4.1 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings OVEN (lb)	500 Servings OVEN (lb)	800 Servings OVEN (lb)	Utensils
1	Flour, wheat	8300	4.00	12.00	20.00	32.00	Baking sheet
	Salt, table	15850	0.50	1.50	2.50	4.00	Breader
	Pepper, black	15480	0.04	0.12	0.20	0.32	Fryer
	Monosodium Glutamate	15260	0.05	0.15	0.25	0.40	Deep Bake Pans
2	Beef, Bnls, Swiss Steaks (steak per serving)	190	38.00	114.00	190.00	304.00	
3	Milk, nonfat, dry	3050	0.41	1.23	2.05	3.28	Oven
	Eggs, whole, slightly beaten	2620	2.00	6.00	10.00	16.00	
	Water, tap		4.00	12.00	20.00	32.00	
4	Shortening	14080	2.00	6.00	10.00	16.00	

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

OPERATIONAL GUIDE FOR CHICKEN FRIED STEAKS L-12

INSTRUCTIONS

		Check Points	Time (Minutes)
NOTE:	This product requires that the steaks be dredged in flour, dipped in egg-wash, and dredged again in flour. The use of two dredgings in important to produce the proper coating.		
0-	Verify components, ingredients (including the flour, salt, pepper, monosodium glutamate mixture), beef steaks, and the milk and egg mixture (egg wash).		10
00-	Deliver all components, ingredients, etc., to the breading and frying area.		
1-	Load breading machine (dry section) with mixture of flour, salt, pepper, and monosodium glutamate.		10
2-	Pass steaks thru breading machine to dredge. Place dredged steaks on baking sheets.		30
3-	When all steaks are dredged, load breading machine (wet section) with milk and egg mixture. Check flour mixture in dry section for quantity also. Place breading machine in line with preheated deep fat fryer. Pass dredged steaks through breader-fryer to brown.		40
4-	Overlap fried steaks in large deep, slightly greased baking pans. Cover pans tightly and bake in preheated 350°F oven until steaks are tender (about 2 hours).		120
5-	Shingle (overlap) 10 fried-baked steaks in half-size steam table pan. Allow to cool to room temperature.		30
6-	Pass filled pans thru lidding machine to cover and close.		10
7-	Pass covered pans thru labelling machine. Labels should read:		10

Chicken Fried Steaks — Date Prepared:_____
Net Wt: — Servings: 10 of 1 steak each

Reconstitution Instructions:

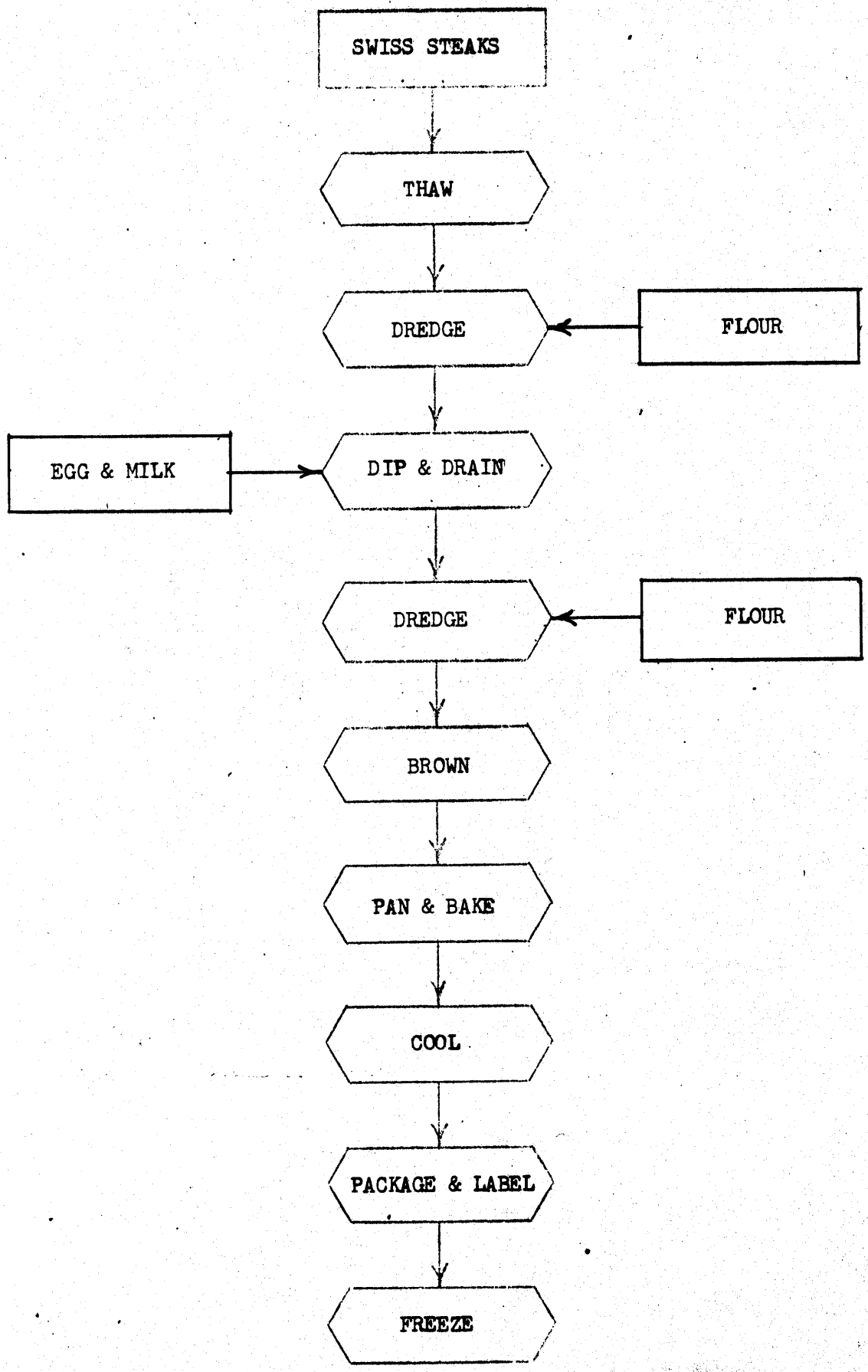
Heat covered pans in 325°F preheated ovens to internal temperature of 165°F.

Convection Ovens: 1 hour 15 minutes

Conventional (ordinary) ovens: 1 hour 30 minutes

MATERIAL FLOW

CHICKEN FRIED STEAKS



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - CHICKEN FRIED STEAKS

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

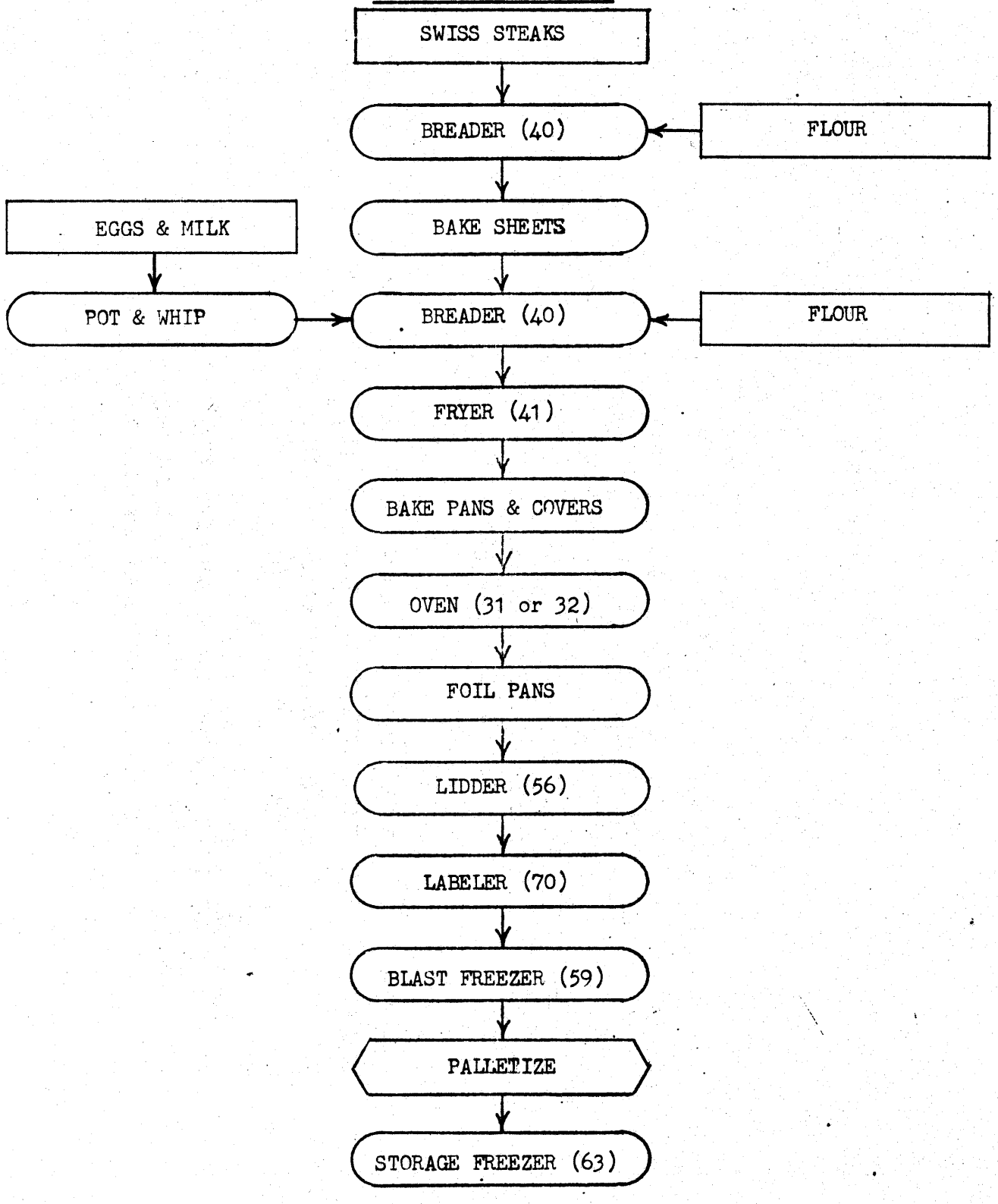
Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Flour, wheat	12.00	20.00	32.00	Flour, salt, pepper and monosodium glutamate for chicken fried steaks
Salt, table	1.05 (1 bag	2.50 (1 bag	4.00 (2 bags	
Pepper, black	0.12 13.77 lbs)	0.20 22.95 lbs)	0.32 18.36 lbs)	
Monosodium glutamate	0.15	0.25	0.40	
		Bag size = 15" X 29-1/2"		* lbs
Beef, boneless, swiss steaks (1 steak/serving)	114.00 (5 bags 22.80 lbs)	190.00 (8 bags 23.80 lbs)	304.00 (13 bags 23.40 lbs)	Beef steaks for chicken fried steaks
		Bag size = 15" X 29-1/2"		* lbs
Milk, nonfat, dry	1.23 (1 bag	2.05 (1 bag	3.28 (1 bag	Milk and eggs for chicken fried steaks
Eggs, whole, slightly beaten	6.00 7.23 lbs)	10.00 12.05 lbs)	16.00 19.28 lbs)	
		Bag size = 15" X 29-1/2"		* lbs
Shortening	6.00 (1 bag 6.00 lbs)	10.00 (2 bags 5.00 lbs)	16.00 (2 bags 8.00 lbs)	Shortening for chicken
		Bag size = 15" X 29-1/2"		* lbs

*Appropriate weight to be written is dependent on number of servings.

5 Aug 77

EQUIPMENT UTILIZATION

CHICKEN FRIED STEAKS



OPERATIONAL GUIDE FOR PEPPER STEAKS L-13

INGREDIENTS & BATCH SIZE

Controlling Equip: Ovens
Container Net Wt:

Servings/Container: 10 of 1 steak & 1/2 cup gravy

Est. Prep Time: 4.9 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Utensils
1	Beef, Bnls, Swiss Steak (1 steak per serving)	190	40.00	120.00	200.00	320.00	Deep Fryer
				40-gal Kettle	40-gal Kettle	40-gal Kettle	
2	Water, tap		14.00	42.00	70.00	112.00	Kettle
	Tomato paste, canned	6460	1.94	5.82	9.70	15.52	Whip
	Soy Sauce	15915	3.12	9.36	15.60	24.96	
	Salt, table	15850	0.25	0.75	1.25	2.00	Pot
	Sugar	9930	0.13	0.39	0.65	1.04	
	Pepper, black	15480	0.03	0.09	0.15	0.24	
	Monosodium Glutamate	15260	0.19	0.57	0.95	1.52	
	Col-flo 67, starch	SP**	0.37	1.11	1.85	2.96	Oven
3	Drippings & water		To make 3.0 gal	To make 9 gal	To make 15 gal	To make 24 gal	Measuring stick
4	Peppers, green, fresh, chopped, ½ x ½ in.	5690	8.00	24.00	40.00	64.00	

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR PEPPER STEAKS L-13

INSTRUCTIONS

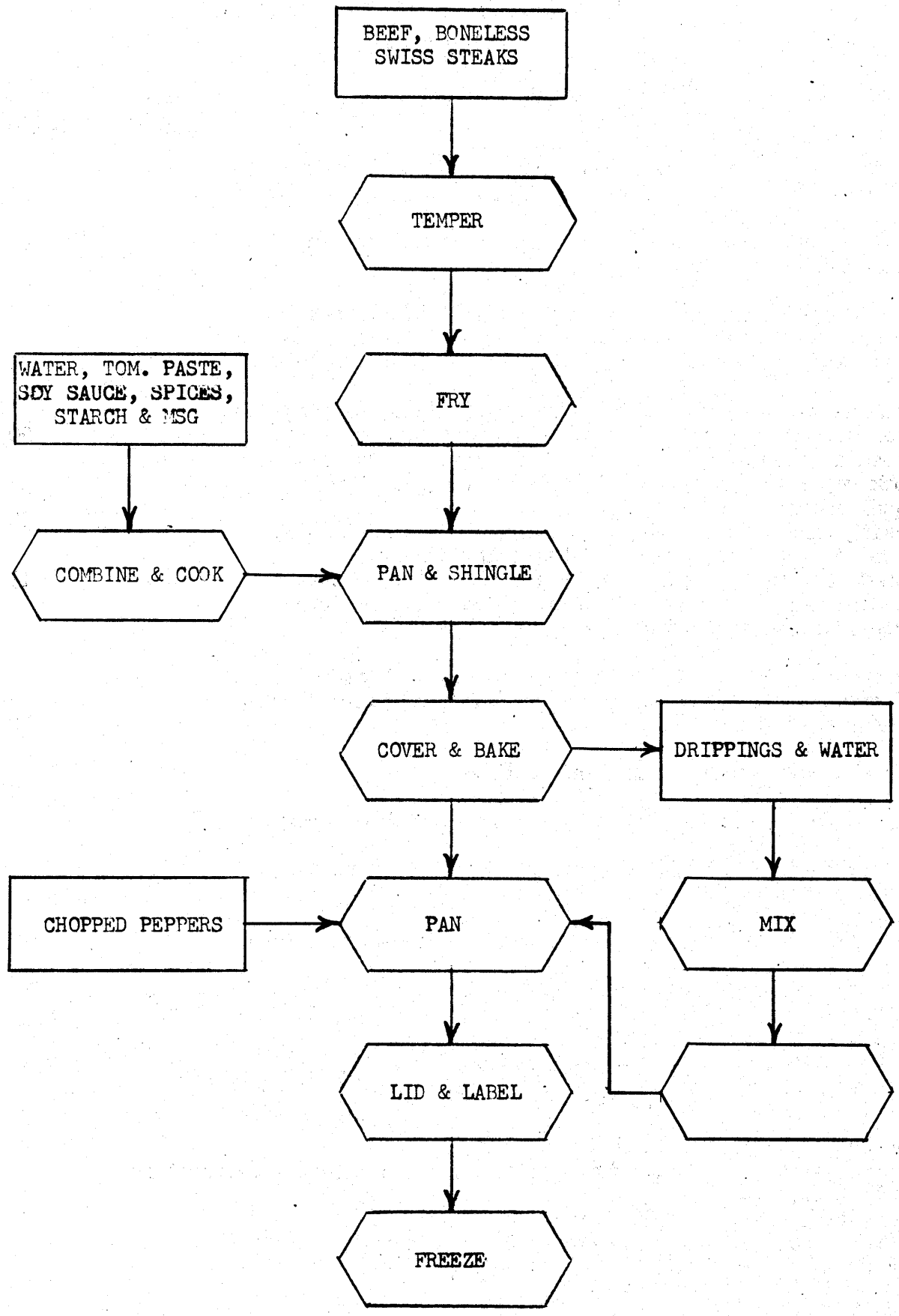
		Check Points	Time (Minutes)
0-	Verify components, ingredients and spices as to number and amounts received from Prep. Area.		10
00-	Deliver Swiss steaks to continuous fryer. Remaining ingredients to kettle area.		
1-	Pass Swiss steaks thru preheated (375°F) continuous fryer. When steaks are discharged from fryer shingle (overlap) in deep baking pans. Hold for step 2 below.		30
2-	Combine water, tomato paste, soy sauce, salt, pepper, starch, and monosodium glutamate in kettle; mix well; crush all lumps. With constant stirring (agitation) cook until thickened (180°F) for 20 minutes.		20
	Pour equal amounts of sauce over steaks (step 2) in baking pans. Cover pans and bake in preheated (325°F) oven for 1-½ hours or until steaks are tender.		90
	Remove steaks from oven, uncover and shingle 10 steaks in each half size steam table aluminum pan. Reserve drippings and liquid for step 3.		15
3-	Scrap drippings into kettle and raise level (volume) of product with water to required number of gallons using measuring stick.		10
	(a) Transfer gravy to filling machine.		10
	(b) Cover panned steaks (step 2) with 2.5 lb of gravy.		10
4-	Top (spread over) gravy steaks 3/4 pound of chopped green peppers.		15
5-	Pass filled pans thru lidding machine to cover and close..		10
6-	Pass covered pans thru labelling machine. Labels should read:		10

Pepper Steaks — Date Prepared:_____
Net Wt: — Servings: 10 of 1 steak and ½ cup gravy

Reconstitution Instructions:
Heat covered pans in preheated 325°F ovens to internal temperature of 165°F.
Convection Oven - 1 hour 15 minutes
Conventional (ordinary) ovens-1 hour 30 minutes

MATERIAL FLOW

PEPPER STEAKS



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - PEPPER STEAKS

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

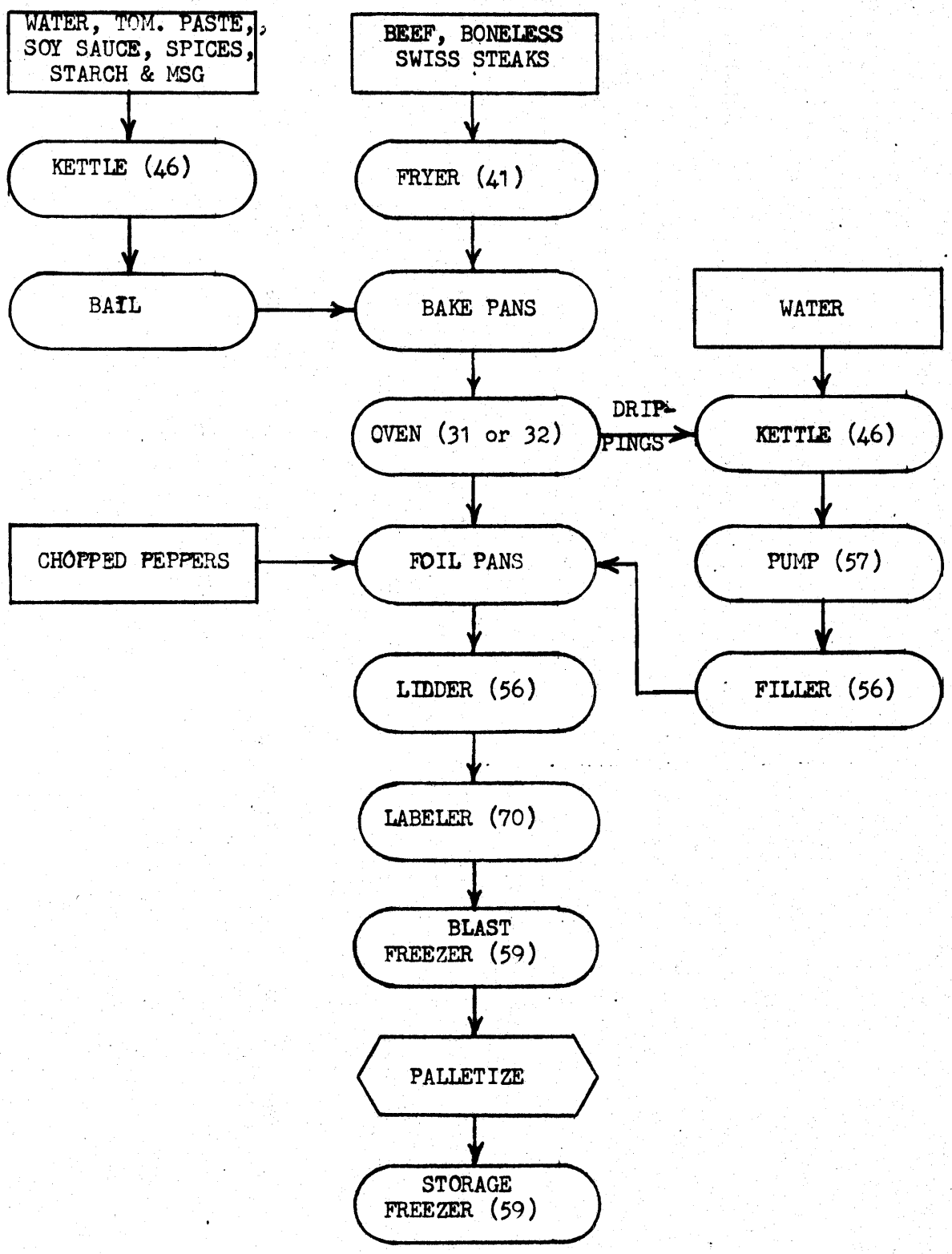
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, boneless, swiss steak (1 steak/serving)	120.00 (6 bags 20.00 lbs)	200.00 (10 bags 20.00 lbs)	320.00 (16 bags 20.00 lbs)	Boneless beef for pepper steaks
		Bag size = 15" X 29-1/2"		20.00 lbs
Tomato paste, canned	5.82	9.70	15.52	Tomato paste, soy sauce, salt, pepper, sugar, monosodium glutamate and starch for pepper steaks
Soy sauce	9.36	15.60	24.96	
Salt, table	0.75 (1 bag	1.25 (2 bags	2.00 (3 bags	
Sugar	0.39 18.09 lbs)	.65 15.08 lbs)	1.04 16.08 lbs)	
Pepper, black	0.09	.15	0.24	
Monosodium glutamate	0.57	.95	1.52	
Col-Flo 67, starch	1.11	1.85	2.96	
		Bag size = 15" X 29-1/2"		* lbs
Peppers, green, fresh, chopped, 1/2 X 1/2 inch	24.00 (2 bags 12.00 lbs)	40.00 (2 bags 20.00 lbs)	64.00 (4 bags 16.00 lbs)	Peppers for pepper steaks
		Bag size = 15" X 29-1/2"		* lbs

*Appropriate weight to be written is depende on number of servings.

EQUIPMENT UTILIZATION

PEPPER STEAKS



OPERATIONAL GUIDE FOR SALISBURY STEAK

WITH BROWN GRAVY L-37

Controlling Equip: Mixer & Oven
Container Net Wt: 5 lb

Standard Servings: 10 of 1 steak & ½ cup gravy

Est. Prep Time: 4.1 hours
Approx. Yield: 300, 500, & 700 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings OVEN (lb)	500 Servings OVEN (lb)	700 Servings OVEN (lb)	Utensils
1	Nonfat Dry milk	3050	0.41	1.23	2.05	2.87	Pot
	Water, tap		4.31	12.93	21.55	30.17	Whip
	Bread, crumbs	6980	1.44	4.32	7.20	10.08	Pot strainer
	Onions, dehydrated, chopped	5290	0.37	1.11	1.85	2.59	Mixer
	Eggs, whole, beaten	2620	1.00	3.00	5.00	7.00	
	Pepper, black	15480	0.02	0.06	0.10	0.14	
	Salt, table	15850	0.37	1.11	1.85	2.59	Patty machine
	Worcestershire sauce	16030	0.19	0.57	0.95	1.33	Baking pans
	Beef, ground	310	30.00	90.00	150.00	210.00	
	Gravy			40-gal Kettle	40-gal Kettle	40-gal Kettle	
2	Flour, wheat	8300	0.44	1.32	2.20	3.08	Kettle
	Col-Flo 67 starch	SP**	0.44	1.32	2.20	3.08	Whip
	Water, tap		23.15	69.45	115.75	162.05	
	Soup & Gravy Base, beef	11440	0.94	2.82	4.70	6.58	
	Garlic powder	4700	0.01	0.03	0.05	0.07	
	Pepper, black	15480	0.01	0.03	0.05	0.07	
3	Water		To make 3 gal	To make 9 gal	To make 15 gal	To make 21 gal	Measuring stick

* FSC Group 89 Subsistence Catalogue 1 Jan 77 (C8900-SL)

** Special Purchase

OPERATIONAL GUIDE FOR SALISBURY STEAKS

WITH BROWN GRAVY L-37

PREPARATION AREA

SALISBURY STEAKS (6 oz each)

1- Salisbury Steaks shall be prepared from components, ground beef and spices as listed in step 1 of Ingredients and Batch Size Operational Guide for Salisbury Steaks with Brown Gravy.

   (a) Reconstitute the non-fat dry milk with water and blend in bread crumbs.

   (b) Rehydrate (soak) dried chopped onions in an excess amount of water (10 minutes). Strain onions to remove excess water.

   (c) Place ground beef in meat mixer, add strained onions, milk mixture, eggs, pepper, salt, and worcestershire sauce; mix lightly but thoroughly.

   (d) Pass ground beef mixture thru patty forming machine to produce 3/4-inch thick, oval shape patties weighing 6 oz.

   (e) Place oval patties on lightly greased baking sheet pans which fit ovens located in Central Kitchen area.

   (f) Keep patties refrigerated until transferred to Central Kitchen.

OPERATIONAL GUIDE FOR SALISBURY STEAKS WITH BROWN GRAVY L-37

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, (including panned Salisbury steaks) ingredients and spices as to number and amounts received from Prep. Area.		
00-	Deliver Salisbury steaks to oven area, all remaining ingredients to kettle area.		10
1-	Place panned Salisbury steaks in preheated 325°F oven, bake to internal temperature of 165°F (about 1 hour baking). Remove from oven; cool and hold for step 5 below.		70
2-	Mix all dry ingredients, flour, starch S & G base and spices in kettle. Add water slowly while stirring vigorously; crush all lumps. Turn on steam and heat for 20 minutes at 200°F. Turn off steam.		30
3-	Raise level of kettle (volume) to required number of gallons with warm water using measuring stick.		10
4-	Transfer gravy to filler.		10
5-	Place 10 steaks in half-size steam table pans, shingling as necessary. Cover steaks with 2.5 lb of brown gravy from filler.		30
6-	Pass pans of steak and gravy thru lidding machine to cover and close.		10
7-	Pass covered, closed pans thru labelling machine. Labels should read:		10

Salisbury Steak w/Brown Gravy
Net Wt: 5 lb (approx.)

Date Prepared:_____
Servings: 10 of 1 steak & 4 oz gravy

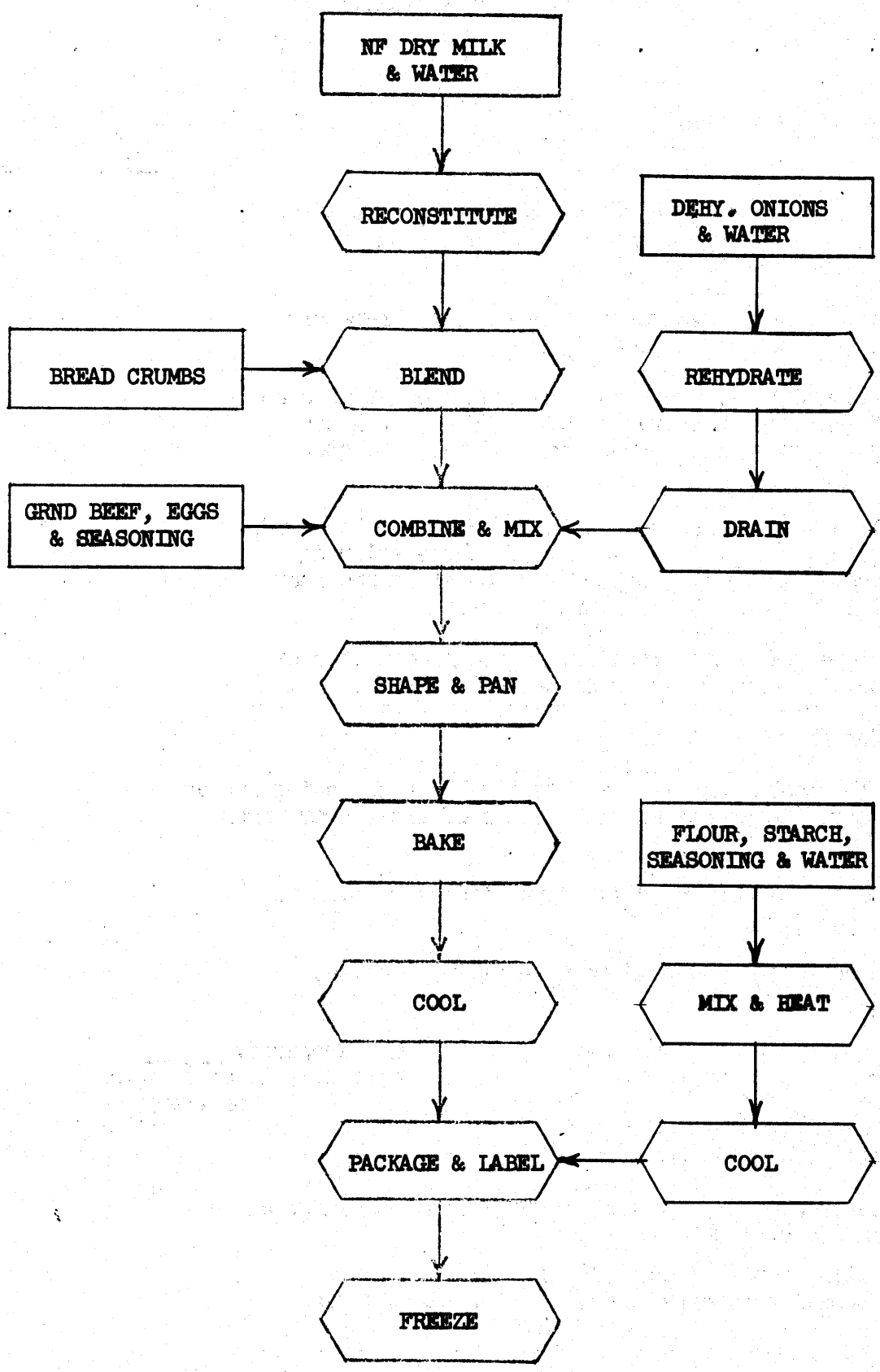
Reconstitution Instructions:

Heat covered pans in preheated 325°F ovens to internal temperature of 160°F

Convection ovens: 1 hour 15 minutes
Conventional (ordinary) ovens: 1 hour 30 minutes

MATERIAL FLOW

SALISBURY STEAK WITH BROWN GRAVY



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SALISBURY STEAK WITH BROWN GRAVY

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

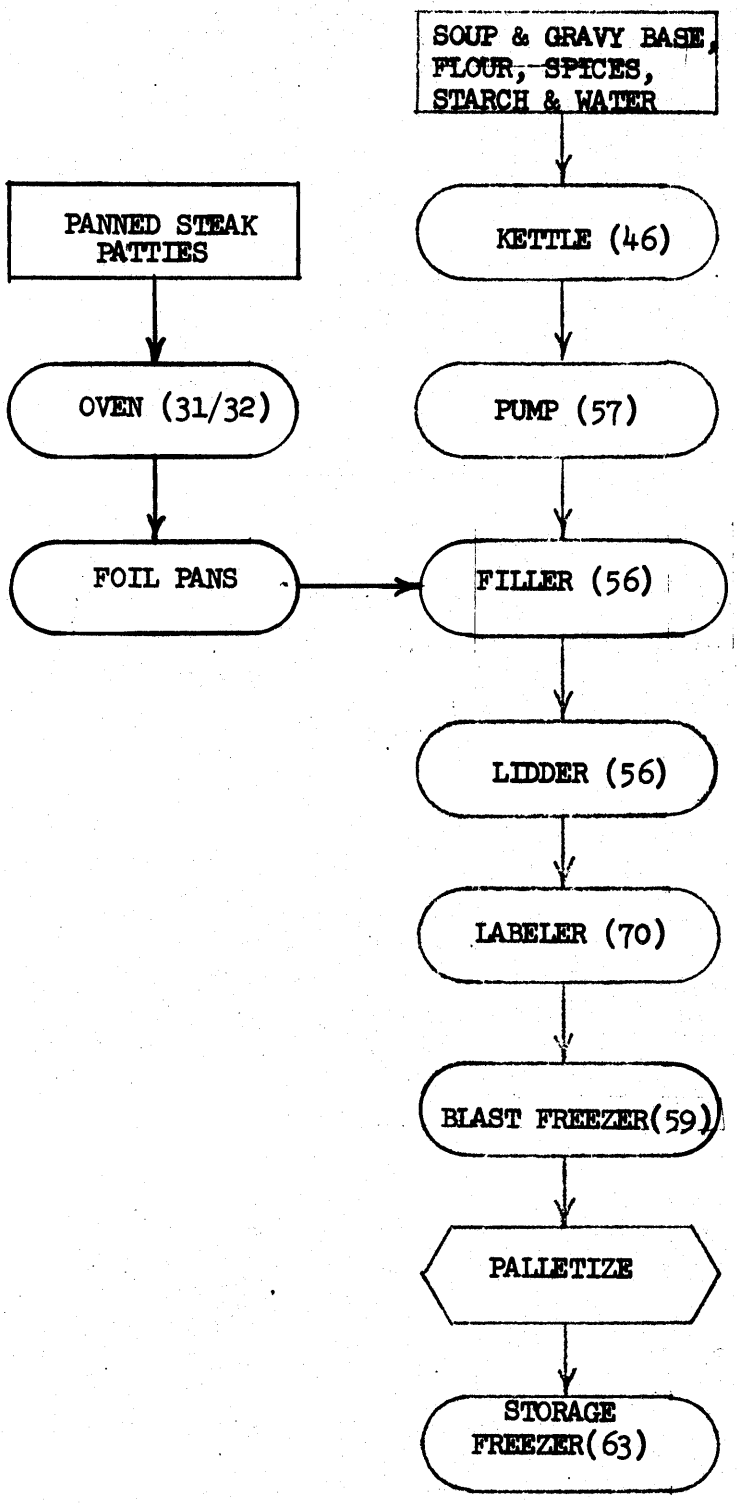
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	700 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
NOTE: The salisbury steaks are to be prepared and panned in the preparation area in accordance with the preparation area operational guide.				
GRAVY				
Flour, wheat	1.32 (1 bag 1.32 lbs)	2.20 (1 bag 2.20 lbs)	3.08 (1 bag 3.08 lbs)	Flour for salisbury steak with brown gravy (Gravy) * lbs
		Bag size = 10" X 18"		
Col-Flo 67 starch	1.32 (1 bag 1.32 lbs)	2.20 (1 bag 2.20 lbs)	3.08 (1 bag 3.08 lbs)	Starch for salisbury steak with brown gravy (Gravy) * lbs
		Bag size = 10" X 18"		
Soup & gravy base, beef	2.82 (1 bag	4.70 (1 bag	6.58 (1 bag	Soup & gravy base, garlic powder and pepper for salisbury steak with brown gravy (Gravy) * lbs
Garlic powder	0.03	0.05	0.07	
Pepper, black	0.03 2.88 lbs)	0.05 4.80 lbs)	0.07 6.72 lbs)	
		Bag size = 10" X 18"		

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

SALISBURY STEAK WITH BROWN GRAVY



OPERATIONAL GUIDE FOR SALISBURY STEAK

WITH TOMATO GRAVY

INGREDIENTS & BATCH SIZE L-37 0-19

Conrolling Equip: Mixer & Oven
Container Net Wt: 4.75 lb

Standard Serving: 10 of 1 steak & 4 oz gravy

Est. Prep Time: 4.1 hours
Approx. Yield: 300, 500, & 700 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings OVEN (lb)	500 Servings OVEN (lb)	700 Servings OVEN (lb)	Utensils
1							
	Nonfat Dry Milk	3050	0.41	1.23	2.05	2.87	Pot, Whip
	Water, tap		3.75	11.25	18.75	26.25	
	Bread crumbs, dry	6980	1.50	4.50	7.50	10.50	Mixer
	Beef, ground	310	30.00	90.00	150.00	210.00	
	Onions, dehydrated, chopped	5290	0.38	1.14	1.90	2.66	
	Eggs, whole, beaten	2620	1.03	3.09	5.15	7.21	Patty machine
	Pepper, black	15480	0.02	0.06	0.10	0.14	
	Salt, table	15850	0.38	1.14	1.90	2.66	Baking pans
	Worcestershire sauce	16030	0.19	0.57	0.95	1.33	
2	GRAVY			40-gal Kettle	40-gal Kettle	60-gal Kettle	
	Onions, dehydrated, chopped	5290	0.19	0.57	0.95	1.33	Kettle
	Shortening	14080	1.50	4.50	7.50	10.50	Whip
	Flour, wheat	8300	1.00	3.00	5.00	7.00	
	Col-flo 67, starch	SP**	0.50	1.50	2.50	3.50	
	Water, tap		21.35	64.05	106.75	149.45	
	Tomato paste	6460	2.15	6.45	10.75	15.05	
	Pepper, black	15480	0.01	0.03	0.05	0.07	
	Soup & Gravy Base (Beef)	11440	0.50	1.50	2.50	3.50	
3	Water, tap		To make 4 gal	To make 12 gal	To make 20 gal	To make 28 gal	Measuring stick

* Fed Supply Catalog 1 Jan 77 - Group 89 Subsistence (C8900-SL)

** Special Purchase

OPERATIONAL GUIDE FOR SALISBURY STEAKS FOR TOMATO GRAVY L-37

PREPARATION AREA

SALISBURY STEAKS (6 oz each)

1- Salisbury steaks shall be prepared from components, ground beef and spices as listed in step 1 of Ingredients and Batch Size Operational Guide for Salisbury Steaks w/Tomato Sauce.

   (a) Reconstitute non fat dry milk with water provided in meat mixer; add bread crumbs and onions; mix thoroughly. Add ground beef, eggs, salt, pepper, and Worcestershire sauce to milk, bread crumbs, and onion mixture; mix lightly but thoroughly.

   (b) Pass ground beef mixture thru patty forming machine to produce a 3/4-inch-thick oval shaped patty weighing 6 oz.

   (c) Place formed oval beef patties on lightly greased baking sheet pans which fit ovens located in Central Kitchen Area.

   (d) Keep panned patties refrigerated until transferred to Central Kitchen.

OPERATIONAL GUIDE FOR SALISBURY STEAKS WITH TOMATO GRAVY L-37 0-19

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components (including panned Salisbury steaks), ingredients, and spices as to number and amounts received from Prep. Area.		
00-	Deliver panned Salisbury steaks to oven area and all remaining ingredients (for gravy) to Kettle Area.		10
1-	Place panned Salisbury steaks in preheated 325°F oven; bake to an internal temperature of 165°F (about 1 hour baking). Remove from oven; cool; and hold for step 5.		70
2-	Combine flour and starch with part of water provided to make a slurry in steam kettle. Add remaining water, shortening, tomato paste, soup and gravy base; mix thoroughly, and heat at 200°F for 20 minutes. Turn off steam.		30
3-	Raise level (volume) of kettle to required number of gallons with warm water using measuring stick.		10
4-	Transfer gravy to filler.		10
5-	Place 10 steaks in half-size steam table pans, shingling as necessary. Cover steaks with 2.5 lb of gravy from filler.		30
6-	Pass pans of steak and gravy thru lidding machine to cover and close.		10
7-	Pass closed covered pans thru labelling machine. Labels should read:		10

Salisbury Steak w/Tomato Gravy
Net Wt: 5 lb

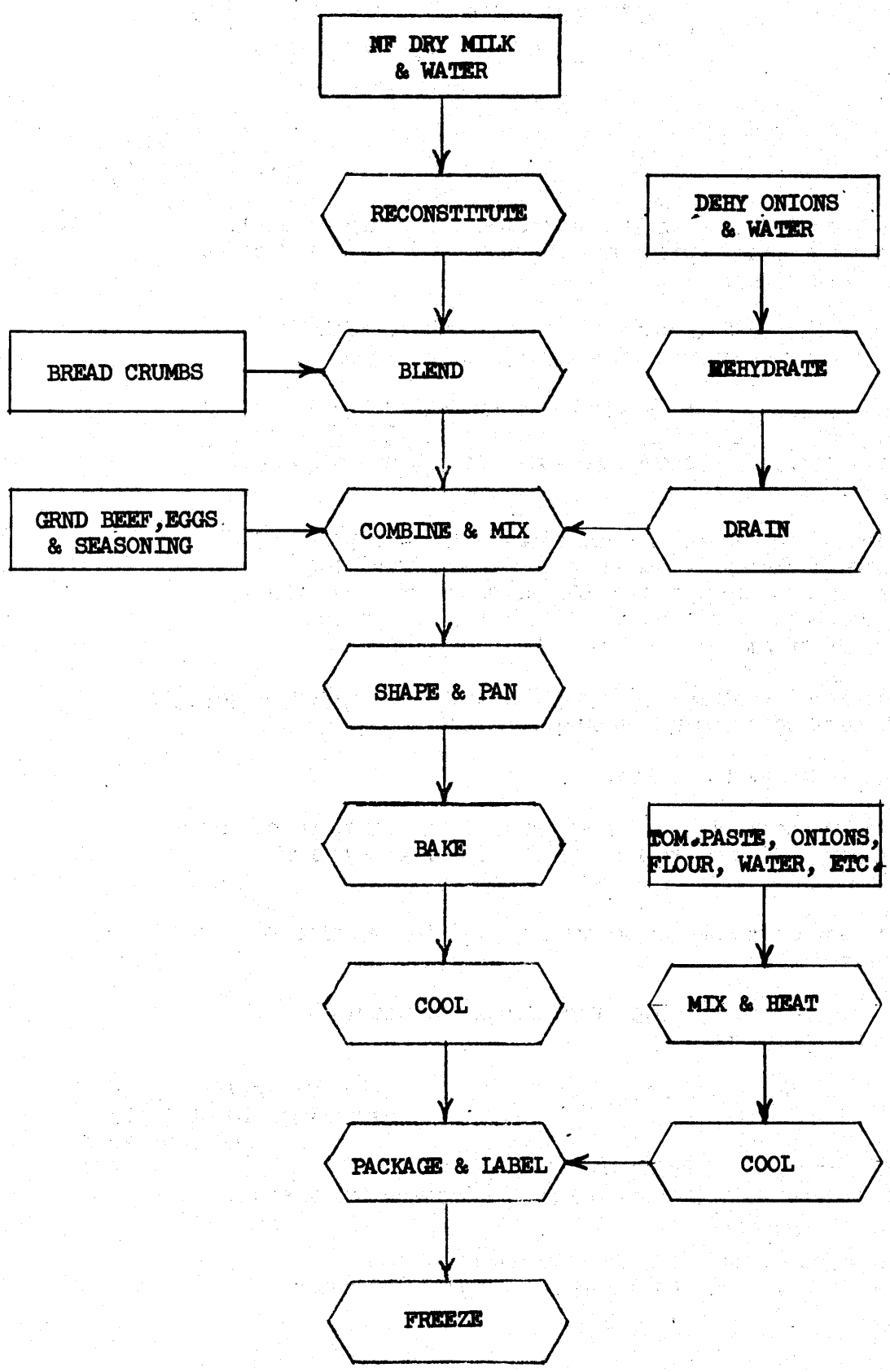
Date Prepared:_____
Servings: 10 of 1 steak and 4 oz gravy

Reconstitution Instructions
Heat covered pans in preheated 325°F ovens to internal temperature of 160°F.

Convection ovens: 1 hour 15 minutes
Conventional ovens (ordinary): 1 hour 30 minutes

MATERIAL FLOW

SALISBURY STEAK WITH TOMATO GRAVY



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SALISBURY STEAK WITH TOMATO GRAVY

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or

2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	700 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Nonfat dry milk	1.23 (1 bag 1.23 lbs)	2.05 (1 bag 2.05 lbs) Bag size = 10" X 18"	2.87 (1 bag 2.87 lbs)	Milk for salisbury steaks * lbs
Bread crumbs, dry	4.50 (1 bag	7.50 (1 bag	10.50 (1 bag	Bread crumbs and onions for salisbury steaks
Onions, dehydrated, chopped	1.14 5.64 lbs)	1.90 (9.4 lbs) Bag size = 15" X 29-1/2"	2.66 13.16 lbs)	* lbs
Beef, ground	90.00 (3 bags 30.00 lbs)	150.00 (5 bags 30.00 lbs) Bag size = 15" X 29-1/2"	210.00 (7 bags 30.00 lbs)	Beef for salisbury steaks * lbs
Eggs, whole, beaten	3.09 (1 bag	5.15 (1 bag	7.21 (1 bag	Eggs and spices for salisbury steaks
Pepper, black	.06	.10	.14	
Salt, table	1.14 4.86 lbs)	1.90 8.10 lbs)	2.66 11.34 lbs)	* lbs
Worcestershire sauce	.57	.95	1.33	
Gravy				
Onions, dehydrated, chopped	.57	.95	1.33	Onions, shortening, tomato paste and spices for salisbury steaks (gravy)
Shortening	4.50 (1 bag	7.50 (2 bags	10.50 (2 bags	
Tomato paste	6.45	10.75	15.05	
Pepper, black	.03 13.05 lbs)	.05 10.88 lbs)	.07 15.23 lbs)	
Soup and gravy base(beef)	1.50	2.50 Bag size = 15" X 29-1/2"	3.50	* lbs

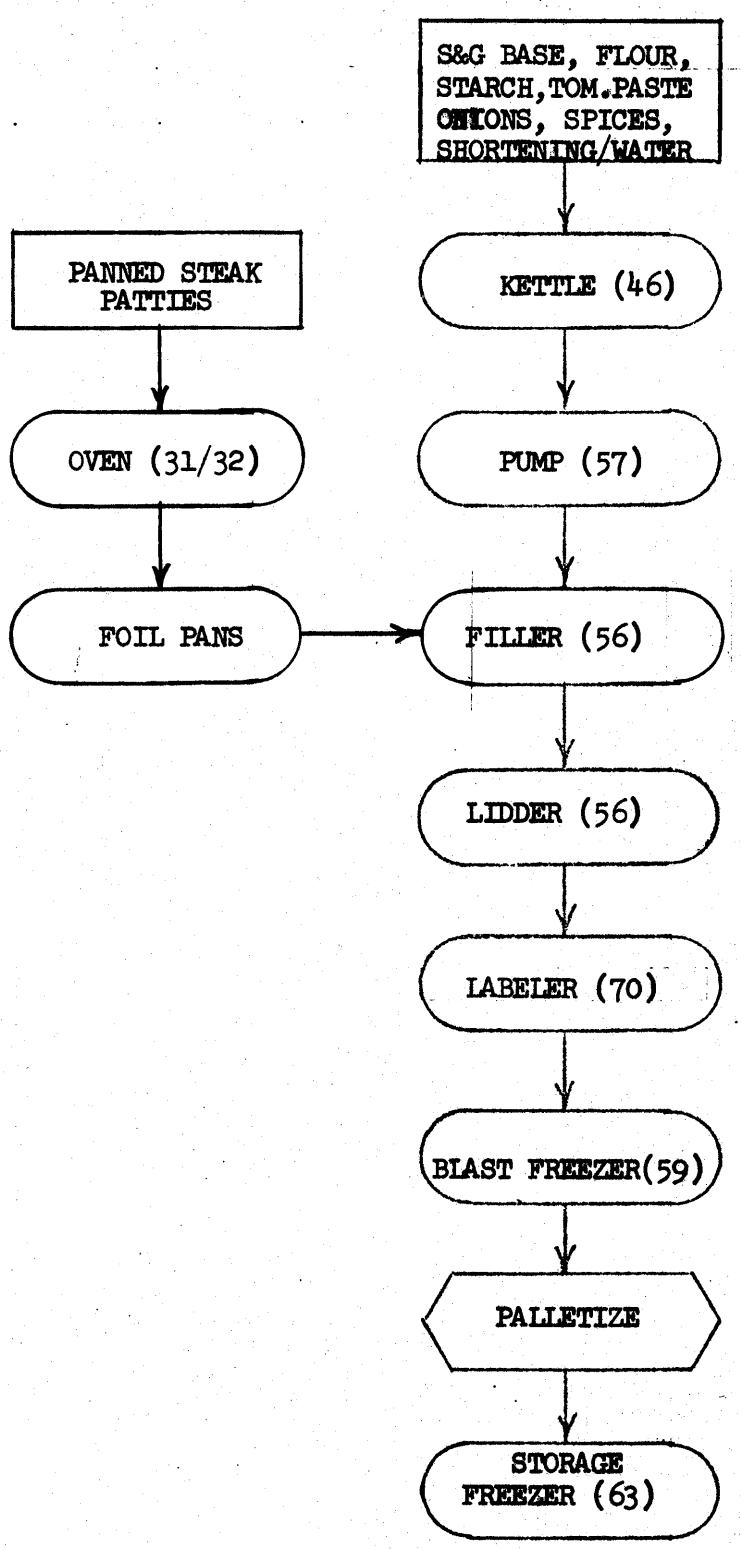
GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SALISBURY STEAK WITH TOMATO GRAVY (Cont'd)

Ingredients	300 Servings (lbs)	500 Servings (lbs)	700 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Gravy (Cont'd)				
Flour, wheat	3.00 (1 bag	5.00 (1 bag	7.00 (1 bag	Flour and starch for salisbury steak (gravy) * lbs
Col-Flo 57 starch	1.50 4.50 lbs)	2.50 7.50 lbs)	3.50 10.50 lbs)	
		Bag size = 15" X 29-1/2"		

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

SALISBURY STEAK WITH TOMATO GRAVY



OPERATIONAL GUIDE FOR SWISS STEAK

WITH BROWN GRAVY L-16

INGREDIENTS & BATCH SIZE

Controlling Equip: Ovens
Container Wt:

Servings/Container: 10 of 1 steak & 1/3 cup of gravy

Est. Prep Time: 4.3 hours
Approx. Yield: 300, 500, & 1000 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	500 Servings 60-gal Kettle (lb)	1000 Servings 80-gal Kettle (lb)	Utensils
1	Beef, Swiss Steaks (100 steaks)	190	36.00	108.00	180.00	360.00	Breader
	DREDGING MIXTURE						
	Flour, wheat	8300	2.20	6.60	11.00	22.00	Fryer
	Pepper, black	15480	0.02	0.06	0.10	0.20	
	Salt, table	15850	0.18	0.54	0.90	1.80	Roasting pans w/covers
	TOPPING						
2	Onion, dehydrated, sliced	5310	0.43	1.29	2.15	4.30	Pot
	Garlic powder, dry	4700	0.01	0.03	0.05	0.10	Whip
	Pepper, black	15480	0.02	0.06	0.10	0.20	
	Salt, table	15850	0.19	0.57	0.95	1.90	
	Soup & Gravy base, beef	11440	0.22	0.66	1.10	2.20	
	Water, hot		14.36	43.08	71.80	143.60	
	Worcestershire sauce	16030	0.27	0.81	1.35	2.70	Oven
	GRAVY						
3	Col-flo 67, starch	SP**	0.27	0.81	1.35	2.70	Kettle
	Water, cold		1.64	4.92	8.20	16.40	Whip
	Beef drippings (Step 3)		21.00	63.00	105.00	210.00	
4	Water, tap		To make 2.5 gal	To make 7.5 gal	To make 12.5 gal	To make 25.00 gal	

* FSC Group 89 Subsistence Catalog 1 Jan 77 (C8900-SL)

** Special Purchase

OPERATIONAL GUIDE FOR SWISS STEAK WITH BROWN GRAVY L-16

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components and ingredients as to number and amounts received from Prep. Area.		10
00-	Deliver Swiss beef steaks and dredging mixture to breader. Spice and starch to Kettle Area.		
1-	Load breader with dredging mixture and run Swiss steaks thru breading machine continuing thru continuous fryer to brown steaks. (360°F for 3 minutes) As steaks come out of fryer, shingle 50 steaks in each roasting pans.		20
2-	Combine dehydrated onions, garlic powder, black pepper, soup and gravy base, Worcestershire sauce with water; mix thoroughly. Use equal amounts of mixture to top each roasting pan of shingled Swiss steak.		150
	(a) Cover pans and heat in 325°F oven until steaks are tender. (approx. 2-½ hours)		
	(b) When steaks are tender, remove from oven and shingle 10 steaks in each half-size steam table pan. Hold for Step 5. Retain beef drippings for Step 3.		
3-	Mix Col-flo 67 starch with tap water in kettle; mix well. Add beef drippings to starch solution in steam kettle (or pot) and heat to a boil; reduce heat and simmer approximately 20 minutes.		20
4-	Raise level (volume) of product in kettle using measuring stick to required number of gallons with hot water.		25
5-	Add 2 pounds of gravy to each half-size steam table pan of 10 steaks (Step 2(b)).		10
6-	Pass pans thru lidding machine to cover and close.		10

	Check Points	Time (Minutes)
7- Pass pans thru labelling machine. Labels should read:		10

Swiss Steaks w/Brown Gravy
Net Wt:

Date Prepared:_____
Servings: 10 of 1 steak & 1/3 cup gravy

Reconstitution Instructions:

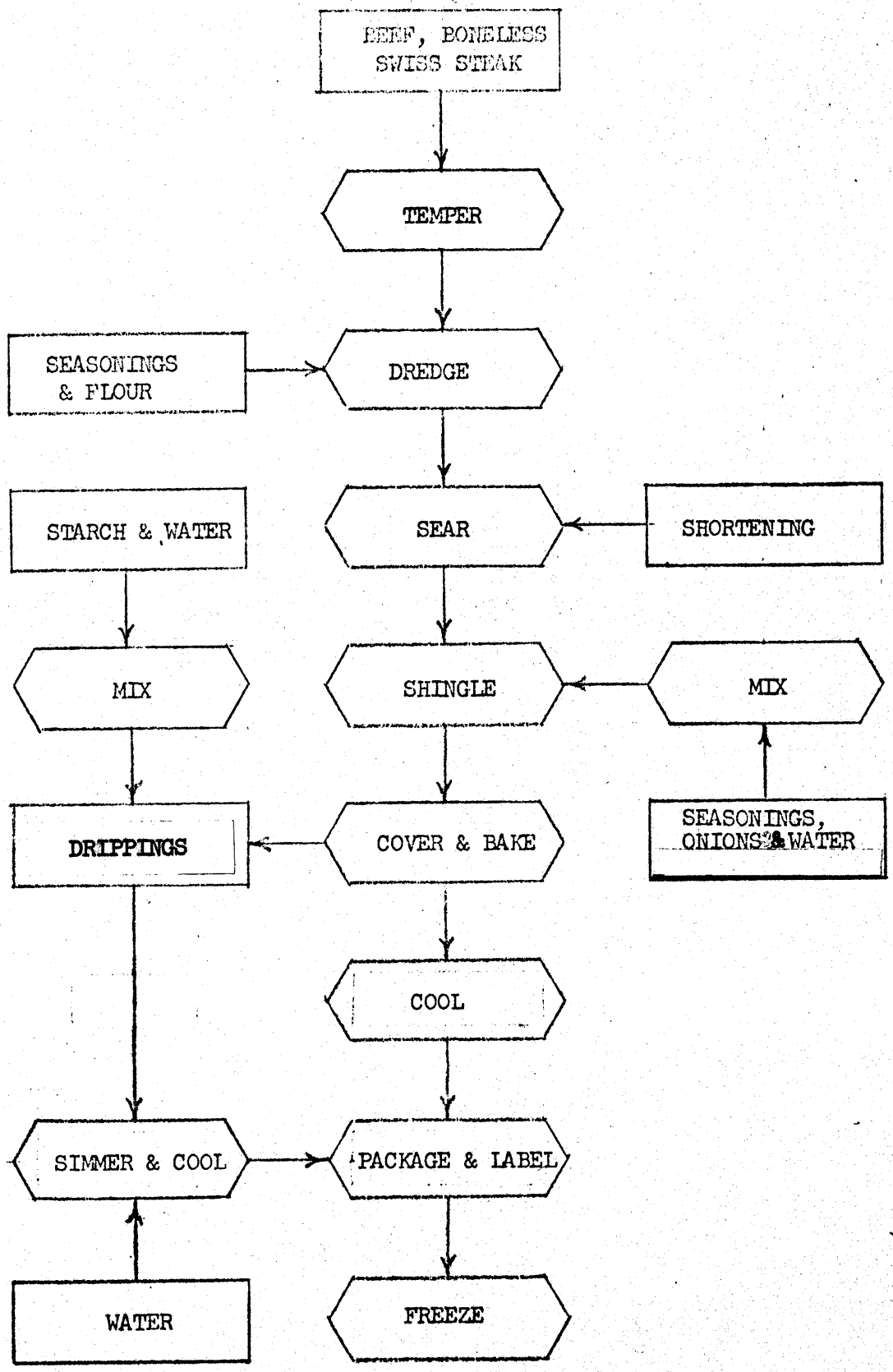
Heat covered pans in 325°F preheated ovens to internal temperature 160°F.

Convection oven: 1 hour 15 minutes

Conventional (ordinary) ovens: 1 hour 30 minutes

MATERIAL FLOW

SWISS STEAK WITH BROWN GRAVY



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SWISS STEAK WITH BROWN GRAVY REVISION 1

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

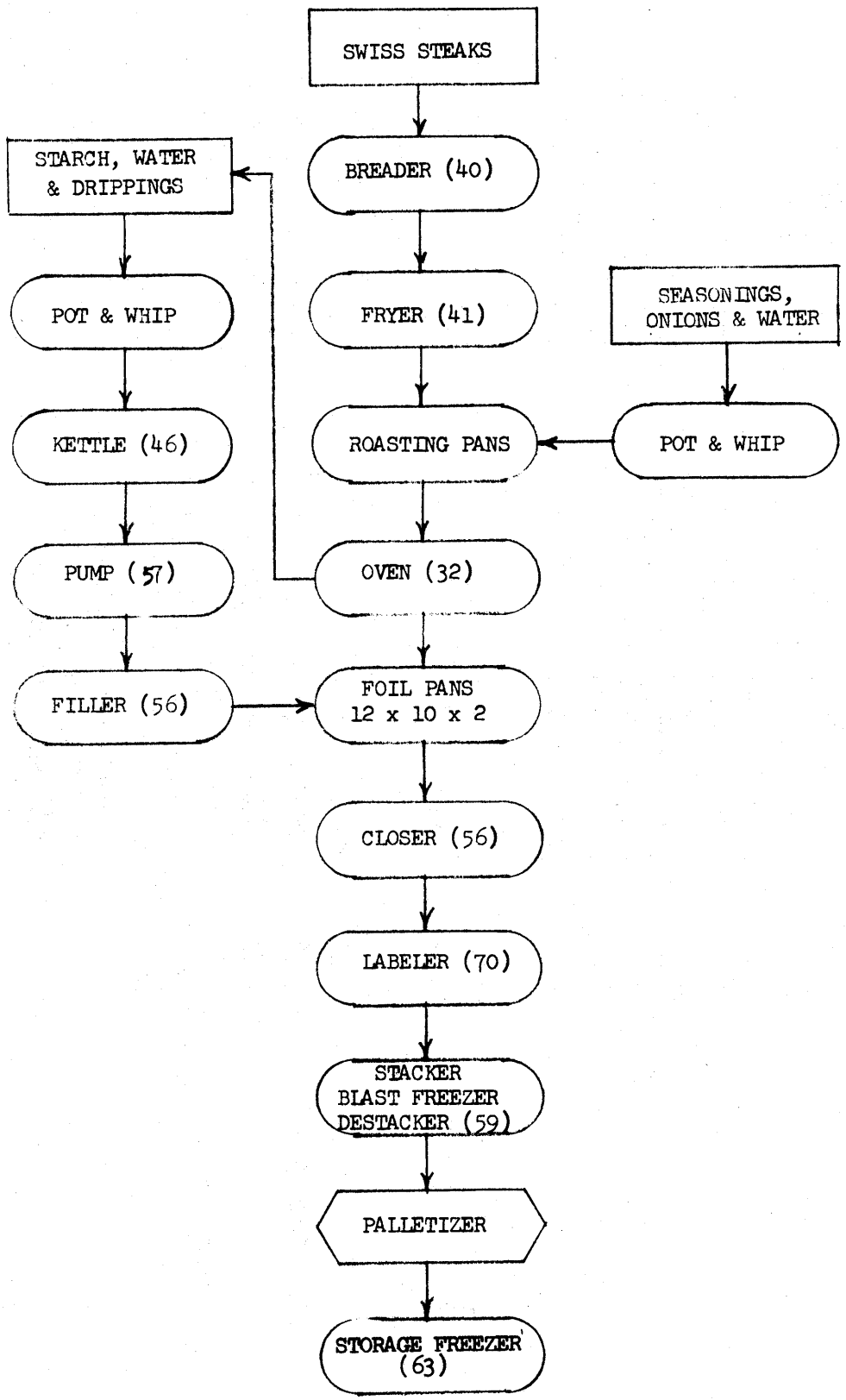
Ingredients	300 Servings (lbs)	500 Servings (lbs)	1000 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, swiss steak	108.00 (4 bags 27.00 lbs)	180.00 (6 bags 30.00 lbs) Bag size = 15" X 29-1/2"	360.00 (12 bags 30.00 lbs)	Beef for swiss steak with brown gravy * lbs
DREDGING MIXTURE				
Flour, wheat	6.60 (1 bag	11.00 (1 bag	22.00 (1 bag	Flour, pepper and salt for swiss steak with brown gravy (Dredging Mixture) * lbs
Pepper, black	0.06 7.20 lbs)	.10 12.00 lbs)	0.20 24.00 lbs)	
Salt, table	0.54	.90	1.00	
		Bag size = 15" X 29-1/2"		
TOPPING				
Onion, dehydrated,sliced	1.29	2.15	4.30	Onions, garlic powder, pepper, salt, soup and gravy base and worcestershire sauce for swiss steak with brown gravy (Topping) * lbs
Garlic powder, dry	0.03	.05	.10	
Pepper, black	0.06 (1 bag	.10 (1 bag	.20 (1 bag	
Salt, table	0.57 3.42 lbs)	.95 5.70 lbs)	1.90 11.40 lbs)	
Soup & gravy base	0.66	1.10	2.20	
Worcestershire sauce	0.81	1.35	2.70	
		Bag size = 15" X 29-1/2"		
GRAVY				
Col-Flo 67 starch	0.81 (1 bag 0.81 lbs)	1.35 (1 bag 1.35 lbs) Bag size = 10" X 18"	2.70 (1 bag 2.70 lbs)	Starch for swiss steak with brown gravy(Gravy) * lbs

*Appropriate weight to be written is dependent on number of servings.

7 Oct 77

EQUIPMENT UTILIZATION

SWISS STEAK WITH BROWN GRAVY



OPERATIONAL GUIDE FOR SWISS STEAK

WITH TOMATO SAUCE L-16

INGREDIENTS & BATCH SIZE

Controlling Equip: Oven
Container Wt:

Servings/Container: 10 of 1 steak & 1/3 cup of gravy

Est. Prep Time: 5.25 hours
Approx. Yield: 300, 500, & 1000 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings OVEN (lb)	500 Servings OVEN (lb)	1000 Servings OVEN (lb)	Utensils
1	Beef, Bnls, Swiss Steaks (1 steak per serving)	190	36.00	108.00	180.00	360.00	Breader
	Dredging Mixture						
	Flour	8300	2.20	6.60	11.00	22.00	Fryer
	Pepper, black	15480	0.02	0.06	0.10	0.20	Roasting
	Salt, table	15850	0.18	0.54	0.90	1.80	Pans
2	Topping						
	Onion, dehydrated, sliced	5310	0.43	1.29	2.15	4.30	
	Peppers, sweet, fresh, green, chopped	5690	2.00	6.00	10.00	20.00	Pot & Whip
	Water, hot		14.36	43.08	71.80	143.60	
	Garlic powder, dry	4700	0.01	0.03	0.05	0.10	
	Pepper, black	15480	0.01	0.03	0.05	0.10	
	Salt, table	15850	0.03	0.09	0.15	0.30	
	Tomatoes, canned, crushed	6420	13.23	39.69	66.15	132.30	
	Worcestershire sauce	16030	0.42	1.26	2.10	4.20	Oven

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings OVEN (lb) 40-gal Kettle	500 Servings OVEN (lb) 40-gal Kettle	1000 Servings OVEN (lb) 40-gal Kettle	Utensils
3	Sauce						
	Water, cold		1.64	4.92	8.20	16.40	
	Col-flo 67, starch	SP**	0.29	0.87	1.45	2.90	Kettle and
	Beef drippings & water		21.00	63.00	105.00	210.00	Whip
4	Water		To make 2.5 gal	To make 7.5 gal	To make 12.5 gal	To make 25.00 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR SWISS STEAK WITH TOMATO SAUCE L-16

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components and ingredients as to number and amounts received from Prep. Area.		10
00-	Deliver Swiss beef steaks and dredging mixture to breader. Spice and starch to Kettle Area.		
1-	Load breader with dredging mixture and run Swiss steaks thru breading machine continuing thru continuous fryer to brown steaks. As steaks come out of fryer, shingle 50 steaks into each roasting pan.		20
2-	Combine crushed tomatoes, dehydrated onions, garlic powder, black pepper, sweet green peppers, salt, Worcestershire sauce with water; mix thoroughly. Use equal amounts of mixture to top each roasting pan of shingled Swiss steak.		150
	(a) Cover pans and heat in 325°F oven until steaks are tender. (Approximately 2-½ hours)		
	(b) When steaks are tender remove from oven and shingle 10 steaks into each half-size steam table pan. Retain beef drippings for Step 3.		20
3-	Mix Col-flo 67 starch with tap water in kettle; mix well. Add beef drippings to starch solution in steam kettle (or pot) and heat to a boil; reduce heat and simmer approximately 20 minutes.		
4-	Raise level (volume) of product in kettle with hot water using measuring stick to required number of gallons. Mix thoroughly; shut off steam.		25
5-	Add 2 pounds of gravy to each half-size steam table pan of 10 steaks (Step 2(b)).		10
6-	Pass pans thru lidding machine to cover and close.		10

	Check Points	Time (Minutes)

7- Pass pans thru labelling machine. Labels should read:

Swiss Steaks w/Tomato Sauce
Net Wt:

Date Prepared:_____
Servings: 10 of 1 steak & 1/3 cup tomato sauce

Reconstitution Instructions:

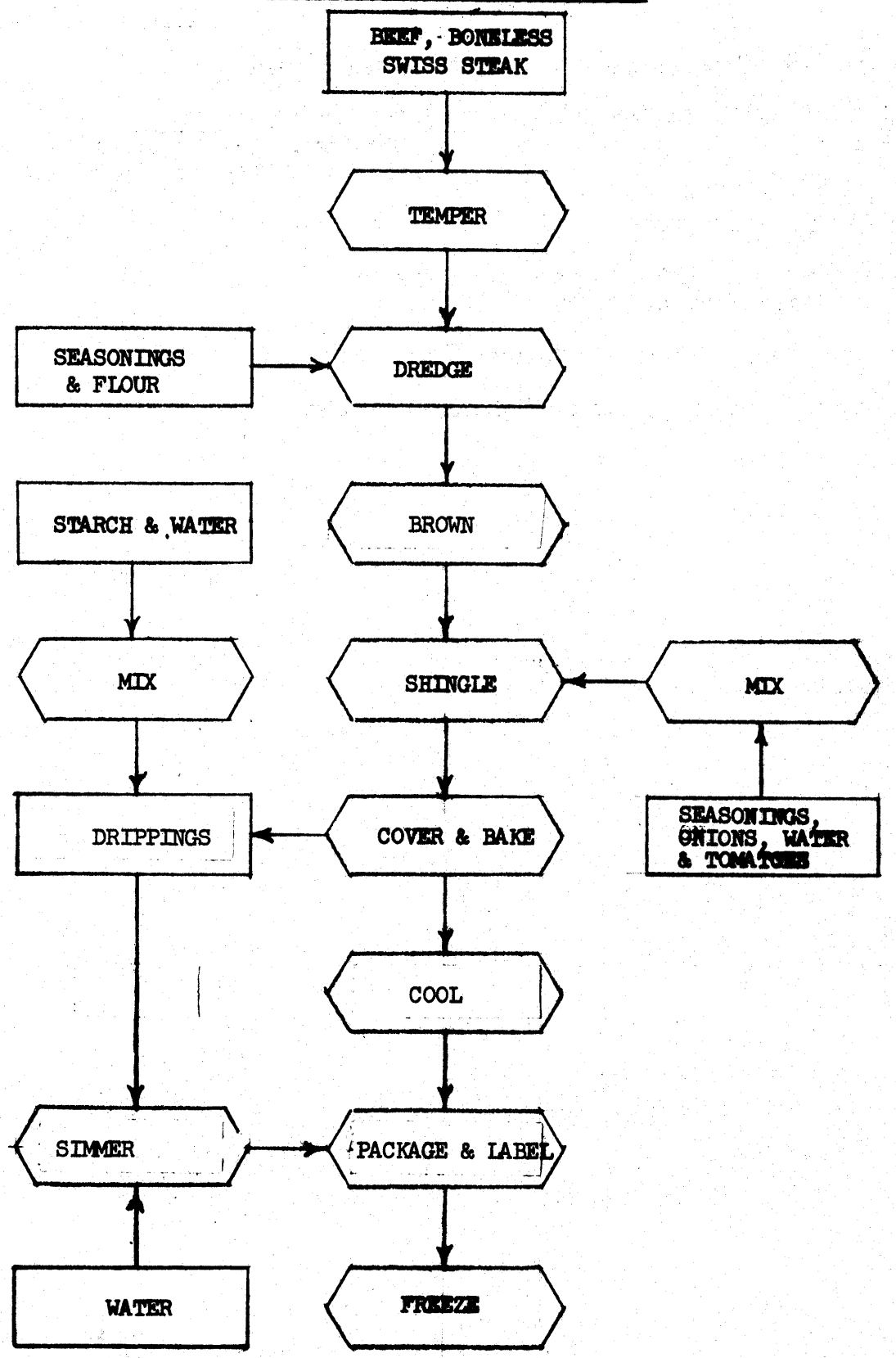
Heat covered pans in 325°F preheated ovens to internal temperature of 160°F.

Convection oven: 1 hour 15 minutes

Conventional (ordinary) ovens: 1 hour 30 minutes

MATERIAL FLOW

SWISS STEAK WITH TOMATO SAUCE



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SWISS STEAK WITH TOMATO SAUCE REVISION 1

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	1000 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, bnls, swiss steaks (100 steaks)	108.00 (4 bags 27.00 lbs)	180.00 (6 bags 30.00 lbs) Bag size = 15" X 29-1/2"	360.00 (12 bags 30.00 lbs)	Beef for swiss steaks with tomato sauce * lbs
DREDGING MIXTURE				
Flour	6.60 (1 bag	11.00 (1 bag	22.00 (1 bag	Flour, pepper and salt for swiss steaks w/ tomato sauce (Dredging Mixture) * lbs
Pepper, black	.06 7.20 lbs)	.10 12.00 lbs)	.20 23.10 lbs)	
Salt, table	.54	.90	1.80	
		Bag size = 15" X 29-1/2"		
TOPPING				
Tomatoes, canned, crushed	39.69 (2 bags 19.85 lbs)	66.15 (3 bags 22.05 lbs) Bag size = 15" X 29-1/2"	132.30 (6 bags 22.05 lbs)	Tomatoes for swiss steak with tomato sauce (Topping) * lbs
TOPPING				
Onions, dehydrated, sliced	1.29	2.15	4.30	Onions, peppers, garlic powder, pepper, salt and worcestershire sauce for swiss steak with tomato sauce (Topping)
Peppers, sweet, fresh, green, chopped	6.00	10.00	20.00	
Garlic powder, dry	0.03 (1 bag	0.05 (1 bag	0.10 (1 bag	
Pepper, black	0.03 8.70 lbs)	0.05 14.50 lbs)	0.10 29.00 lbs)	
Salt, table	0.09	0.15	0.30	
Worcestershire sauce	1.26	2.10	4.20	
		Bag size = 15" X 29-1/2"		* lbs

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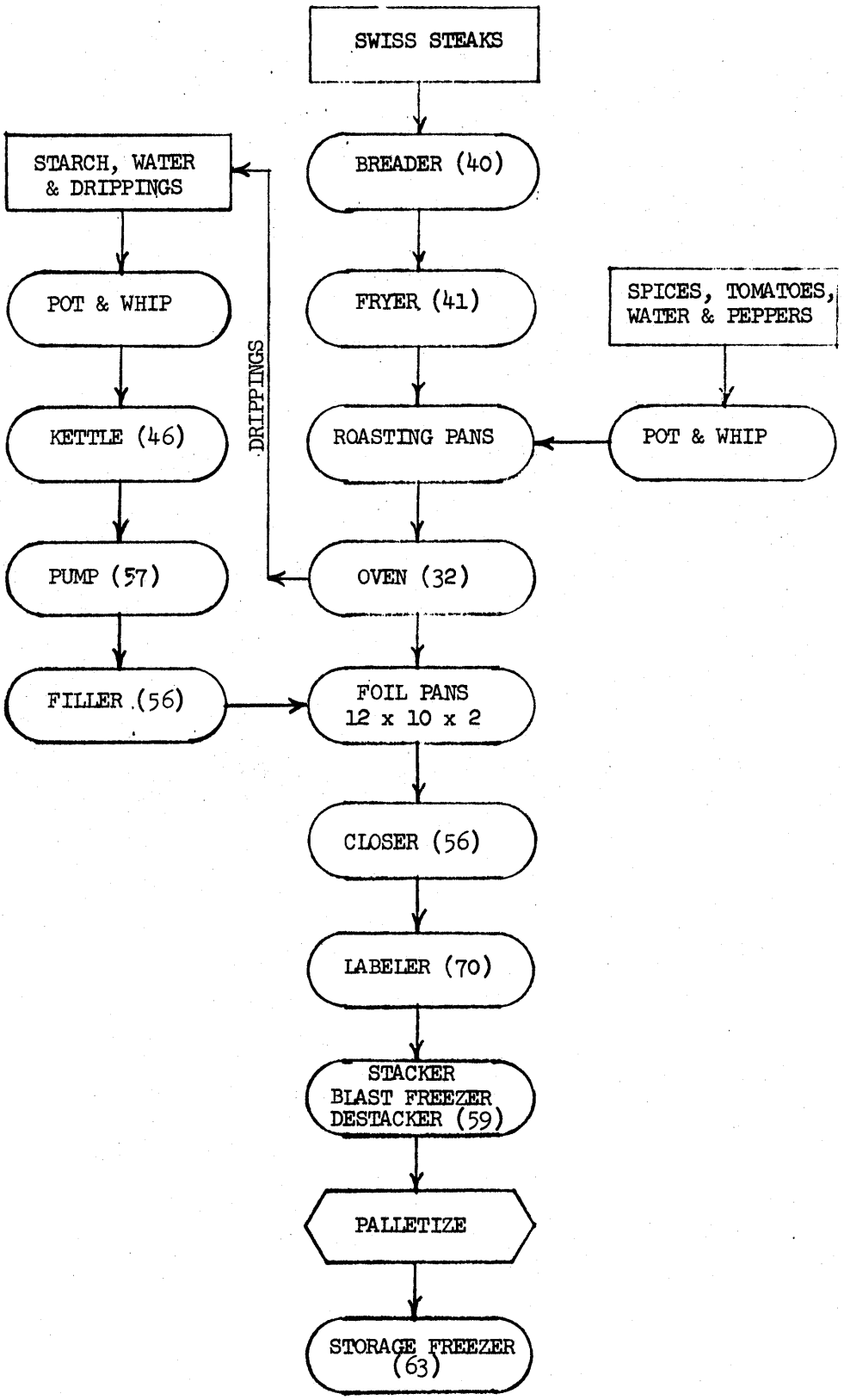
Ingredients	300 Servings (lbs)	500 Servings (lbs)	1000 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
SAUCE				
Col-Flo 67 starch	0.87 (1 bag 0.87 lbs)	1.45 (1 bag 1.45 lbs) Bag size = 8" X 10"	2.90 (1 bag 2.90 lbs)	Starch to be used with swiss steaks w/tomato sauce (Sauce) * lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

SWISS STEAK WITH TOMATO SAUCE



OPERATIONAL GUIDE FOR BAKED FISH

WITH CHEESE SAUCE L-106 and O-16(2)
INGREDIENTS AND BATCH SIZE

Controlling Equip: Ovens, Kettles
Container Wt:

Servings/Container: 10 of 2 pcs. fish and 3 oz sauce

Est. Prep Time: 4 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings OVEN (lb)	300 Servings OVEN (lb)	500 Servings OVEN (lb)	800 Servings OVEN (lb)	Utensils
1	Fish, perch, fillets	1320	32.00	96.00	160.00	256.00	Baking sheets
	Margarine or butter	2360 or 13980	1.50	4.50	7.50	12.00	Oven
	Lemon juice	4960	0.50	1.50	2.50	4.00	
	Paprika, ground	15440	.06	.18	.30	.48	
2	Cheese Sauce						
	Margarine or butter	2360 or 13980	2.00	6.00	10.00	16.00	Kettle
	Flour, wheat	8300	1.00	3.00	5.00	8.00	
	Col-flo 67 starch	SP**	0.17	0.51	0.85	1.36	Kettle or pot
	Milk, nonfat, dry	3050	1.70	5.10	8.50	13.60	
	Water, tap		15.00	45.00	75.00	120.00	
	Salt, table	15850	0.08	0.24	0.40	0.64	
	Cheese, cheddar, white ground or shredded	2430	3.00	9.00	15.00	24.00	Measuring stick
3	Water		To make 2.75 gal	To make 8.25 gal	To make 13.75 gal	To make 22.00 gal	

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR BAKED FISH
WITH CHEESE SAUCE L-106 and O-16(2)
INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients and spices as to number and amounts received from Prep. Area.		
00-	Deliver fish, margarine, lemon juice, and paprika to oven area. Remaining ingredients which also include margarine to the kettle area.		10
1-	Grease sheet pans, using some of margarine listed in Step 1 of formula. Place single layers of fish fillets on greased sheet pans; do not crows or shingle fish.		25
	(a) Melt remaining margarine and combine with lemon juice. Pour lemon mixture evenly on fish fillets. Sprinkle paprika over lemoned fish. Bake in preheated 350°F oven until golden brown, about 20 minutes. CAUTION: DO NOT OVERBAKE. Overbaking causes fish to break and flake and is difficult to handle. Place 20 pieces of cooked fish (10 pieces to a layer) in each half-size steam table pan. Hold for Step 6 below.		30
2-	Cheese Sauce		
	(a) Melt margarine in kettle; sprinkle in flour, mixing thoroughly; continue to mix while cooking for 10 minutes. Hold for starch and milk mixture. Shut off steam.		15
	(b) Combine starch (Col-flo 67) nonfat dry milk, salt, and water in a separate kettle; mix well; continue mixing and heat to 180°F. Shut off steam. Transfer and slowly add this starch-milk mixture to other kettle of flour and margarine mixture; turn on steam, stirring constantly. Add shredded cheese to mixture in kettle mixing thoroughly until cheese is melted and blended with the flour-starch.		30
3-	Raise level (volume) of the product in kettle with hot water to required number of gallons using measuring stick; mix well. Shut off steam.		10

		Check Points	Time (Minutes)
4-	Transfer sauce to filler.		10
5-	Fill each half-size steam table pan with 2 pounds of sauce.		10
6-	Pass filled pans thru lidding machine to cover and close.		10
7-	Pass covered pans thru labelling machine. Labels should read:		10

Baked Fish w/Cheese Sauce
Net Wt:

Date Prepared:_____
Servings: 10 of 2 pieces of fish and 3 oz sauce

Reconstitution Instructions:

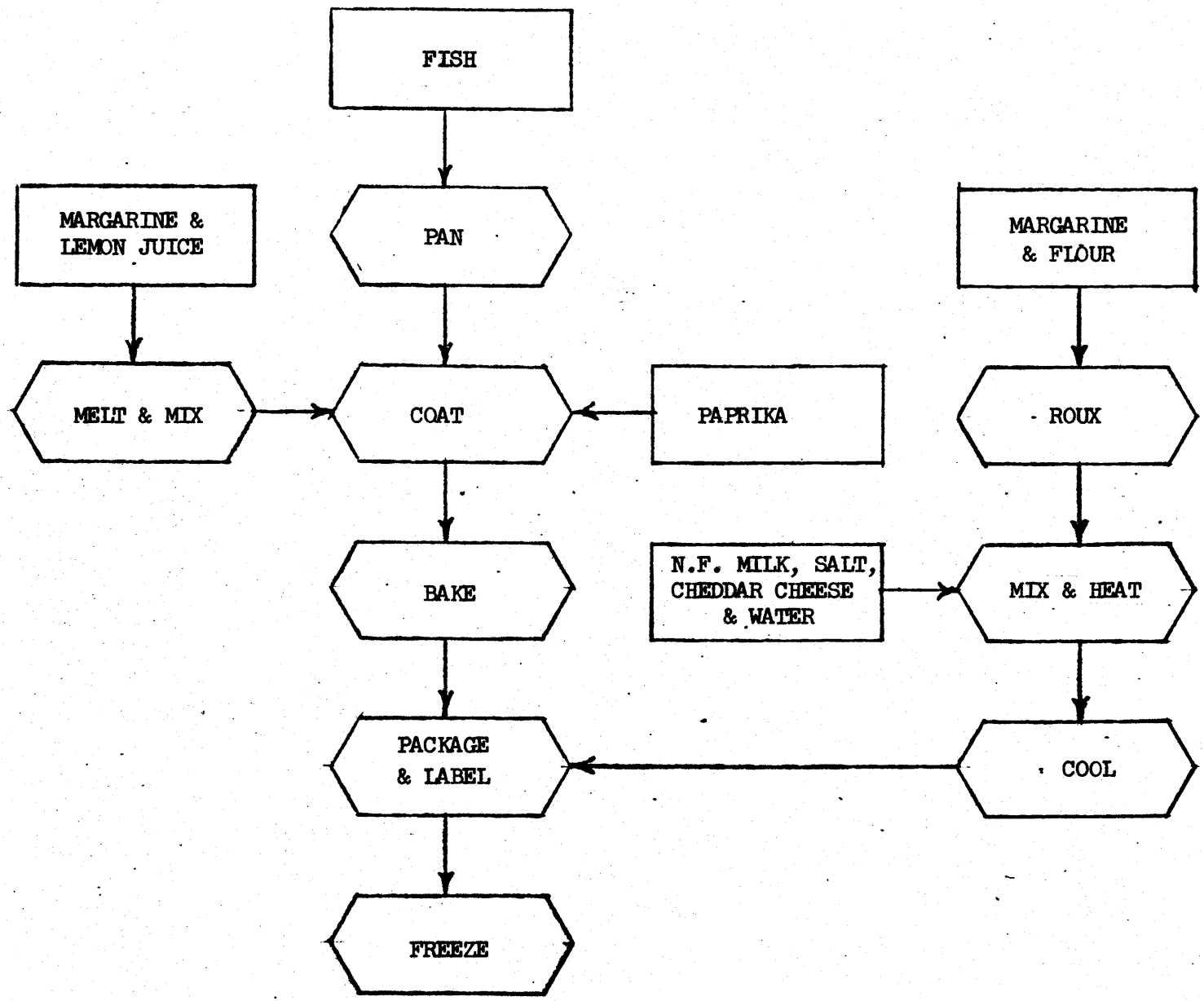
Heat covered pans in 325°F. preheated ovens to an internal temperature of 160°F.

Convection ovens: 1 hour 15 minutes

Conventional (ordinary) ovens: 1 hour 30 minutes

MATERIAL FLOW

BAKED FISH WITH CHEESE SAUCE



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BAKED FISH WITH CHEESE SAUCE

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Fish, perch, fillets	96.00 (6 bags 16.00 lbs)	160.00 (10 bags 16.00 lbs) Bag size = 15" X 29-1/2"	256.00 (16 bags 16.00 lbs	Fish for baked fish with cheese sauce 16.00 lbs
Margarine or butter	4.50 (1 bag 4.50 lbs)	7.50 (1 bag 7.50 lbs) Bag size = 10" X 18"	12.00 (2 bags 6.00 lbs)	Margarine or butter for baked fish w/cheese sauce * lbs
Lemon juice	1.50 (1 bag 1.50 lbs)	2.50 (1 bag 2.50 lbs) Bag size = 10" X 18"	4.00 (1 bag 4.00 lbs)	Lemon juice for baked fish w/cheese sauce * lbs
Paprika, ground	0.18 (1 bag 0.18 lbs)	0.30 (1 bag 0.30 lbs) Bag size = 8" X 10"	0.48 (1 bag 0.48 lbs)	Paprika for baked fish with cheese sauce * lbs
Cheese Sauce				
Margarine or butter	6.00 (1 bag 6.00 lbs)	10.00 (1 bag 10.00 lbs) Bag size = 15" X 29-1/2"	16.00 (1 bag 16.00 lbs)	Margarine or butter for baked fish w/cheese sauce (cheese sauce) * lbs
Flour, wheat	3.00 (1 bag 3.00 lbs)	5.00 (1 bag 5.00 lbs) Bag size = 10" X 18"	8.00 (1 bag 8.00 lbs)	Flour for baked fish with cheese sauce (cheese sauc * lbs

*Appropriate weight to be written is dependent on number of servings.

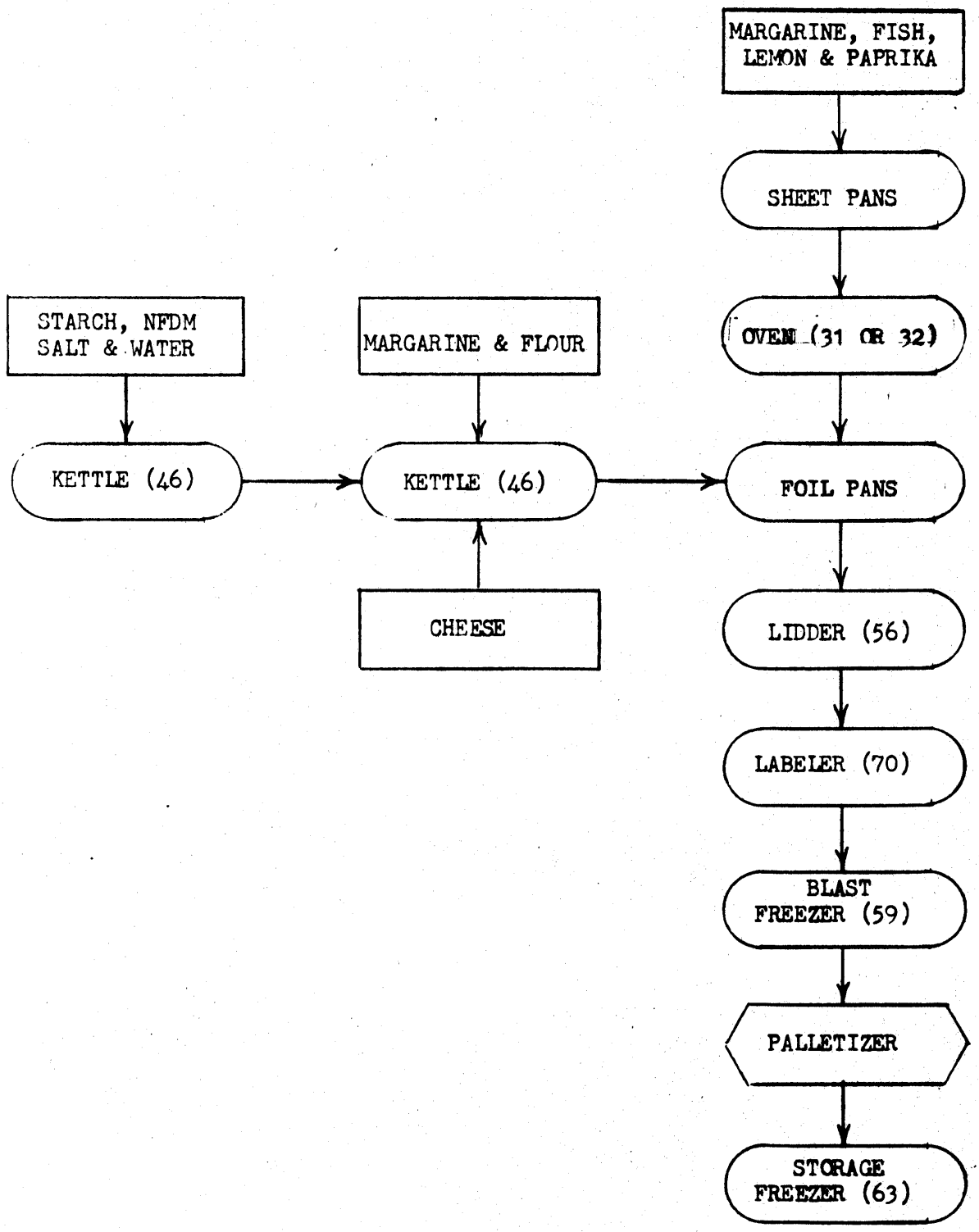
GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BAKED FISH WITH CHEESE SAUCE (Cont'd)

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Cheese Sauce (Cont'd)				
Col-Flo 67 starch Milk, nonfat, dry Salt, table	0.51 (1 bag 5.10 0.24 5.85 lbs)	0.85 (1 bag 8.50 0.40 9.75 lbs) Bag size = 15" X 29-1/2"	1.36 (1 bag 13.60 0.64 15.60 lbs)	Starch, milk and salt for baked fish with cheese sauce (cheese sauce) * lbs
Cheese, cheddar, white, ground or shredded	9.00 (1 bag 9.00 lbs)	15.00 (1 bag 15.00 lbs) Bag size = 15" X 29-1/2"	24.00 (2 bags 12.00 lbs)	Cheddar cheese for baked fish w/cheese sauce (cheese sauce) * lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

BAKED FISH WITH CHEESE SAUCE



OPERATIONAL GUIDE FOR SALMON CAKES L-114

INGREDIENTS & BATCH SIZE

Controlling Equip: Mixers
Container Net Wt:

Standard Serving: 10 of 2 Cakes

Est. Prep. Time: 4.4 hours
Approx. Yield: 300, 500, & 600 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings (lb)	500 Servings (lb)	600 Servings (lb)	Utensils
1	Salmon, canned	1650	20.00	60.00	100.00	120.00	Knives, Forks Meat Lugs
2	Potato Mixture						
	Liquids (Salmon juice and water)		10.50	31.50	52.50	63.00	Kettle
	Margarine or butter	2350	0.50	1.50	2.50	3.00	
	Onions, dehydrated, chopped	5290	0.09	0.27	0.45	0.54	
	Potatoes, white, Instant	6080	4.00	12.00	20.00	24.00	Pot & Whip Mixer (Stand-up)
	Milk, nonfat, dry	3050	0.20	0.60	1.00	1.20	
	Salt, table	15850	0.06	0.18	0.30	0.36	
	Pepper, black	15480	0.03	0.09	0.15	0.18	
3	Eggs, whole beaten	2620	2.00	6.00	10.00	12.00	Meat Mixer Baking sheets
4	Flour, wheat	8300	1.00	3.00	5.00	6.00	Breader-Fryer

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 1977

OPERATIONAL GUIDE FOR SALMON CAKES L-114

PREPARATION AREA

		Check Points	Time (Minutes)
	Salmon Cakes (2.5 oz each)		
	Salmon cakes shall be prepared from components, ingredients, and spices listed in Steps 1, 2, and 3 of "Ingredients and Batch Size, Operational Guide". Margarine can be substituted for Butter.		
1-	Remove salmon from cans; drain; save juices for Step 2 below. Remove skin and bones from salmon and flake. Hold fish for Step 3 below.		20
2-	Combine liquids (salmon juice and water) with butter (margarine), and onions in kettle; heat to a boil. Shut off steam.		10
	(a) Combine instant potatoes, nonfat dry milk, pepper, and salt in a pot; mix well.		10
	(b) Transfer hot liquid-onion mixture to mixer (Hobart type) and add potato mixture rapidly while mixing; whip until smooth. Remove from mixer and cool. (Lukewarm, so as not to cook eggs.)		15
3-	Transfer whipped potato mixture (Step 2b) to meat mixer; add salmon (Step 1), eggs; mix thoroughly. Remove from mixer; place in meat lugs; keep amounts to no more than 4-6 inches deep to allow for rapid chilling. The salmon potato mixture must be chilled to about 35°F to allow for easy patty forming and handling.		100
	(a) When the salmon-potato mixture has reached the required chilled temperature, the mixture shall be formed into patties of 2.5 oz each on the patty-making machine. The patties shall be placed on baking sheets and transferred to Central Kitchen. <u>Keep refrigerated at all times.</u> Patties must be delivered to central kitchen well chilled for easy handling prior to frying.		30

OPERATIONAL GUIDE FOR SALMON CAKES L-114

CENTRAL KITCHEN

		Check Points	Time (Minutes)
NOTE:	Salmon Cakes (patties) are made (Steps 1, 2, and 3)in the Preparation Area and shipped in chilled state to Central Kitchens.		
0-	Verify salmon patties and flour as to number and amounts received from Prep. Area.		
00-	Deliver patties and flour to Breader-Fryer Area.		10
4-	Load breading machine with flour. Preheat continuous fryer to 375°F. Pass cakes thru breading machine to coat and then thru deep fat fryer for approximately 1 to 2 minutes until golden brown. Drain cakes prior to placing in half-size steam table aluminum pans.		30
5-	Place 20 drained patties (cakes) in half-size steam table pans.		20
6-	Pass filled pans thru lidding machine to cover and close.		10
7-	Pass covered pans thru labelling machine. Labels should read:		10

Salmon Cakes — Date Prepared: _____
Net Wt: — Servings: 10 of 2 cakes

Reconstitution Instructions:

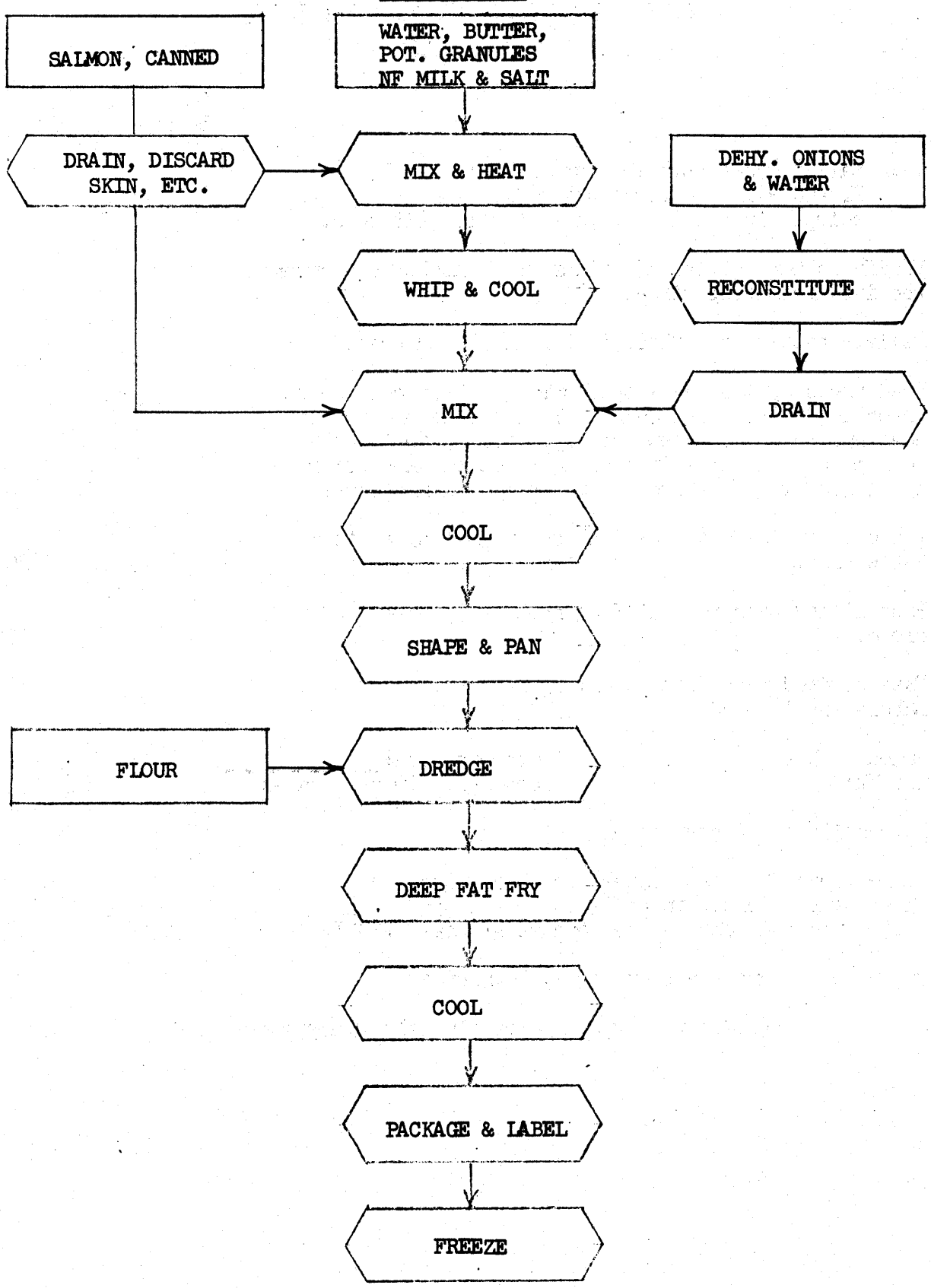
Place frozen patties (cakes) one layer deep on sheet pans. Reheat in preheated ovens 350°F until internal temperature reaches at least 160°F.

Convection ovens - approximately 10 minutes

Conventional (ordinary) ovens - approximately 15 minutes

MATERIAL FLOW

SALMON CAKES



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SALMON CAKES

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

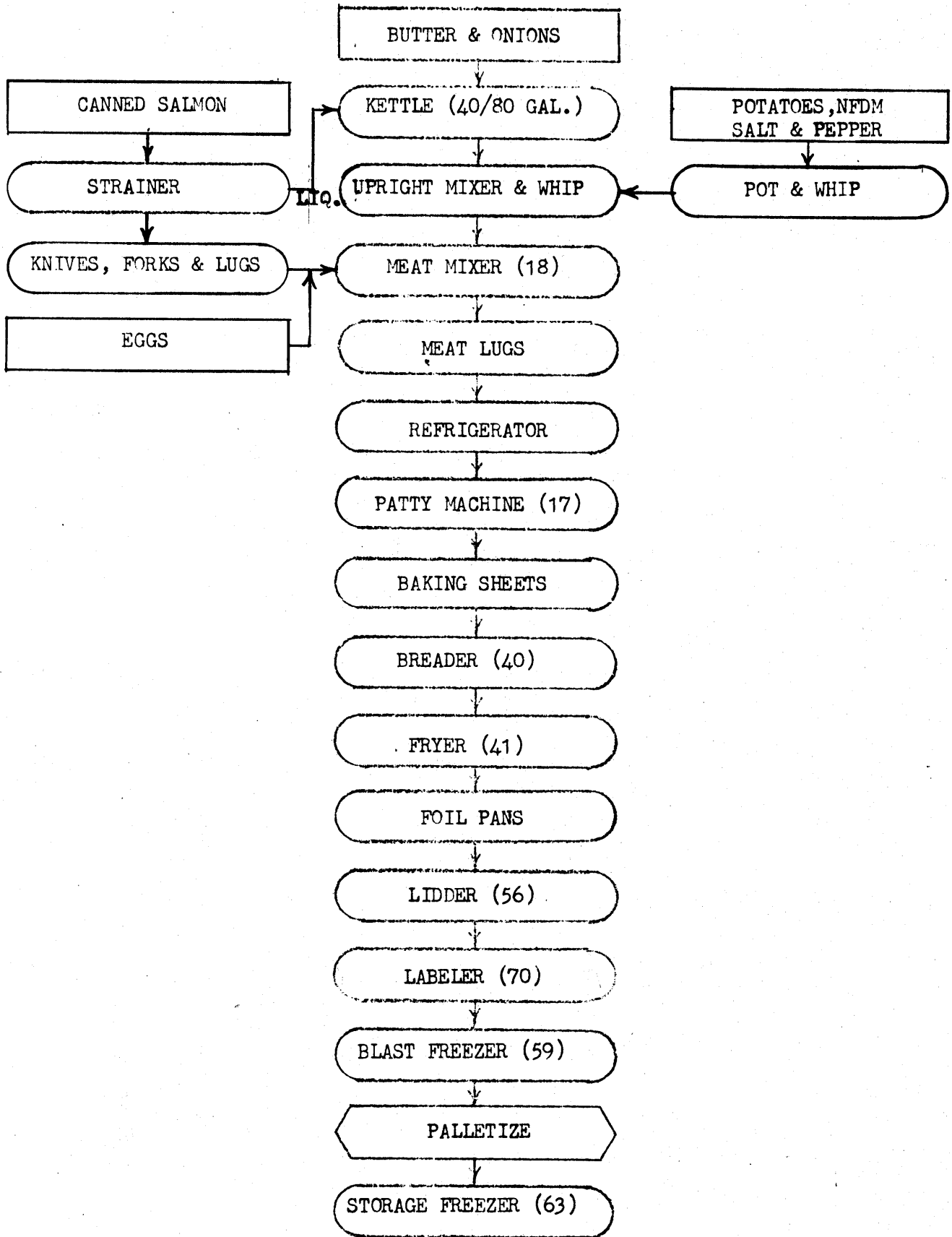
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	600 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Salmon, canned	60.00 (4 bags 15.00 lbs)	100.00 (5 bags 20.00 lbs) Bag size = 15" X 29-1/2"	120.00 (10 bags 12.00 lbs)	Salmon for salmon cakes * lbs
Potato Mixture				
Salmon juice	31.50 (1 bag 15.75 lbs)	52.50 (5 bags 10.50 lbs) Bag size = 15" X 29-1/2"	63.00 (6 bags 10.50 lbs)	Juices for salmon cakes * lbs
Margarine or butter Onions, dehydrated, chopped	1.50 (1 bag .27 1.77 lbs)	2.50 (1 bag .45 2.95 lbs) Bag size = 10" X 18"	3.00 (1 bag .54 3.54 lbs)	Margarine or butter and onions for salmon cakes * lbs
Potatoes, white Milk, instant, nonfat, dry Salt, table Pepper, black	12.00 0.60 (1 bag 0.18 12.87 lbs) 0.09	20.00 1.00 (2 bags 0.30 10.73 lbs) 0.15 Bag size = 15" X 29-1/2"	24.00 1.20 (2 bags .36 12.87 lbs) .18	Potatoes, milk, salt and pepper for salmon cakes * lbs
Eggs, whole, beaten	6.00 (1 bag 6.00 lbs)	10.00 (1 bag 10.00 lbs) Bag size = 15" X 29-1/2"	12.00 (1 bag 12.00 lbs)	Eggs for salmon cakes * lbs
Flour, wheat	3.00 (1 bag 3.00 lbs)	5.00 (1 bag 5.00 lbs) Bag size = 10" X 18"	6.00 (1 bag 6.00 lbs)	Flour for salmon cakes * lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

SALMON CAKES



OPERATIONAL GUIDE FOR SEA FOOD

PLATTER L-108, 118(2) and 121(2)

INGREDIENTS & BATCH SIZE

Controlling Equip: Continuous Fryer
Container Net Wt:

Servings/Container: 2 Fish Sticks & 3 shrimp

Est. Prep Time: 3 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Utensils
1	Fish Sticks, Frozen Breaded	880-890-900	15.00	45.00	75.00	120.00	Deep Fat Fryer Kraft Paper
2	Shrimp, Frozen, Breaded	1740	12.00	36.00	60.00	96.00	Baking sheets

* FSC Group Subsistence Catalog (C8900-SL) 1 Jan 77

OPERATIONAL GUIDE FOR SEA FOOD
PLATTER L-108, 118(2) and 121(2)
INSTRUCTIONS

		Check Points	Time (Minutes)
NOTE:	This guide is based on breaded fish products as purchased. Breaded scallops may be substituted for breaded shrimp.		
0-	Verify fish type components as to amounts and species received from Prep. Area.		10
00-	Deliver all components to frying area.		10
1-	Pass breaded fish sticks thru preheated (365°F) continuous deep fat fryer for 2 to 3 minutes (internal temperature of 160°F) and golden brown. Place on baking sheets covered with kraft paper to drain and cool. Hold for step 3 below.		60
2-	Cook breaded shrimp in same manner as above. Should breaded scallops be substituted for breaded shrimp, they may be fried in same manner.		60
3-	Place 16 fried breaded fish sticks in one side of half-size steam table pan and place 24 fried breaded shrimp on the other side.		20
4-	Pass panned fried sea food thru lidding machine to cover and close.		10
5-	Pass covered pans of fried sea food thru labelling machine. Labels should read:		10

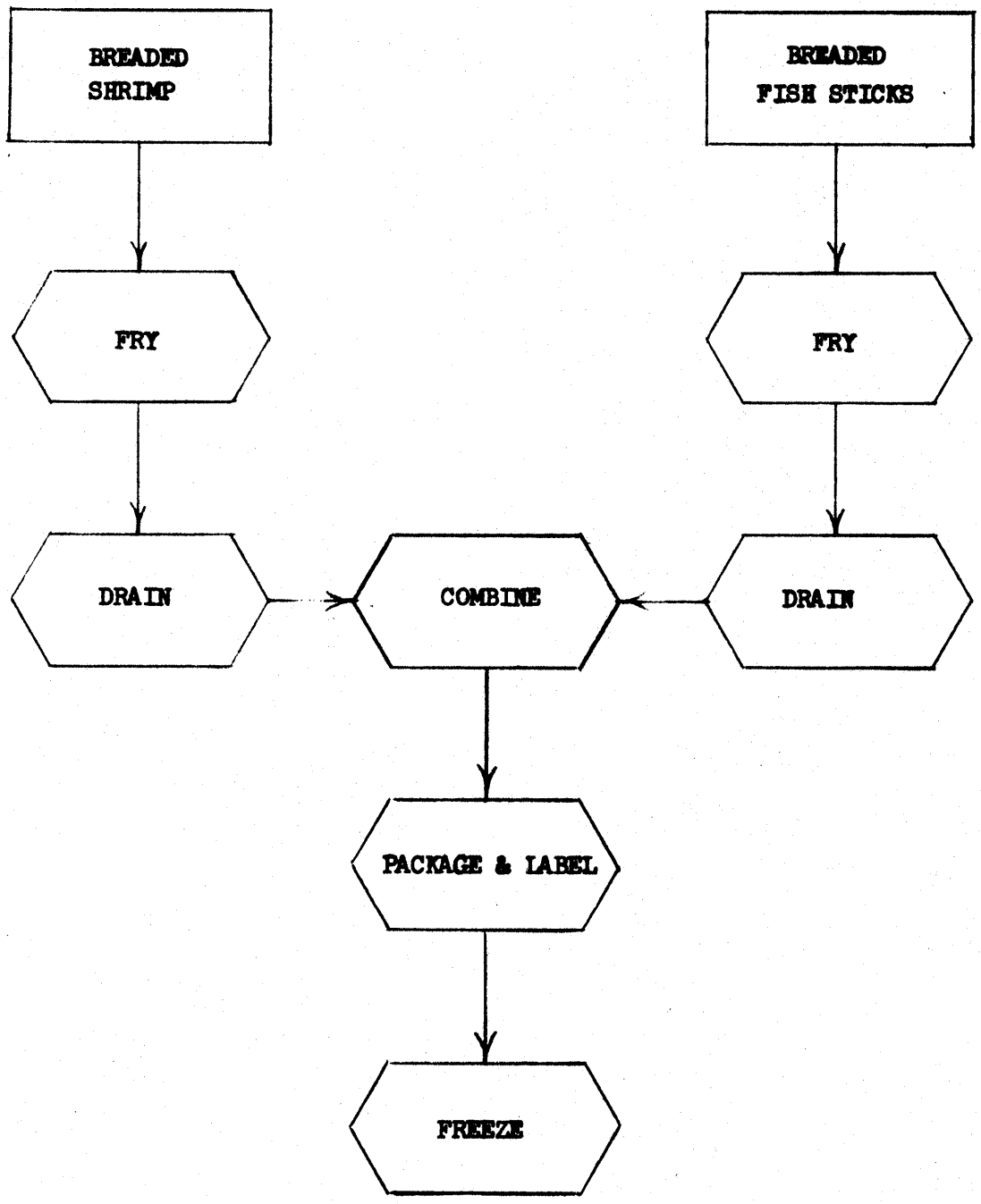
Fish Sticks and Shrimp (Fried) Date Prepared:_____

or

Fish Sticks and Scallops (Fried)
Net Wt: Servings: 8 of 2 Fish Sticks and 3 Shrimp or Scallops

MATERIAL FLOW

SEAFOOD PLATTER



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SEAFOOD PLATTER

Prepare items for transportation in one of the following manners:

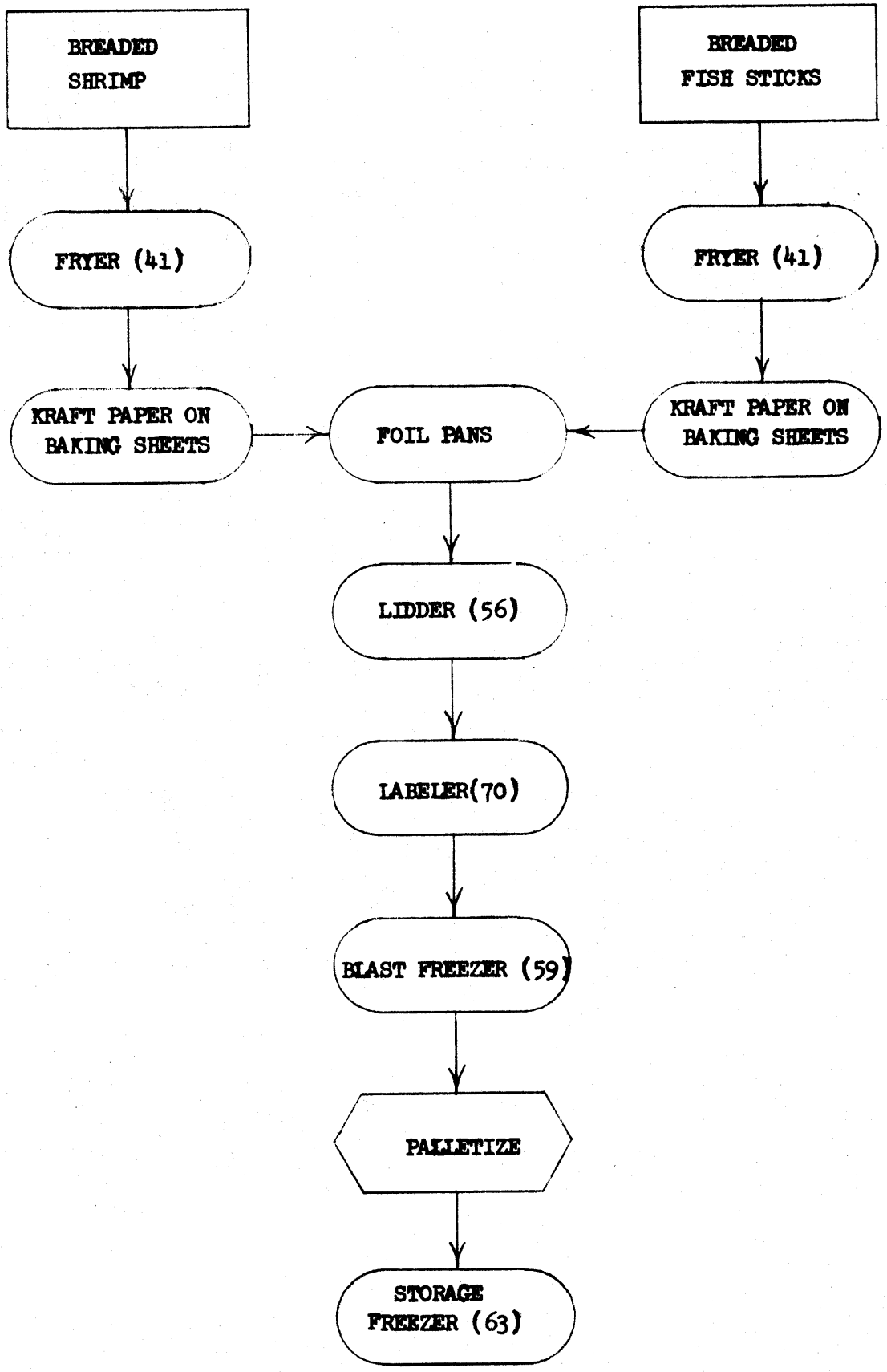
1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Fish sticks, frozen, breaded	45.00 (3 bags 15.00 lbs)	75.00 (5 bags 15.00 lbs)	120.00 (8 bags 15.00 lbs)	Fish sticks for seafood platter
		Bag size = 15" X 29-1/2"		15.00 lbs
Shrimp, frozen, breaded	36.00 (3 bags 12.00 lbs)	60.00 (5 bags 12.00 lbs)	96.00 (8 bags 12.00 lbs)	Shrimp for seafood platter
		Bag size = 15" X 29-1/2"		12.00 lbs

EQUIPMENT UTILIZATION

SEAFOOD PLATTER



OPERATIONAL GUIDE FOR SHRIMP CREOLE (W.R.)

INGREDIENTS & BATCH SIZE

Controlling Equip: Kettles
Container Net Wt:

Servings/Container: 12 of 6 oz

Est. Prep. Time: 4 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	500 Servings 40-gal Kettle (lb)	800 Servings 60-gal Kettle (lb)	Utensils
1	Shrimp, frozen, deveined	1740	24.00	72.00	120.00	192.00	Kettle
2	Bacon	80	3.00	9.00	15.00	24.00	Pan Fry-Tilt
3	Tomatoes, canned in heavy puree	SP**	11.00	33.00	55.00	88.00	Strainer
	Celery, fresh, diced 1/2 inch	4720	2.00	6.00	10.00	16.00	
	Mushrooms, canned, pieces, drained	5210	1.40	4.20	7.00	11.20	
	Peppers, frozen, green, diced	5700	1.00	3.00	5.00	8.00	
	Sugar, granulated	9930	0.40	1.20	2.00	3.20	
	Onions, dehyd, chopped	5290	0.20	0.60	1.00	1.60	
	Lemon juice	4960	0.05	0.15	0.25	0.40	
	Water, tap		1.50	4.50	7.50	12.00	
	Salt	15850	0.20	0.60	1.00	1.60	
	Garlic, granular	4700	0.02	0.06	0.10	0.16	
	Hot sauce	15180	0.007	0.021	0.035	0.056	
	Bay, ground	14320	0.001	0.003	0.005	0.008	
	Allspice, ground	14260	0.001	0.003	0.005	0.008	
	Pepper, cayenne, ground	15510	0.001	0.003	0.005	0.008	
4	Water, tap cold		3.12	9.36	15.60	24.96	Pot & Whip
	Col-flo 67, starch	SP**	0.70	2.10	3.50	5.60	
	Flour, hard wheat	8300	0.25	0.75	1.25	2.00	
5	Water		To make 4.75 gal	To make 14.25 gal	To make 23.75 gal	To make 38.00 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR SHRIMP CREOLE (W.R)

INSTRUCTIONS

		Check Points	Time (Minutes)
NOTE:	To preserve the integrity of the shrimp, this product should be hand-filled.		
0-	Verify components, ingredients, and spices as to number and amounts received from Prep. Area.		10
00-	Deliver bacon to oven area; remaining ingredients to kettle area.		10
1-	Place water in kettle. Bring to a boil. Add shrimp, return to boiling point. Reduce heat and simmer 2 minutes. Shut off steam. Drain hot water and rinse with cold water to cool shrimp to room temperature. Drain. Hold for Step 5.		20
2-	Fry bacon strips in fry-tilt pan until crisp (about 30 minutes). Drain fat and hold for Step 3. Crumble bacon into small (approximately ½") pieces. Transfer bacon fat and bacon pieces to kettle area.		40
3-	In a steam-jacketed kettle, place bacon fat and bacon pieces from Step 2. Add tomatoes, diced celery, drained mushroom pieces, diced green peppers, sugar, lemon juice, water, salt, granulated garlic, tabasco sauce, ground bay, ground allspice, and ground cayenne pepper. Turn on steam and heat with constant agitation until temperature reaches 160°F.		30
4-	In a pot, combine Col-flo 67 starch and wheat flour with cold water to make a slurry; using whip, stir and crush all lumps. Add to other ingredients in steam-jacketed kettle (Step 3) and heat, with constant agitation to 180°F.		20
5-	Raise level (volume) of product in kettle with tap water to required amount of gallons using measuring stick. Mix well. Turn off steam. Add shrimp from Step 1, and mix lightly.		10
6-	Fill half-size steam table aluminum pan with 4-½ lb of product		20

	Check Points	Time (Minutes)
7- Pass pans filled with Shrimp Creole thru lidding machine to cover and close.		10
8- Pass covered pans thru labelling machine.		10

Labels should read:

Shrimp Creole
Net Wt:

Date Prepared:_____
Servings: 12 Of 6 oz
(1 cup)

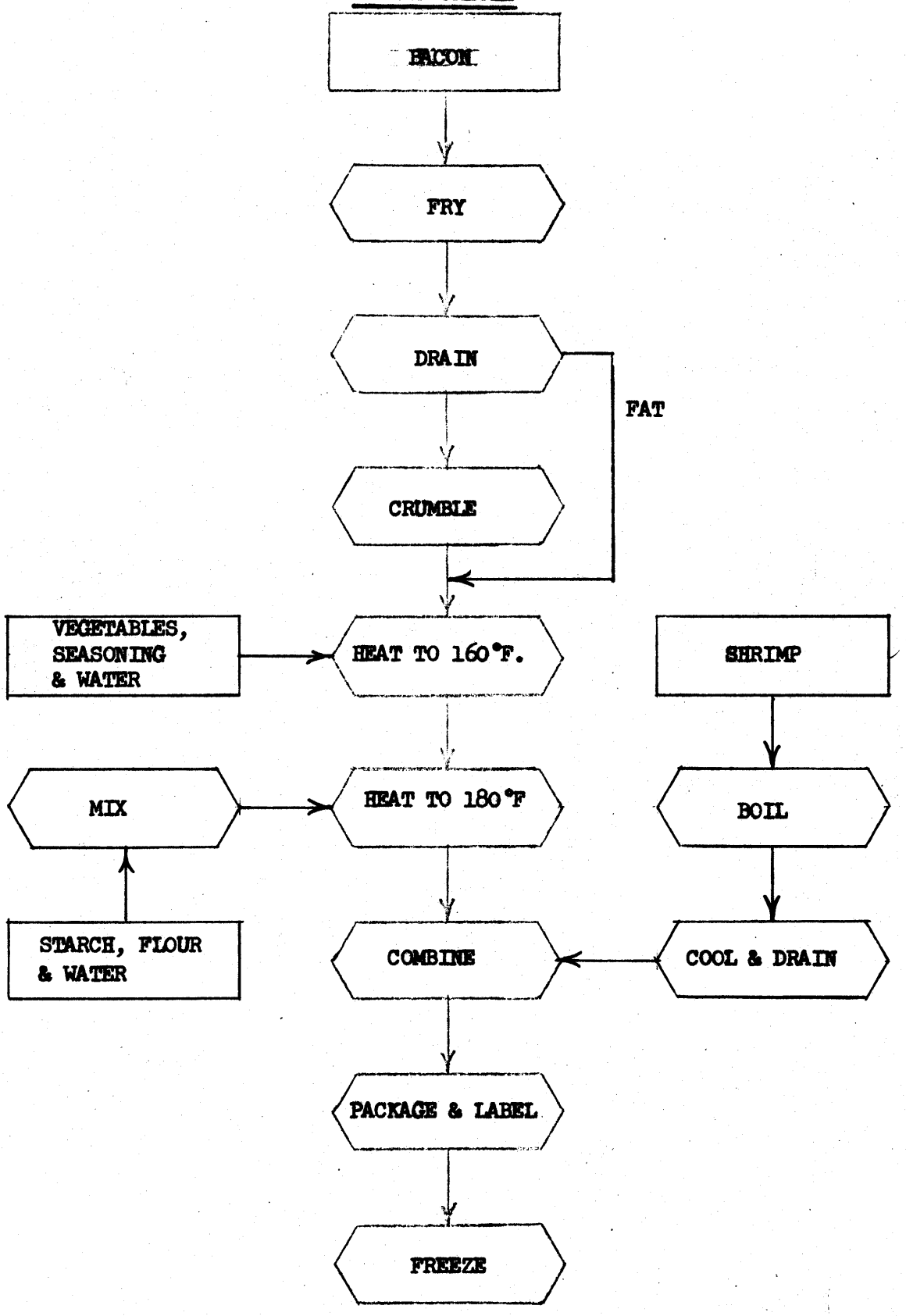
Reconstitution Instructions:

Heat covered pans in 325°F preheated ovens to internal temperature of 160°F.

Convection ovens: 1 hour 15 minutes
Conventional (ordinary) ovens: 1 hour 30 minutes

MATERIAL FLOW

SHRIMP CREOLE



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SHRIMP CREOLE

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Shrimp, frozen, deveined	72.00 (3 bags 24.00 lbs)	120.00 (5 bags 24.00 lbs) Bag size = 15" X 29-1/2"	192.00 (8 bags 24.00 lbs)	Shrimp for shrimp creole 24.00 lbs
Bacon	9.00 (1 bag 9.00 lbs)	15.00 (1 bag 15.00 lbs) Bag size = 15" X 29-1/2"	24.00 (1 bag 24.00 lbs)	Bacon for shrimp creole * lbs
Tomatoes, canned in heavy puree	33.00 (3 bags 11.00 lbs)	55.00 (5 bags 11.00 lbs) Bag size = 15" X 29-1/2"	88.00 (8 bags 11.00 lbs)	Tomatoes for shrimp creole 11.00 lbs
Celery, fresh, diced, 1/2 inch	6.00	10.00	16.00	Celery, mushrooms and peppers for shrimp creole
Mushrooms, canned pieces, drained	4.20 (1 bag 13.20 lbs)	7.00 (2 bags 11.00 lbs)	11.20 (2 bags 17.20 lbs)	
Peppers, frozen, green, diced	3.00	5.00 Bag size = 15" X 29-1/2"	8.00	* lbs
Sugar, granulated	1.20	2.00	3.20	Sugar, onions, lemon juice, salt, garlic, hot sauce, bay, allspice and pepper for shrimp creole
Onions, dehydrated, chopped	0.60	1.00	1.60	
Lemon juice	0.15	0.25	0.40	
Salt	0.60 (1 bag 2.64 lbs)	1.00 (1 bag 4.40 lbs)	1.60 (1 bag 7.04 lbs)	
Garlic, granular	0.06	0.10	0.16	
Hot sauce	0.021	0.035	0.056	
Bay, ground	0.003	0.005	0.008	
Allspice, ground	0.003	0.005	0.008	
Pepper, cayenne, ground	0.003	0.005 Bag size = 10" X 18"	0.008	* lbs

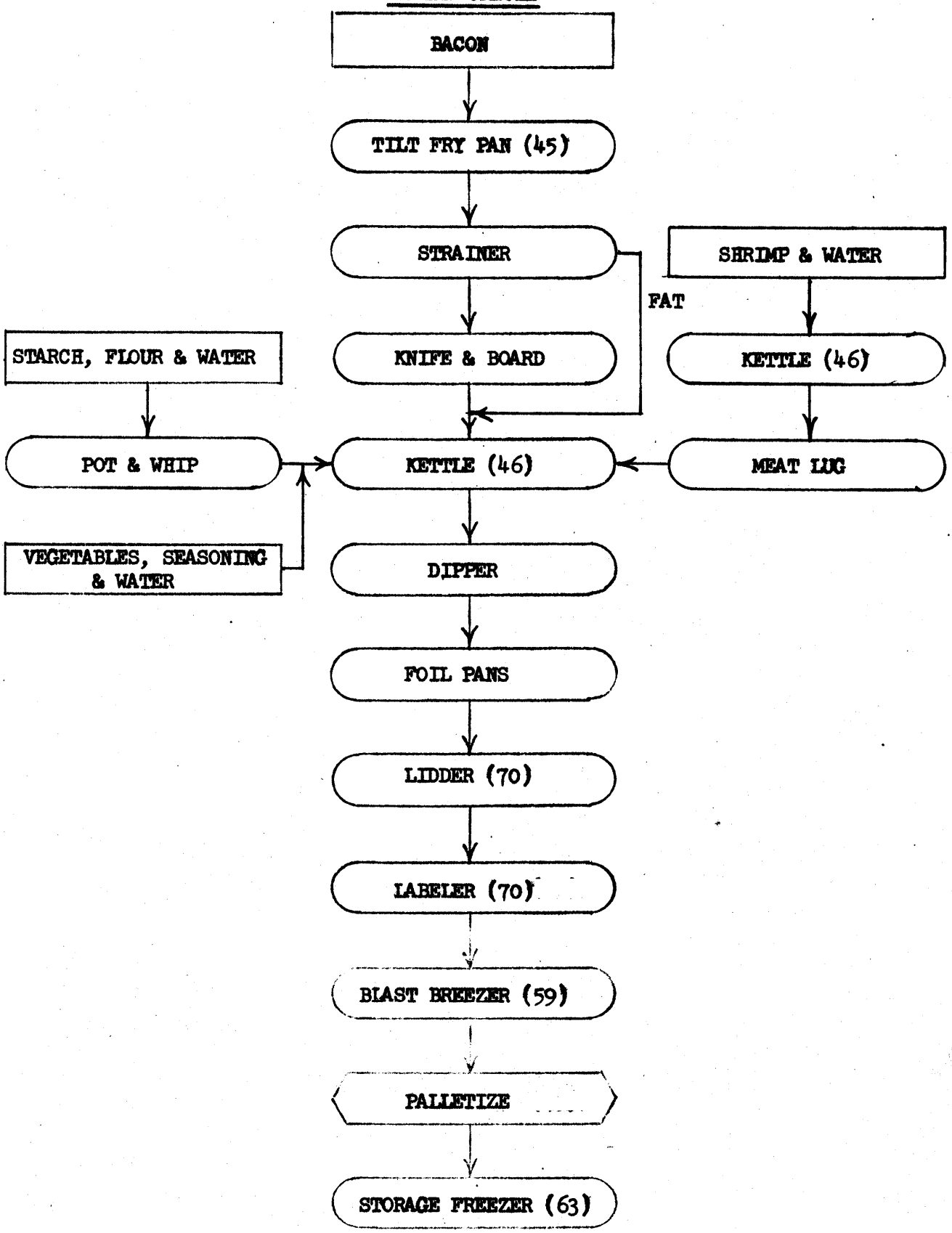
GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SHRIMP CREOLE (Cont'd)

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Col-Flo-67, starch Flour, hard wheat	2.10 (1 bag 0.75 2.85 lbs)	3.50 (1 bag 1.25 4.75 lbs) Bag size = 10" X 18"	5.60 (1 bag 2.00 7.60 lbs)	Starch and flour for shrimp creole * lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

SHRIMP CREOLE



OPERATIONAL GUIDE FOR BAKED TUNA

AND NOODLES L-124

INGREDIENTS & BATCH SIZE

Controlling Equip: Kettle
Container Net Wt: 5.75 lb

Servings/Container: 10 of 9 oz

Est. Prep. Time: 4.9 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	500 Servings 60-gal Kettle (lb)	800 Servings 80-gal Kettle (lb)	Utensils
1	Tuna, Canned, White	1800	17.00	51.00	85.00	136.00	Meat Lugs Forks & Knives
2	Milk, nonfat, dry	3050	2.50	7.50	12.50	20.00	Kettle
	Col-flo 67, starch	SP**	0.42	1.26	2.10	3.36	Whip
	Water		24.00	72.00	120.00	192.00	
3	Margarine/Butter	2360/13980	2.70	8.10	13.50	21.60	Kettle
	Onions, dehy, sliced	5310	0.09	0.27	0.45	0.72	Whip
	Celery, chopped, 1/8 in. diced	4270	4.00	12.00	20.00	32.00	
	Flour, wheat	8300	0.85	2.55	4.25	6.80	
	Salt	15850	0.16	0.48	0.80	1.28	
4	Water, tap		25.00	75.00	125.00	200.00	Kettle
	Salt, table	15850	0.11	0.33	0.55	0.88	
	Noodles	8460	5.00	15.00	25.00	40.00	
5	Pimentos, canned, drained, chopped 1/4 in.	5730	0.85	2.55	4.25	6.80	
	Water		To make 6.5 gal	To make 19.5 gal	To make 32.5 gal	To make 52 gal	Measuring stick
6	Cheese, cheddar, shredded	2430	1.50	4.50	7.50	12.00	
	Paprika	15440	0.06	0.18	0.30	0.48	
	Bread Crumbs	6980	0.85	2.55	4.25	6.80	

* FSC Group 89 Subsistence Catalog 1 Jan 77 (C8900-SL)

** Special Purchase

OPERATIONAL GUIDE FOR BAKED TUNA AND NOODLES L-124

PREPARATION AREA

NOTE: Prior to shipping to Central Kitchen the following ingredients should be prepared and kept refrigerated.

1- Canned Tuna should be opened, drained and flaked in 3/4-inch or less pieces.

2- Celery should be cleaned and chopped in 1/8-inch pieces.

3- Onions should be rehydrated in excess water for at least 10 minutes and drained of excess water.

4- Canned Pimentoes should be open, drained, and diced in 1/4-inch pieces (ensuing juices from dicing shall not be drained).

5- Cheese shall be shredded.

6- Paprika and bread crumbs shall be mixed thoroughly.

OPERATIONAL GUIDE FOR BAKED TUNA AND NOODLES L-124

INSTRUCTIONS

		Check Points	Time (Minutes)
NOTE:	This product requires the use of two different kettles.		
0-	Verify components (flaked tuna, chopped celery and pimentos, rehydrated onions, shredded cheese and paprika/bread crumb mixture), ingredients, and spices as to number and amounts received from Prep. Area.		
00-	Deliver all ingredients to the kettle area.		
000-	Margarine may be substituted for Butter.		
1-	Drain canned tuna; flake; place in meat lugs; cover and set aside for Step 5 below. DO NOT HOLD MORE THAN ONE HOUR WITHOUT REFRIGERATION.		30
2-	Place water in kettle; add dry milk and starch; stir well to crush all lumps; heat to 180°F with agitation. Shut off steam hold for Step 3.		20
3-	Heat margarine in large kettle; add rehydrated onions and celery; cook until tender. Sprinkle flour and salt into margarine with constant stirring; crush all lumps and continue cooking for 10 minutes. Transfer the hot dry milk-starch mixture (Step 2) and slowly add to flour mixture in kettle with constant agitation; simmer for 20 minutes.		40
4-	In a separate kettle, place salt and water, heat to a rolling boil; add noodles slowly; stir to prevent clumping. Cook noodles until tender (15-20 minutes). Do not overcook. Drain and rinse noodles thoroughly and drain again. Noodles should be used within 30 minutes or refrigerated.		30
5-	Add tuna, noodles and pimentos to sauce mixture in kettle. Mix thoroughly and with constant agitation heat to 165°F. Shut off steam. Raise level (volume) of product in kettle with hot water to required number of gallons using measuring stick. Mix thoroughly.		20
	(a) Pump cooled tuna-noodle mixture to filler.		10
	(b) Fill half-size steam table pans with 5.75 pounds of product.		15

	Check Points	Time (Minutes)
6- Sprinkle shredded cheese evenly on product in pans. Top over shredded cheese a mixture of bread-crumbs and paprika.		20
7- Pass filled pans thru lidding machine to cover and close.		10
8- Pass covered pans thru labelling machine. Labels should read:		10

Tuna and Noodles Date Prepared:_____
Net Wt: 5.75 lb Servings: 10 of 9 oz ea

Reconstitution Instructions:

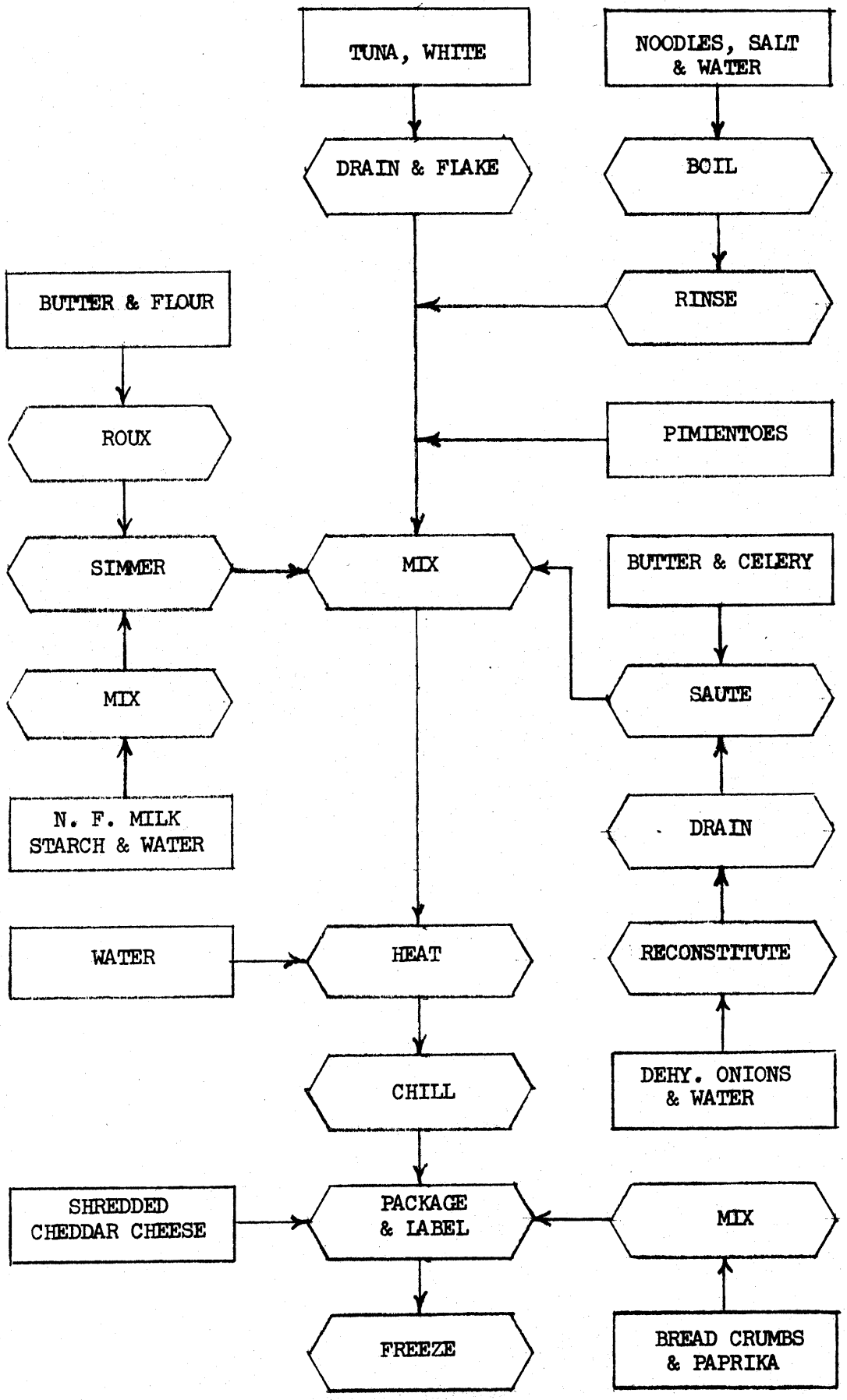
Heat covered pans in 325°F preheated ovens to an internal temperature of 165°F.

Convection ovens: 1 hour 15 minutes
Conventional (ordinary) ovens: 1 hour 30 minutes

Alternatively the Tuna and Noodles may be poured (removed from foil pans) in kettle and heated to 165°F.

MATERIAL FLOW

BAKED TUNA AND NOODLES



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BAKED TUNA AND NOODLES

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Tuna, canned, white	51.00 (3 bags 17.00 lbs)	85.00 (5 bags 17.00 lbs) Bag size = 15" X 29-1/2"	136.00 (8 bags 17.00 lbs)	Tuna for baked tuna and noodles 17.00 lbs
Milk, nonfat, dry Col-Flo 67 starch	7.50 (1 bag 1.26 8.76 lbs)	12.50 (1 bag 2.10 14.60 lbs) Bag size = 15" X 29-1/2"	20.00 (2 bags 3.36 11.68 lbs)	Milk and starch for baked tuna and noodles * lbs
Margarine/butter	8.10 (1 bag 8.10 lbs)	13.50 (1 bag 13.50 lbs) Bag size = 15" X 29-1/2"	21.60 (2 bags 10.80 lbs)	Butter or margarine for baked tuna and noodles * lbs
Onions, dehydrated, sliced Celery, chopped	0.27 (1 bag 12.00 12.27 lbs)	0.45 (2 bags 20.00 10.23 lbs) Bag size = 15" X 29-1/2"	0.72 (3 bags 32.00 10.91 lbs	Onions and celery for baked tuna and noodles * lbs
Flour, wheat Salt	2.55 (1 bag .48 3.03 lbs)	4.25 (1 bag .80 5.05 lbs) Bag size = 10" X 18"	6.80 (1 bag 1.28 8.08 lbs)	Flour and salt for baked tuna and noodles * lbs
Salt, table	0.33 (1 bag 0.33 lbs)	0.55 (1 bag 0.55 lbs) Bag size = 8" X 10"	0.88 (1 bag 0.88 lbs)	Salt (to be used in cooling noodles) for baked tuna and noodles * lbs

*Appropriate weight to be written is dependent on number of servings.

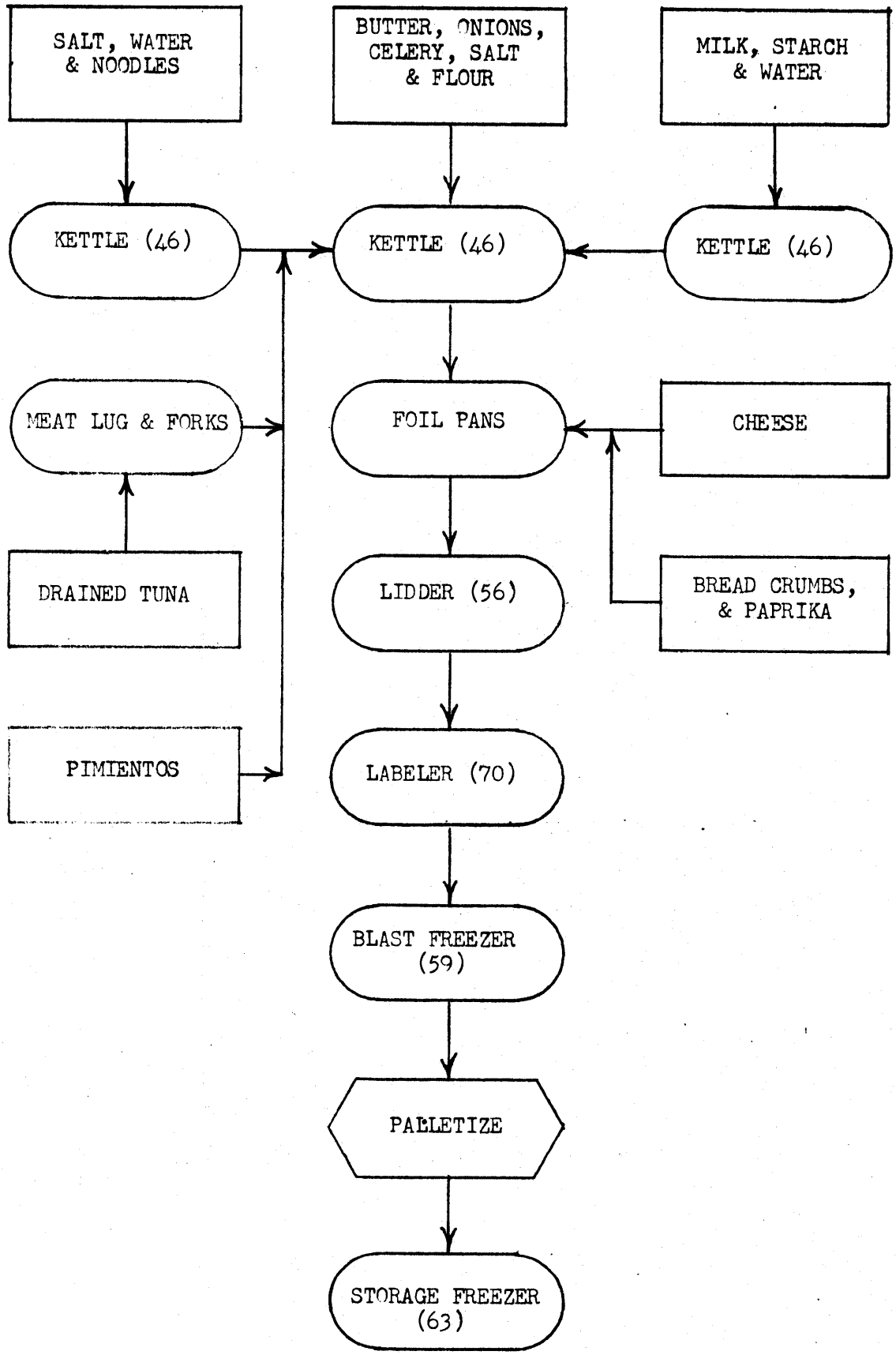
GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BAKED TUNA AND NOODLES (Cont'd)

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Noodles	15.00 (1 bag 15.00 lbs)	25.00 (2 bags 12.50 lbs) Bag size = 15" X 29-1/2"	40.00 (2 bags 20.00 lbs)	Noodles for baked tuna and noodles ___*___ lbs
Pimentos, canned	2.55 (1 bag 2.55 lbs)	4.25 (1 bag 4.25 lbs) Bag size = 15" X 29-1/2"	6.80 (1 bag 6.80 lbs)	Pimentos for baked tuna and noodles ___*___ lbs
Cheese, cheddar, shredded	4.50 (1 bag 4.50 lbs)	7.50 (1 bag 7.50 lbs) Bag size = 10" X 18"	12.00 (2 bags 6.00 lbs)	Cheese for baked tuna and noodles ___*___ lbs
Paprika Bread crumbs	0.18 (1 bag 2.55 2.73 lbs)	0.30 (1 bag 4.25 4.55 lbs) Bag size = 10" X 18"	0.48 (1 bag 6.80 7.28 lbs)	Paprika and bread crumbs for tuna and noodles ___*___ lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

BAKED TUNA AND NOODLES



OPERATIONAL GUIDE FOR BARBECUED CHICKEN

INGREDIENTS & BATCH SIZE L-128

Conrolling Equip: Fryer of Oven - Kettles
Container Net Wt: 4.5 lb

Standard Serving: 8 of 2 pcs.
1/4 cup sauce

Est. Prep Time: 5.5 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	500 Servings 40-gal Kettle (lb)	800 Servings 60-gal Kettle (lb)	Utensils
1	Chicken, parts or cut-up	580	50.00	150.00	250.00	400.00	Fryer of Oven Baking pans
	Shortening (oven method only)	14080	1.00	3.00	5.00	8.00	
2	Sauce						
	Onions, dehyd, sliced	5310	0.37	1.11	1.85	2.96	Kettle
	Worcestershire sauce	16030	2.25	6.75	11.25	18.00	agitating
	Catsup, tomato	14410	16.50	49.50	82.50	132.00	
	Mustard, prepared	15310	1.00	3.00	5.00	8.00	Whip
	Sugar, light brown	9870	2.50	7.50	12.50	20.00	
	Salt, table	15850	0.65	1.95	3.25	5.20	
	Pepper, black	15480	0.01	0.03	0.05	0.08	
	Pepper, red	15510	0.01	0.03	0.05	0.08	
	Margarine or Butter	1398 or 2360	1.00	3.00	5.00	8.00	
	Col-flo 67, starch	SP**	0.35	1.05	1.75	2.80	
	Water, tap		12.00	36.00	60.00	96.00	
	Vinegar, white	16000	4.00	12.00	20.00	32.00	
3	Water		To make 4 gal	To make 12 gal	To make 20 gal	To make 32 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR BARBECUED CHICKEN L-128

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients, and spices as to number and amounts received from Prep. Area.		10
00-	Deliver chicken parts to deep fat fryer oven area; remaining ingredients to Kettle Area.		10
1-	Optional Methods for browning Chicken parts -		
	(a) Fryer method: Pass chicken parts thru 365°F preheated continuous fryer to brown surface. Parts being discharged from fryer should be separated so as to fill baking pans with one type only (i.e. all legs, all wings, etc. per pan). Hold for Step No. 4.		30
	(b) Oven Method: Grease baking pans with shortening. Separate chicken parts so that only one type is placed in each pan (i.e. all legs, all wings, etc. per pan). Place uncovered pans in a preheated 375°F oven and bake until slightly browned. (20-30 minutes) Hold for Step No. 4.		40
2-	Sauce - Combine remaining ingredients, except vinegar, in steam kettle; mix well to blend. Turn on steam heat to 200°F., and simmer for 15 minutes. Add vinegar; mix well.		20
3-	Raise level (volume) of product in kettle with hot water to required number of gallons using measuring stick. Mix well.		10
4-	Pour sauce equally over each pan of browned chicken parts; cover and bake in preheated 365°F oven to an internal temperature of 165°F (about 1 to 1-1/4 hours).		90
5-	Remove cooked chicken parts from oven and set aside to cool.		60
6-	Place 4 legs, 4 wings, 4 breasts, and 4 thighs in each half-size steam table pan. Pour 2 lb of sauce over chicken parts.		40

	Check Points	Time (Minutes)
7- Pass pans thru lidding machine to cover and close.		10

8- Pass covered pans thru labelling machine.
Labels should read:

Barbecued Chicken
Net Wt: 4.5 lb

Date Prepared: _____
Servings: 8 of 2 pcs ea
1/4 cup sauce

Reconstitution Instructions:

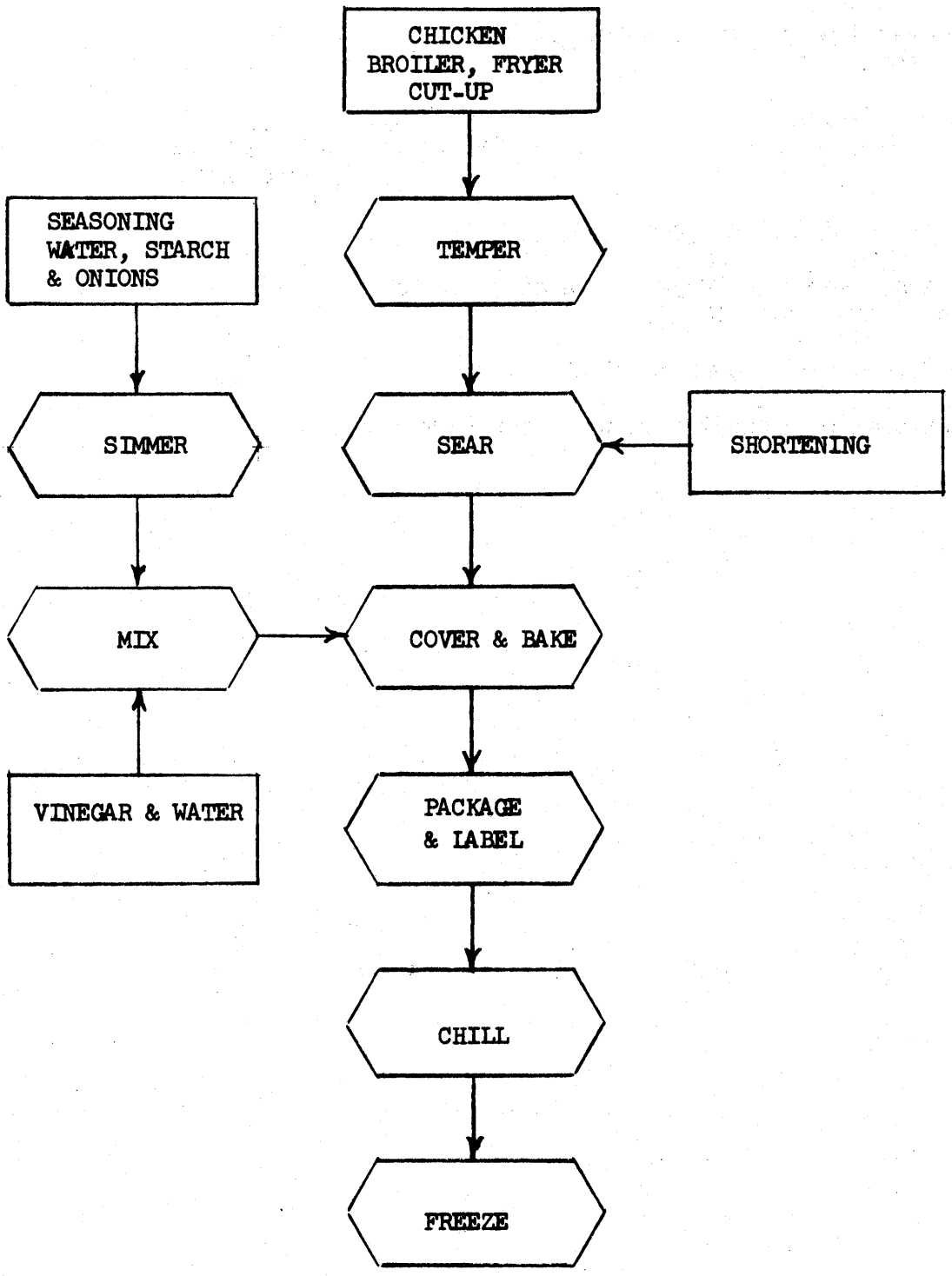
Heat pans covered in 325°F preheated ovens to internal temperature 160°F.

Convection oven: 1 hour 15 minutes

Conventional (ordinary) ovens: 1 hour 30 minutes

MATERIAL FLOW

BARBECUED CHICKEN



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BARBECUED CHICKEN

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

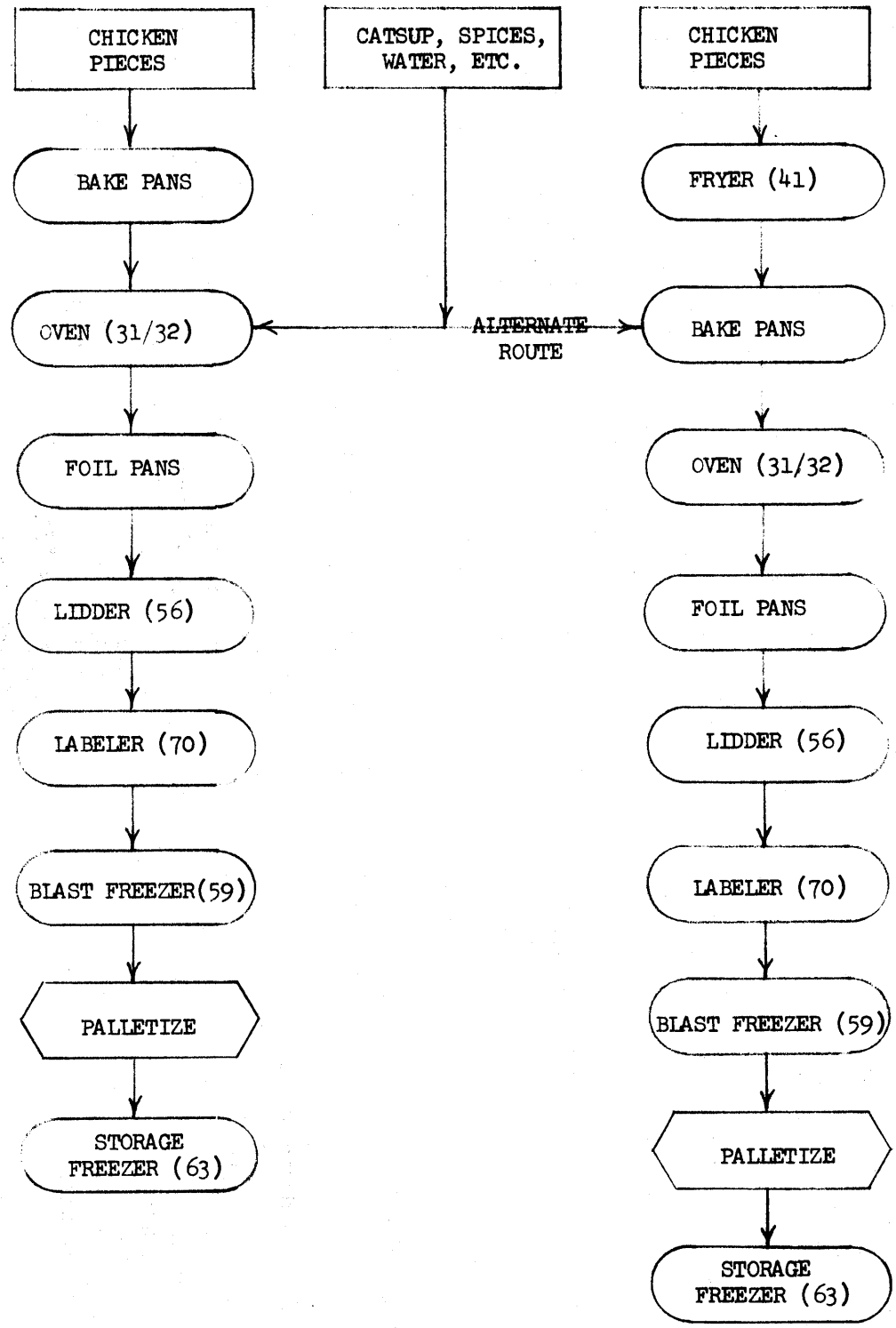
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Chicken, parts or cut-up	150.00 (10 bags 15.00 lbs)	250.00 (20 bags 12.5 lbs) Bag size = 15" X 29-1/2"	400.00 (20 bags 20.00 lbs)	Chicken for barbecued chicken * lbs
Shortening	3.00 (1 bag 3.00 lbs)	5.00 (1 bag 5.00 lbs) Bag size = 10" X 18"	8.00 (1 bag 8.00 lbs)	Shortening for barbecued chicken * lbs
Sauce				
Catsup, Tomato	49.50 (3 bags 16.50 lbs)	82.50 (5 bags 16.50 lbs) Bag size = 15" X 29-1/2"	132.00 (8 bags 16.50 lbs)	Catsup for barbecued chicken (sauce) 16.50 lbs
Onions, dehydrated, sliced	1.11	1.85	2.96	Onions, worcestershire sauce, mustard, sugar, salt, pepper (2), butter and starch for barbecued chicken (sauce)
Worcestershire sauce	6.75	11.25	18.00	
Mustard, prepared	3.00	5.00	8.00	
Sugar, light brown	7.50 (2 bags	12.50 (2 bags	20.00 (4 bags	
Salt, table	1.95 12.21 lbs)	3.25 20.35 lbs)	5.20 16.28 lbs)	
Pepper, black	0.03	0.05	0.08	
Pepper, red	0.03	0.05	0.08	
Margarine or butter	3.00	5.00	8.00	
Col-Flo 67 starch	1.05	1.75	2.80	
		Bag size = 15" X 29-1/2"		* lbs
Vinegar, white	12.00 (1 bag 12.00 lbs)	20.00 (2 bags 10.00 lbs) Bag size = 15" X 29-1/2"	32.00 (4 bags 8.00 lbs)	Vinegar for barbecued chicken (sauce) * lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

BARBEQUED CHICKEN



OPERATIONAL GUIDE FOR CHICKEN CACCIATORE L-130

INGREDIENTS & BATCH SIZE

Controlling Equip: Fryer - Kettle
Container Wt:

Standard Servings: 8 of 2 pcs and ½ cup sauce

Est. Prep Time: 5 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings FRYER (lb)	300 Servings FRYER (lb)	500 Servings FRYER (lb)	800 Servings FRYER (lb)	Utensils
1	Chicken, Broiler/ Fryer, cut-up	580	50.00	150.00	250.00	400.00	Fryer
2	Topping						
	Tomatoes, canned crushed	6420	5.250	15.75	26.25	42.00	Pot
	Tomato paste, canned (26% solids)	6460	2.250	6.75	11.75	18.00	Whip
	Mushrooms, drained ½ x ½ in. chopped	5210	1.800	5.40	9.00	14.40	
	Water, tap		9.500	28.50	47.50	76.00	Roasting pans w/Covers
	Soup & Gravy Base Chicken	11470	0.250	0.75	1.25	2.00	
	Salt, table	15850	0.150	0.45	0.75	1.20	
	Pepper, black	15480	0.005	0.015	0.025	0.04	
	Onion, dehyd, sliced	5310	0.150	0.450	0.750	1.20	Oven
	Pepper, red	15510	0.005	0.015	0.025	0.04	
	Allspice, ground	14260	0.005	0.015	0.025	0.04	
	Garlic, powder	4700	0.005	0.015	0.025	0.04	
	Chili powder	14480	0.045	0.135	0.225	0.36	
	Thyme, ground	15990	0.005	0.015	0.025	0.04	
3	Sauce			40-gal Kettle	40-gal Kettle	40-gal Kettle	
	Col-flo 67, starch	SP**	0.400	1.200	2.00	3.20	Kettle
	Water		1.00	3.00	5.00	8.00	
	Drippings						

Steps	Ingredients	*Index No.	100 Servings FRYER (lb)	300 Servings FRYER (lb)	500 Servings FRYER (lb)	800 Servings FRYER (lb)	Utensils
				40-gal Kettle	40-gal Kettle	40-gal Kettle	
4	Water		To make 3.5 gal	To make 10.5 gal	To make 17.5 gal	To make 28.00 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR CHICKEN CACCIATORE L-130

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components (including washed and drained chicken parts), ingredients, and spices as to number and amounts received from Preparation Area.		10
00-	Deliver chicken parts to continuous fryer area and remaining ingredients to kettle area.		10
1-	Pass chicken parts thru preheated continuous fryer to brown surface (365°F) for 3 to 5 minutes. Parts being discharged from fryer should be separated so as to fill baking pans with one type only; i.e., all legs, all wings, etc., per pan.		30
2-	Topping		
	Combine crushed tomatoes, tomato paste, drained mushrooms, water, chicken soup and gravy base, onions, and remaining spices in a large pot and mix thoroughly. Use equal amounts of mixture to top each baking pan of chicken parts.		100
	(a) Cover pans and heat in preheated 325°F oven to an internal temperature of 165°F (approximately 1 hr).		
	(b) Remove chicken parts from oven and fill each half-size steam table pans with 4 legs, 4 wings, 4 breasts, and 4 thighs. Set pans aside for Step 7. Reserve drippings for Step 3.		
3-	In a pot combine Col-flo 67 starch with water to make a slurry; stir; crush all lumps. Place drippings (from Step 2(b)) in kettle and combine with starch slurry; heat to 180°F for 10 minutes. Shut off steam.		20
4-	Raise level (volume) of product in kettle with water to required number of gallons using measuring stick; mix thoroughly.		
5-	Transfer sauce to filler.		10
6-	Fill half-size steam table pans of panned chicken with 2.25 lb of sauce.		20

	Check Points	Time (Minutes)
8- Pass pans thru lidding machine to cover and close.		10
9- Pass covered pans thru label machine. Labels should read:		10

Chicken Cacciatore
Net Wt:

Date Prepared:_____
Servings: 8 of 2 pcs & ½ cup sauce

Reconstitution Instructions:

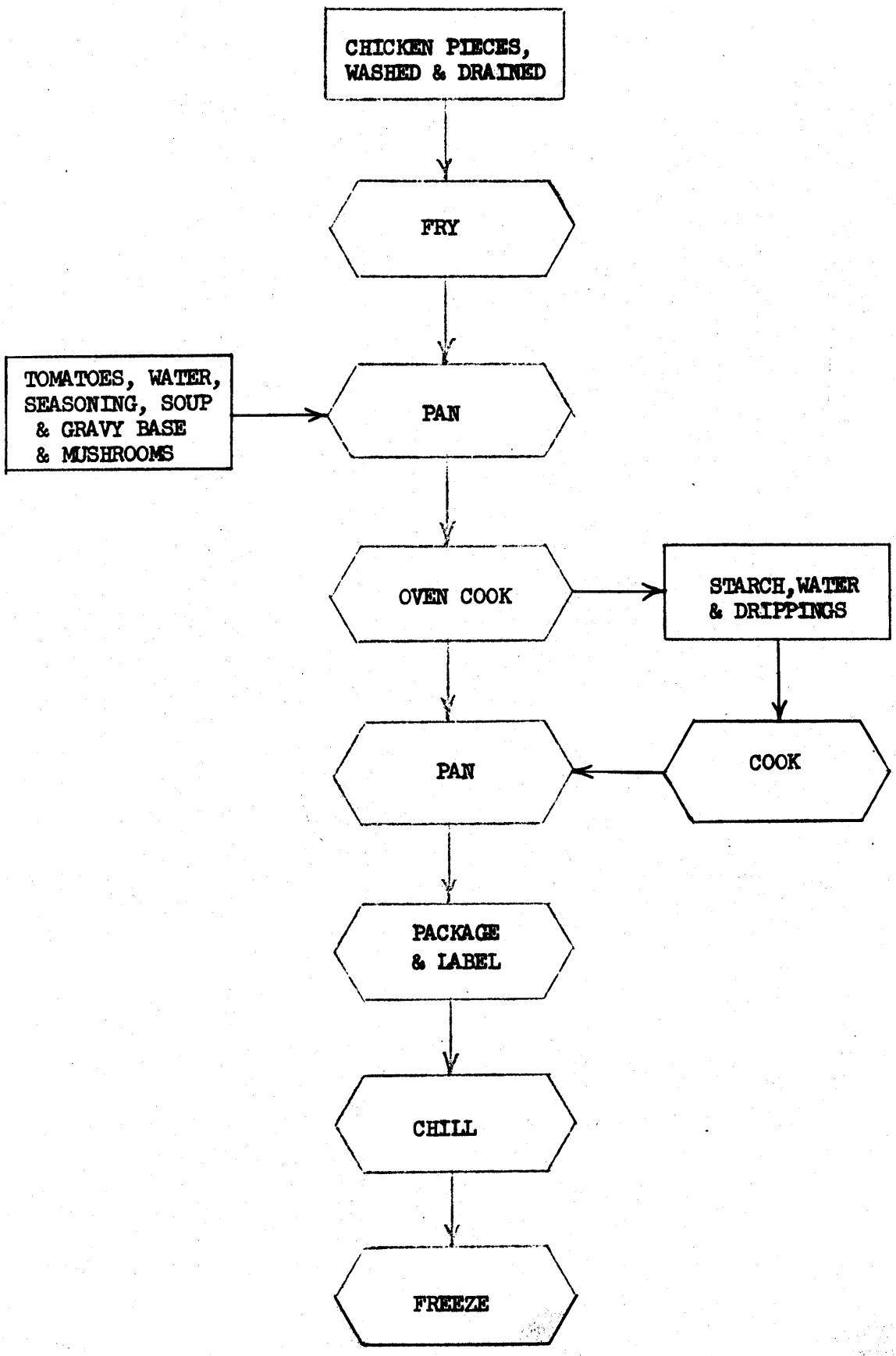
Heat covered pans in preheated 325°F ovens to internal temperature of 160°F.

Convection ovens: 1 hour 15 minutes

Conventional ovens (ordinary): 1 hour 30 minutes

MATERIAL FLOW

CHICKEN CACCIATORE



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - CHICKEN CACCIATORE

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Chicken, broiler/fryer, cut-up	150.00 (6 bags 25.00 lbs)	250.00 (10 bags 25.00 lbs) Bag size = 15" X 29-1/2"	400.00 (16 bags 25.00 lbs)	Chicken for chicken cacciatore 25.00 lbs
TOPPING				
Tomatoes, canned, crushed	15.75 (1 bag 15.75 lbs)	26.25 (2 bags 13.13 lbs) Bag size = 15" X 29-1/2"	42.00 (3 bags 14.00 lbs)	Crushed tomatoes for chicken cacciatore (topping) * lbs
Tomato paste, canned (26% solids)	6.75 (1 bag 6.75 lbs)	11.75 (1 bag 11.75 lbs) Bag size = 15" X 29-1/2"	18.00 (2 bags 9.00 lbs)	Tomato paste for chicken cacciatore (topping) * lbs
Mushrooms, drained, 1/2 X 1/2 inch chopped	5.40	9.00	14.40	Mushrooms, chicken base, salt, pepper (2), onions, spice, garlic, chili and thyme for chicken cacciatore (topping)
Soup & gravy base, chicken	.75 (1 bag 7.26 lbs)	1.25 (1 bag 12.10 lbs)	2.00 (1 bag 19.36 lbs)	
Salt, table	.45	.75	1.20	
Pepper, black	.015	.025	.04	
Onion, dehydrated, sliced	.450	.750	1.20	
Pepper, red	.015	.025	.04	
Allspice, ground	0.015	0.025	0.04	
Garlic powder	0.015	.025	0.04	* lbs
Chili powder	0.135	.225	0.36	
Thyme, ground	0.015	.025	0.04	
		Bag size = 15" X 29-1/2"		

*Appropriate weight to be written is dependent on number of servings.

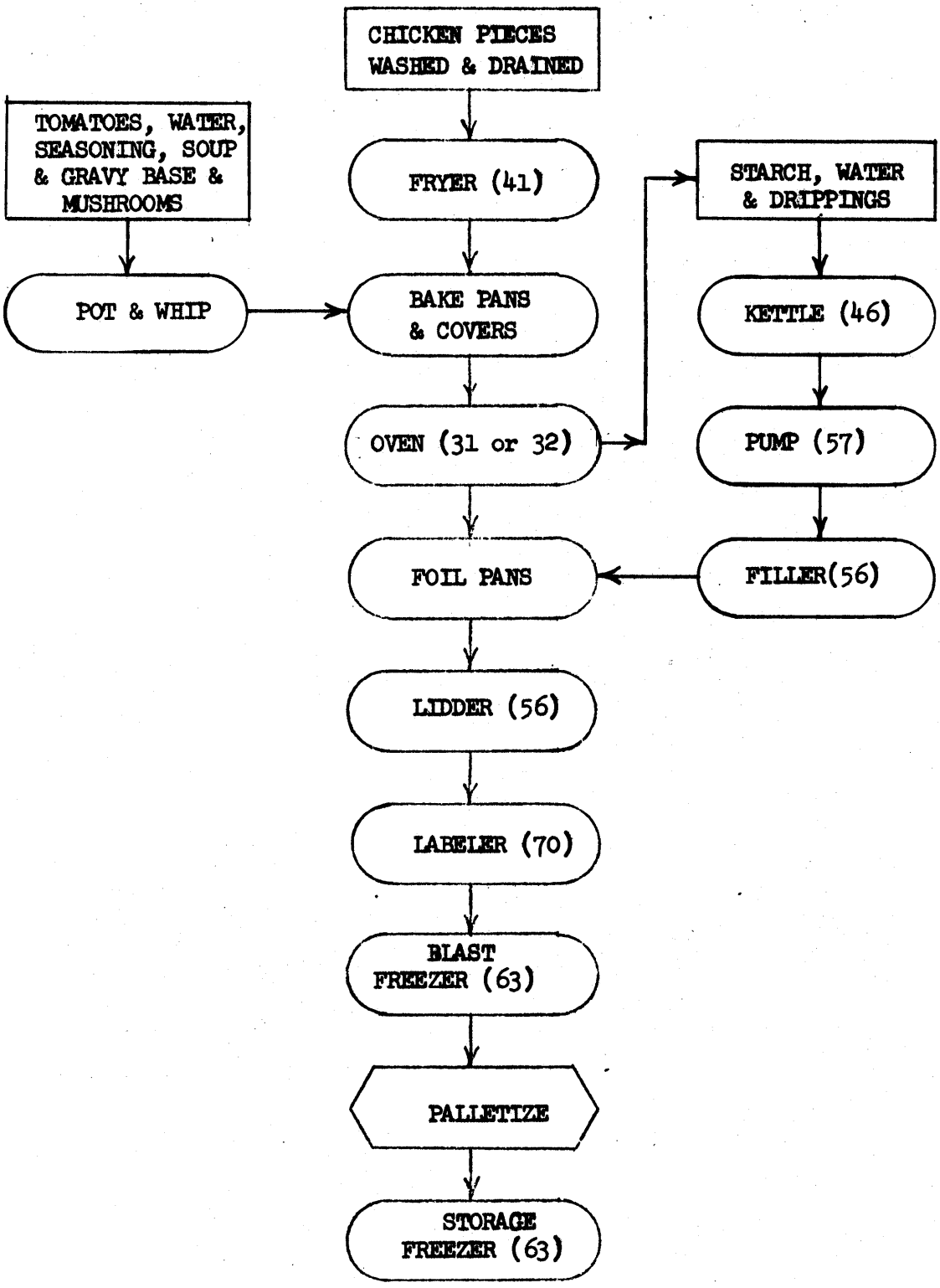
GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - CHICKEN CACCIATORE (Cont'd)

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
SAUCE				
Col-Flo 67, starch Drippings and water	1.20 (1 bag 3.00 4.20 lbs)	2.00 (1 bag 5.00 7.00 lbs)	3.20 (2 bags 8.00 5.6 lbs)	Starch and drippings for chicken cacciatore (sauce) * lbs
		Bag size = 10" X 18"		

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

CHICKEN CACCIATORE



OPERATIONAL GUIDE FOR COUNTRY STYLE CHICKEN L-135

INGREDIENTS & BATCH SIZE

Controlling Equip: Oven
Container Net Wt: 5.5 lb

Standard Servings: 8 of 2 pcs & 1/2 cup gravy

Est. Prep. Time: 5 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings OVEN (lb)	500 Servings OVEN (lb)	800 Servings OVEN (lb)	Utensils
1	Chicken, broiler-fryer, cut up, washed & drained	580	50.00	150.00	250.00	400.00	
	Dredging Mixture						
	Flour, wheat	8300	4.00	12.00	20.00	32.00	Breader
	Salt, table	15850	0.50	1.50	2.50	4.00	Fryer
	Pepper, black	15480	0.02	0.06	0.10	0.16	Baking pans
	Paprika	15440	0.02	0.06	0.10	0.16	
2	Water, hot		8.00	24.00	40.00	64.00	OVEN
3	Roux		Kettle	40-gal Kettle	40-gal Kettle	40-gal Kettle	
	Shortening	14080	1.80	5.40	9.00	14.40	Kettle
	Flour	8300	0.75	2.25	3.75	6.00	Whip
4	Gravy						
	Col-flo starch	SP**	0.75	2.25	3.75	6.00	Pot
	Milk, nonfat, dry	3050	0.75	2.25	3.75	6.00	Whip
	Chicken Soup & Gravy Base	11470	0.75	2.25	3.75	6.00	
	Liquid - Water &/or drippings		28.00	84.00	140.00	224.00	
5	Water		To make 3.5 gal	To make 10.5 gal	To make 17.5 gal	To make 28.0 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR COUNTRY STYLE CHICKEN L-135

INSTRUCTIONS

		Check Points	Time (Minutes)
NOTE:	This product requires work space for hand-filling half-size steamtable pans.		
0-	Verify components (including the washed and drained cut-up chicken), ingredients, and spices as to number and amounts received from Prep. Area.		10
00-	Deliver cut-up chicken and dredging mixture (flour, salt, pepper and paprika) to breading-frying area. Deliver all remaining ingredients to kettle area.		10
1-	Load breading machine with dredging mixture, pass chicken parts through breading machine and pre-heated continuous fryer (360°F for 3 to 5 minutes) until golden grown. As chicken parts are being discharged from fryer, they should be separated so as to fill baking pans with one type only; i.e., all legs, all wings, etc. per pan.		30
2-	Add about 1 quart (2 lb) of water to each baking pan; cover pans and bake in preheated 325°F oven for 45 minutes or until chicken reaches an internal temperature of 165°F. Remove from oven and load half-size steamtable aluminum pans with 4 legs, 4 wings, 4 thighs and 4 breasts. Set aside for Step 7. Reserve drippings for Step 4.		80
3-	To make roux, melt shortening in kettle; add flour slowly with thorough stirring to eliminate lumps; continue to cook for 10 minutes.		15
4-	Mix Col-flo 67 starch, nonfat dry milk, chicken soup and gravy base with 1/5 of the required (liquid) water. Crush all lumps and add to roux slowly with thorough mixing. Combine drippings (Step 2) with sufficient amount of water to make the remaining 4/5 of liquid, (water). Heat to 180°F and cook for 15 minutes. <u>DO NOT BOIL</u>.		25
5-	Raise level (volume) of product in kettle with tap water to required amount of gallons using measuring stick. Mix well. Turn off steam.		10

		Check Points	Time (Minutes)
6-	Transfer gravy to filling machine.		10
7-	Fill 2.25 lb of gravy over panned cooked chicken parts (Step 2).		20
8-	Pass filled pans of chicken and gravy thru lidding machine to cover and close.		10
9-	Pass covered pans thru labelling machine. Labels should read:		10

Country Style Chicken
Net Wt:

Date Prepared:_____
Servings: 8 of 2 pcs & ½ cup gravy

Reconstitution Instructions:

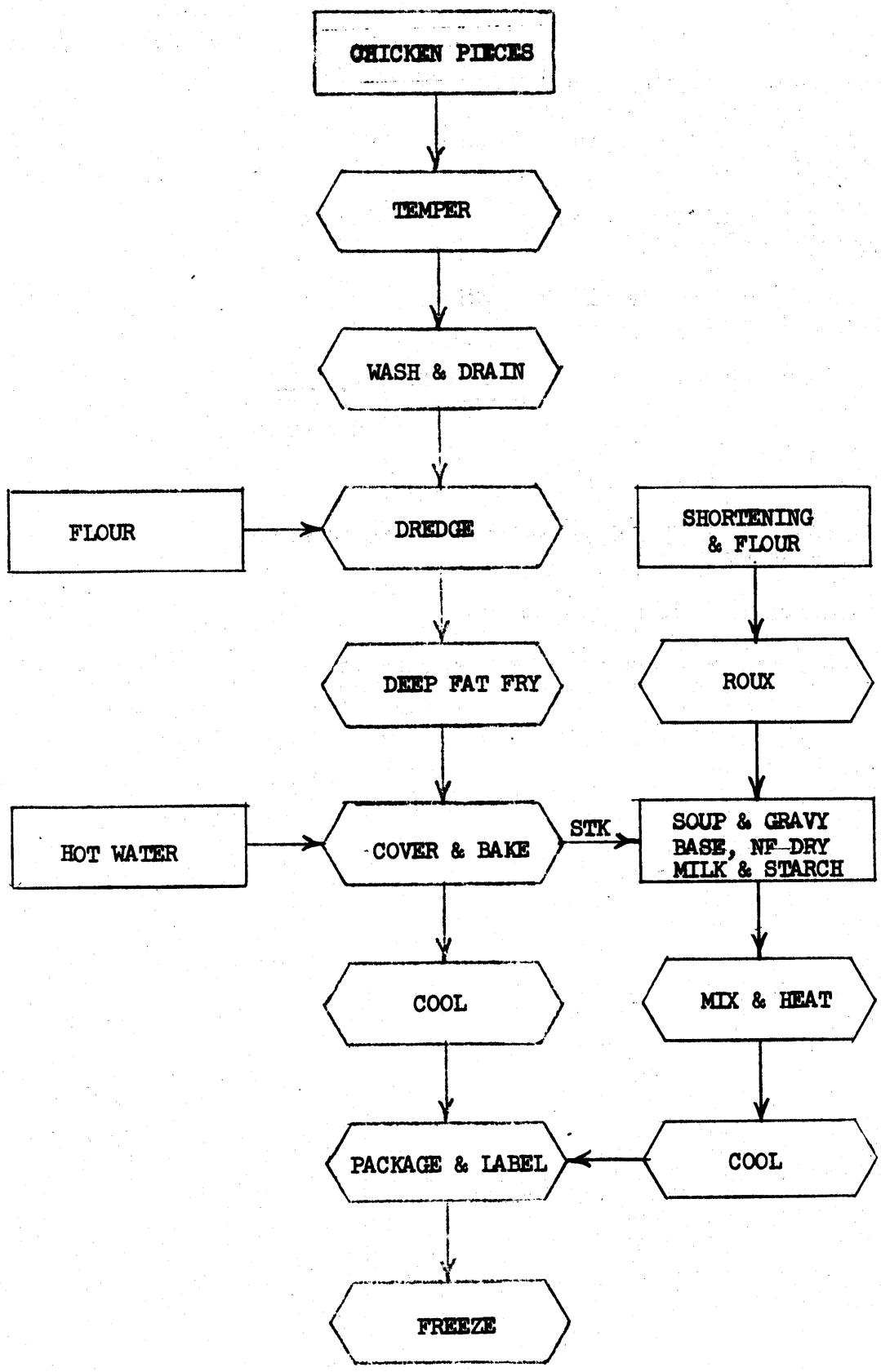
Heat covered pans in 325°F preheated ovens to internal temperature of 160°F.

Convection ovens: 1 hour 15 minutes

Convention (ordinary) ovens: 1 hour 30 minutes

MATERIAL FLOW

COUNTRY STYLE CHICKEN



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - COUNTRY STYLE CHICKEN

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

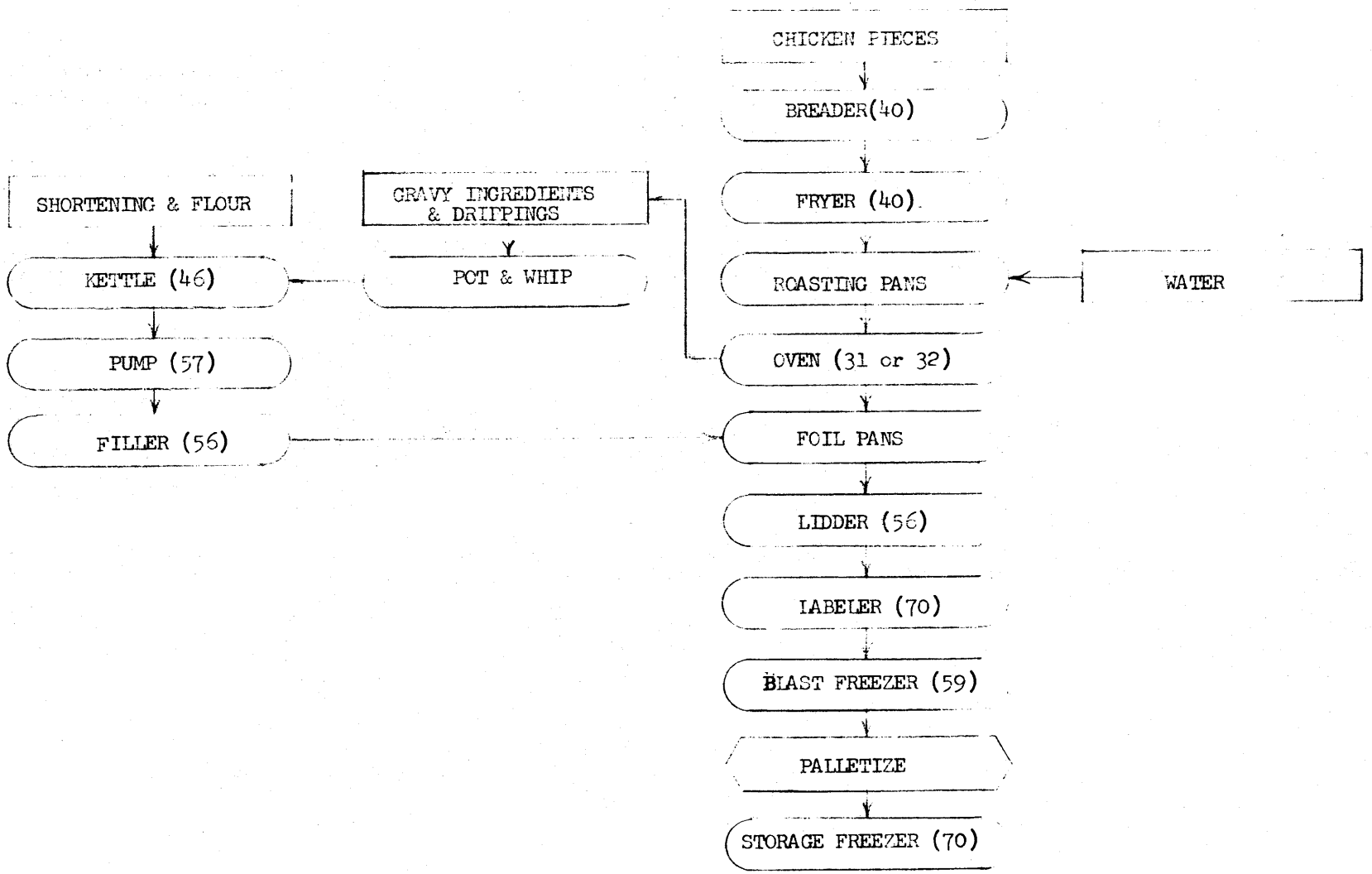
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Chicken, broiler-fryer, cut-up, washed & drained	150.00 (6 bags 25.00 lbs)	250.00 (10 bags 25.00 lbs) Bag Size = 15" X 29-1/2"	400.00 (16 bags 25.00 lbs)	Chicken for country style chicken 25.00 lbs
Dredging Mixture				
Flour, wheat	12.00	20.00	32.00	Flour, salt, pepper and paprika for country style chicken (dredging mixture * lbs
Salt, table	1.50 (1 bag	2.50 (2 bags	4.00 (2 bags	
Pepper, black	.06 13.62 lbs)	.10 11.35 lbs)	.16 18.16 lbs)	
Paprika	.06	.10 Bag Size = 15" X 29-1/2"	.16	
Roux				
Shortening	5.40 (1 bag	9.00 (1 bag	14.00 (2 bags	Shortening and flour for country style chicken (roux) * lbs
Flour	2.25 7.65 lbs)	3.75 12.75 lbs) Bag size = 15" X 29-1/2"	6.00 10.00 lbs)	
Gravy				
Col-Flo Starch	2.25 (1 bag	3.75 (1 bag	6.00 (2 bags	Starch, milk and soup and gravy base for country style chicken (gravy) * lbs
Milk, nonfat, dry	2.25 6.75 lbs)	3.75 11.25 lbs)	6.00 9.00 lbs)	
Chicken soup & gravy base	2.25	3.75 Bag size = 10" X 18"	6.00	

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

COUNTRY STYLE CHICKEN



OPERATIONAL GUIDE FOR OVEN-FRIED CHICKEN L-138

INGREDIENTS & BATCH SIZE

Controlling Equip: Ovens
Container Net Wt:

Standard Servings: 8 of 2 pcs

Est. Prep Time: 3.5 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings OVEN (lb)	500 Servings OVEN (lb)	800 Servings OVEN (lb)	Utensils
1 (a)	Dipping Mixture						
	Nonfat dry milk	3050	0.40	1.20	2.00	3.20	Pot
	Water, tap		2.75	8.25	13.75	22.00	Whip
	Eggs, whole, beaten	2620	2.00	6.00	10.00	16.00	
(b)	Dredging Mixture						
	Flour, wheat	8300	3.00	9.00	15.00	24.00	Mixer
	Salt	15850	0.50	1.50	2.50	4.00	or
	Pepper	15480	0.01	0.03	0.05	0.08	Pot, Whip
	Bread crumbs, dry	6980	5.00	15.00	25.00	40.00	
	Paprika, ground	15440	0.02	0.06	0.10	0.16	
							Breader-Fryer
2	Chicken, broiler Fryer, cut up, washed & drained	580	50.00	150.00	250.00	400.00	Baking Pans OVEN

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

OPERATIONAL GUIDE FOR OVEN FRIED CHICKEN L-138

INSTRUCTIONS

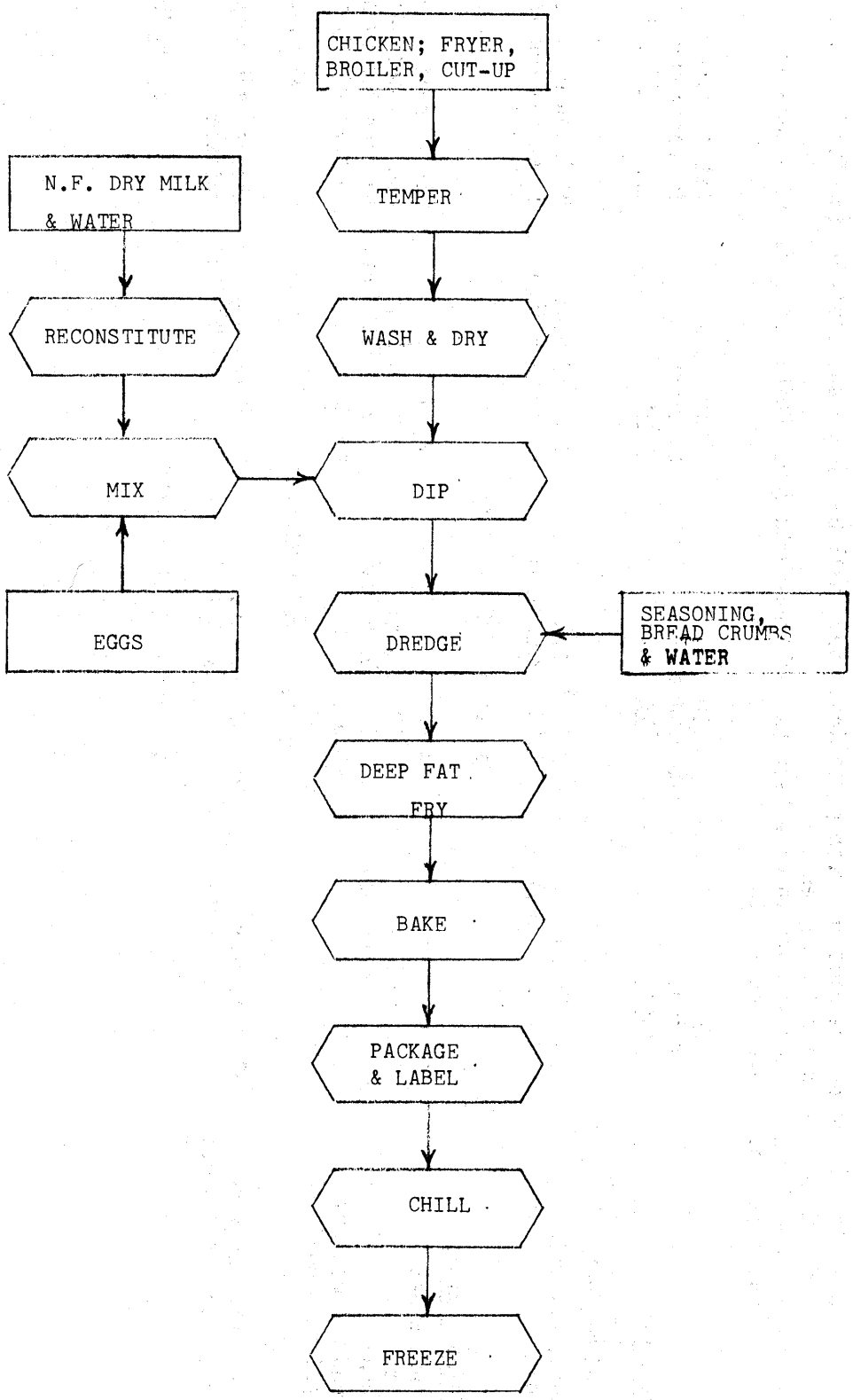
		Check Points	Time (Minutes)
NOTE:	This product requires work space for hand filling half-size steamtable pans.		
0-	Verify components (including washed and drained cut-up chicken) ingredients and spices as to number and amounts received from Prep. Area.		10
00-	Deliver cut up chicken, dip mixture, and dredging mixture to breader-fryer area.		10
1-	Load breading machine (wet section) with nonfat dry milk, water and eggs which have been mixed thoroughly, 1(a).		20
	Also load breading machine (dry section) with a well blended mixture of flour, salt, pepper, bread crumbs and paprika, 1(b).		
2-	Pass chicken parts thru dipping mixture and dredging mixture and continue thru continuous fryer (preheated to 365°F) for 2 minutes or until golden brown. As chicken parts are being discharged from fryer, they should be separated so as to fill baking pans with one type only; i.e., all legs, all wings, etc., per pan.		40
3-	Place chicken parts which are in uncovered baking pans in preheated 350°F oven and bake until the internal temperature of 165°F is reached (about 45 minutes).		50
4-	Place 16 pieces (4 wings, 4 thighs, 4 legs and 4 breasts) in half-size steamtable pans. Allow the chicken to cool to room temperature.		60
5-	Pass filled pans of cooled chicken thru lidding machine to cover and close.		10
6-	Pass covered pans thru labelling machine. Labels should read:		10

Oven-Fried Chicken — Date Prepared:_____
Net Wt: — Servings: 8 of 2 pieces

Reconstitution Instructions:
Heat covered pans in 350°F preheated ovens to internal temperature of 160°F.
Convection ovens: 1 hour 15 minutes
Convectional (ordinary) ovens: 1 hour 30 minutes

MATERIAL FLOW

OVEN FRIED CHICKEN



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - OVEN FRIED CHICKEN

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

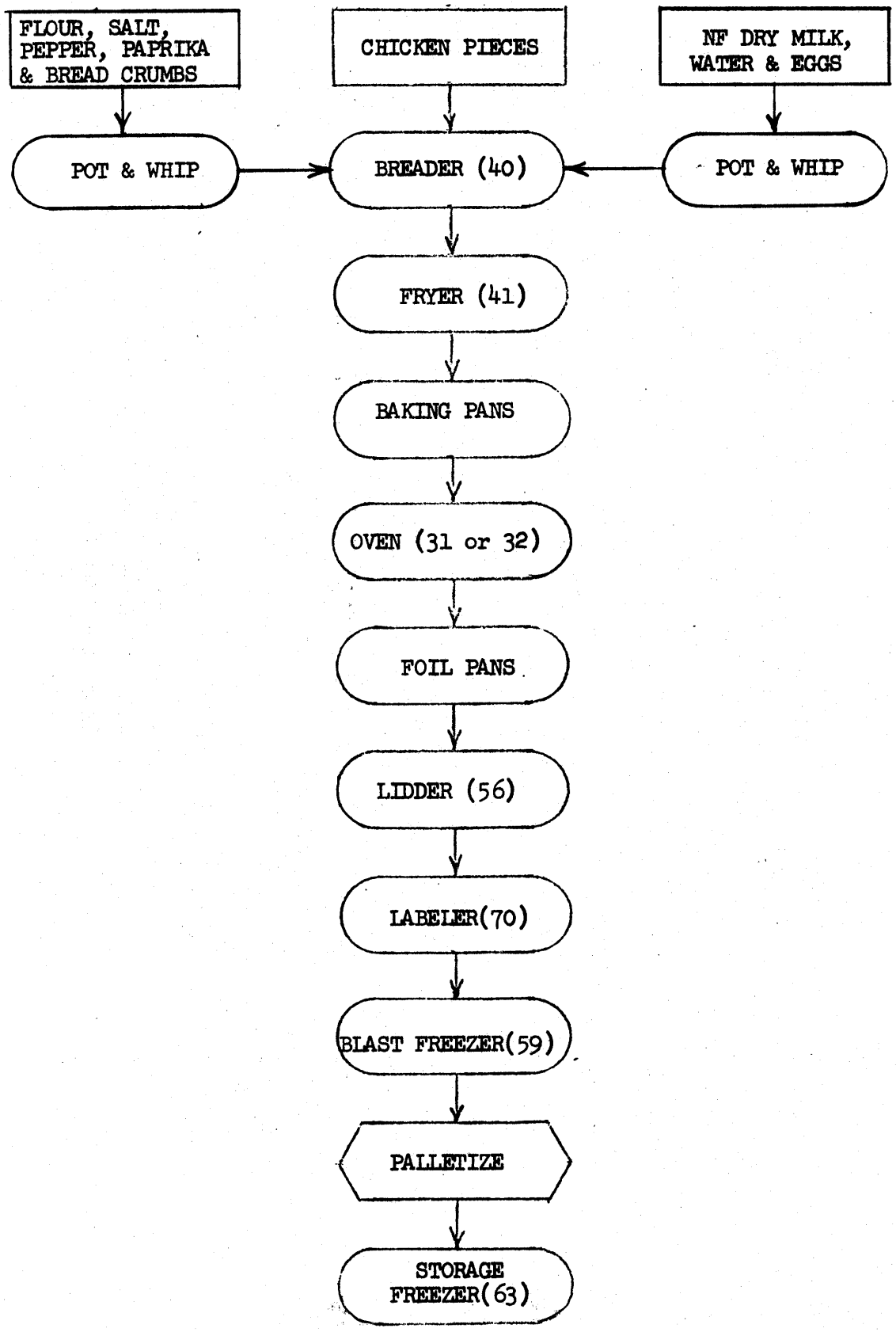
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Dipping Mixture				
Nonfat dry milk	1.20 (1 bag	2.00 (1 bag	3.20 (2 bags	Milk and eggs for oven fried chicken (dipping mixture)
Eggs	6.00 7.20 lbs)	10.00 12.00 lbs)	16.00 9.6 lbs)	
		Bag size = 15" X 29-1/2"		* lbs
Dredging Mixture				
Flour, wheat	9.00	15.00	24.00	Flour, salt, pepper, bread crumbs and paprika for oven fried chicken (dredging mixture
Salt	1.50 (2 bags	2.50 (4 bags	4.00 (6 bags	
Pepper	0.03 12.80 lbs)	.05 10.46 lbs)	.08 11.38 lbs)	
Bread crumbs, dry	15.00	25.00	40.00	
Paprika, ground	.06	.10	.16	
		Bag size = 15" X 29-1/2"		* lbs
Chicken, broiler-fryer, cut-up, washed & drained	150.00 (6 bags 25.00 lbs)	250.00 (10 bags 25.00 lbs)	400.00 (16 bags 25.00 lbs)	Chicken for oven fried chicken
		Bag size = 15" X 29-1/2"		25.00 lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

OVEN-FRIED CHICKEN



OPERATIONAL GUIDE FOR

SAVORY BAKED CHICKEN L-140

INGREDIENTS & BATCH SIZE

Controlling Equip: Ovens
Container Net Wt:

Standard Servings: 8 of 2 pcs.

Est. Prep Time: 3.4 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Utensils
1	Salt, table	15850	0.19	0.57	0.95	1.52	Pot & Whip
	Pepper, black	15480	0.04	0.12	0.20	0.32	OVENS
	Celery salt	14430	0.07	0.21	0.35	0.56	
	Garlic salt	15130	0.06	0.18	0.30	0.48	
	Worcestershire sauce	16030	1.00	3.00	5.00	8.00	
	Soy sauce	15915	0.75	2.25	3.75	6.00	
	Salad oil	14000	2.00	6.00	10.00	16.00	
	Parsley, fresh, chopped	5410	0.07	0.21	0.35	0.56	
2	Chicken, fryer, cut-up (2 pcs per serving)	580	50.00	150.00	250.00	400.00	Roasting Pans

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 1977

OPERATIONAL GUIDE FOR
SAVORY BAKED CHICKEN L-140
INSTRUCTIONS

NOTE: This product requires work space for hand-filling half-size steamtable aluminum pans.	Check Points	Time (Minutes)
0- Verify components (including the washed and drained cut-up chicken), ingredients, and spices as to number and amounts received from Prep. Area.		10
00- Deliver all items to oven area.		
1- Combine salad oil, soy sauce, worcestershire sauce, garlic, celery salt, pepper, and salt in pot; mix well to make marinating liquid. Hold for Step 2 below.		10
2- Separate chicken parts so as to fill roasting pans with one type only; i.e., all legs, all wings, all thighs and all breasts per pan. Divide marinating liquid so as to pour equal amounts over panned chicken. Leave chicken marinate for 30 minutes, turning frequently. Bake chicken in preheated 350°F oven or until chicken is tender (internal temperature of 160°F about 1-1/4 hours). Baste frequently while baking to develop flavor.		115
3- Remove cooked chicken from oven. Transfer chicken to half-size steamtable aluminum pans. Load 4 legs, 4 wings, 4 thighs, and 4 breasts to each pan. Divide drippings evenly to cover panned chicken parts. Sprinkle chopped Parsley over top of panned chicken. Allow the product to cool prior to lidding.		45
4- Pass cooled panned chicken thru lidding machine to cover and close.		10
5- Pass covered pans thru labelling machine. Labels should read:		10

Savory Baked Chicken
Net Wt:

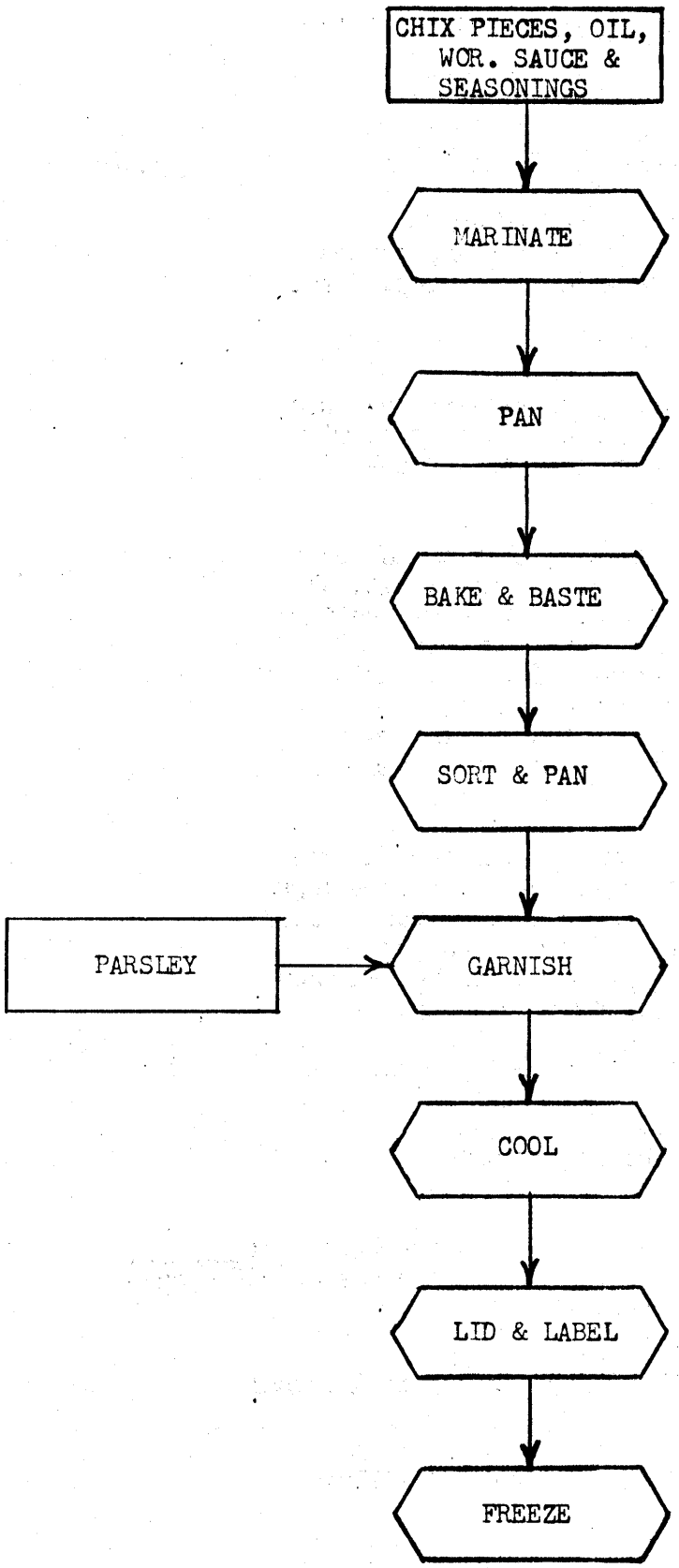
Date Prepared:_____
Servings: 8 of 2 pcs.

Reconstitution Instructions:

Heat covered pans in 325°F preheated oven to internal temperature of 165°F.
Convection Oven: 1 hour 15 minutes
Convectional (ordinary) oven: 1 hour 30 minutes

MATERIAL FLOW

SAVORY BAKED CHICKEN



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SAVORY BAKED CHICKEN

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

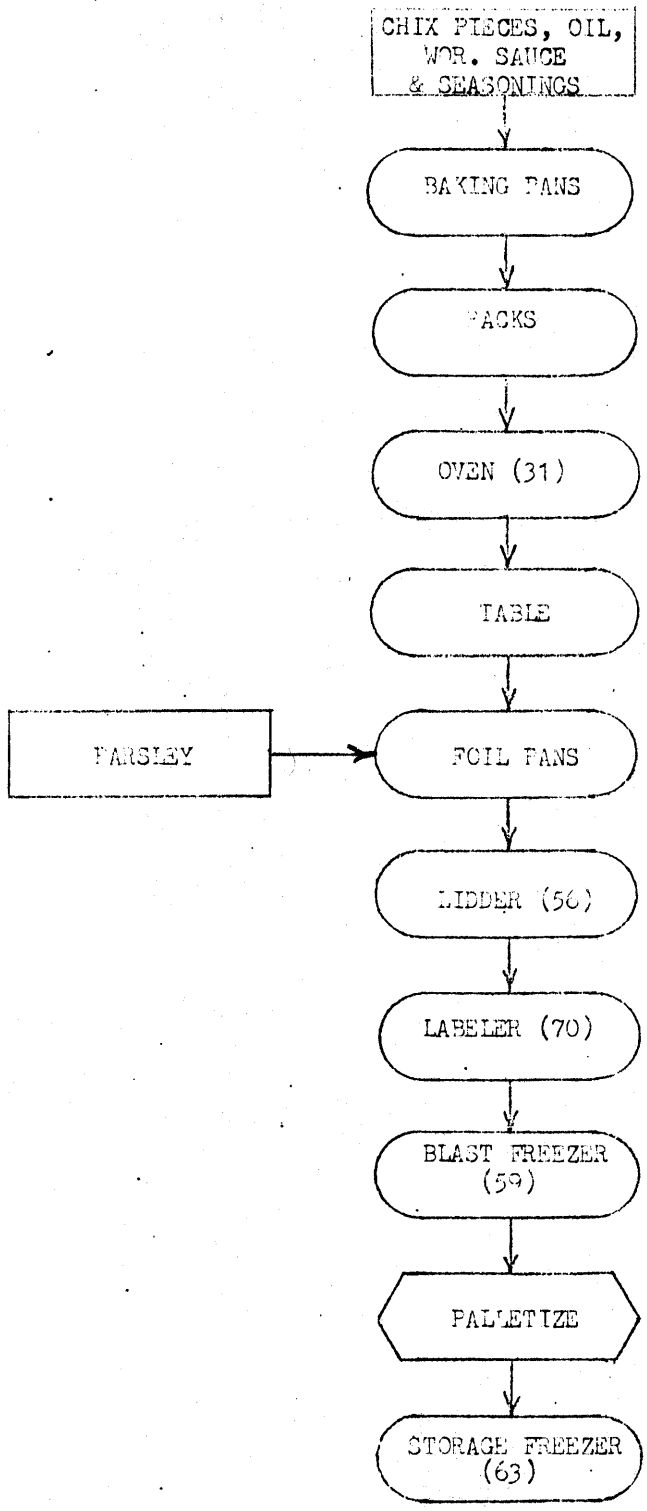
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Salt, table	0.57	0.95	1.52	Salt, pepper, celery, salt, garlic salt, worcestershire sauce, soy sauce & salad oil for savory baked chicken
Pepper, black	0.12	0.20	0.32	
Celery salt	0.21 (1 bag	0.35 (1 bag	0.56 (2 bags	
Garlic salt	0.18 14.33 lbs)	0.30 20.55 lbs)	0.48 16.44 lbs)	
Worcestershire sauce	3.00	5.00	8.00	
Soy sauce	2.25	3.75	6.00	
Salid oil	6.00	10.00	16.00	
	Bag size = 15" X 29-1/2"			* lbs
Parsley, fresh, chopped	0.21 (1 bag 0.21 lbs)	0.35 (1 bag 0.35 lbs)	0.56 (1 bag 0.56 lbs)	Parsley for savory baked chicken
	Bag size = 8" X 10"			* lbs
Chicken, fryer, cut-up (2 pcs per servings)	150.00 (6 bags 25.00 lbs)	250.00 (10 bags 25.00 lbs)	400.00 (16 bags 25.00 lbs)	Chicken for savory baked chicken
	Bag size = 15" X 29-1/2"			25.00 lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

SAVORY BAKED CHICKEN



OPERATIONAL GUIDE FOR

CHICKEN VEGA L-127

INGREDIENTS & BATCH SIZE

Controlling Equip: Kettle, Steamer
Container Wt:

Servings/Container: 6 oz of 2 pc and 6 oz rice

Est. Prep Time: 4.8 hours
Approx. Yield: 300 & 500 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 60-gal Kettle (lb)	500 Servings 80-gal Kettle (lb)	Utensils
1	Chicken, broiler-fryer cut-up (2 pc per Serving)	580	50.00	150.00	250.00	Steamer
2	Rice	8700	10.00	30.00	50.00	Kettle
	Water		60.00	180.00	300.00	
3	Milk, nonfat, dry	3050	1.88	5.64	9.40	Kettle
	Water, drippings		8.00	24.00	40.00	Whip
	Soup & Gravy Base, Chicken	11470	1.50	4.50	7.50	Pot
	Butter or Margarine	2360 or 13980	1.50	4.50	7.50	
	Flour, wheat	8300	1.13	3.39	5.65	
4	Water		To make 1.75 gal	To make 5.25 gal	To make 8.75 gal	Measuring stick
5	Dehydrated Onion Soup	11290	1.00	3.00	5.00	

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

OPERATIONAL GUIDE FOR
CHICKEN VEGA L-127
INSTRUCTIONS

C

	Check Points	Time (Minutes)
NOTE: This product requires work space for hand-filling half-size steamtable aluminum pans.		
0- Verify components (including washed and drained cut up chicken), ingredients, and spices as to number and amounts received from Prep. Area.		10
00- Deliver chicken parts to steamer area, rice and remaining ingredients to Kettle Area.		10
1- Separate chicken parts so as to fill steamer pans with one type part only; i.e., all legs, all wings, all thighs, and all breasts per pan. Place panned chicken in steamer and cook to an internal temperature of 160°F (about 15 minutes). Cool and hold for Step 5 below.		35
2- Place water in steam-jacketed kettle and bring to a rolling boil. Slowly add rice, stirring until water returns to boiling point; continue to boil for 2 minutes, shut off steam. Cover kettle and let stand for 10 minutes (until all water is absorbed). Allow to cool. Hold for Step 5 below.		130
3- Melt margarine in kettle, slowly add flour with constant stirring to make roux. Cook for five minutes, breaking all lumps. Mix dry milk and soup and gravy base with hot water in a pot (caution: heat if necessary to dissolve chicken base). Add milk mixture to roux slowly with constant stirring until mixture thickens. Shut off steam. Shut off agitator.		60
4- Raise level (volume) of mixture in kettle with water to required number of gallons using measuring stick. Mix well.		10
5- Transfer gravy to filling machine.		10

	Check Points	Time (Minutes)
6- Place 36 oz of cooled, cooked rice in half-size steamtable aluminum pans. Place 12 pieces of chicken (3 legs, 3 wings, 3 breasts, and 3 thighs) on top of rice. Cover chicken with 12 oz gravy. Sprinkle 1 oz of dehydrated onion soup over gravy.		20
7- Pass panned chicken, rice, and gravy through lidding machine to cover and close.		10
8- Pass covered pans thru labelling machine. Labels should read:		10

Chicken Vega
Net Wt:

Date Prepared:_____
Servings: 6 of 2 pcs and 6 oz of rice

Reconstitution Instructions:

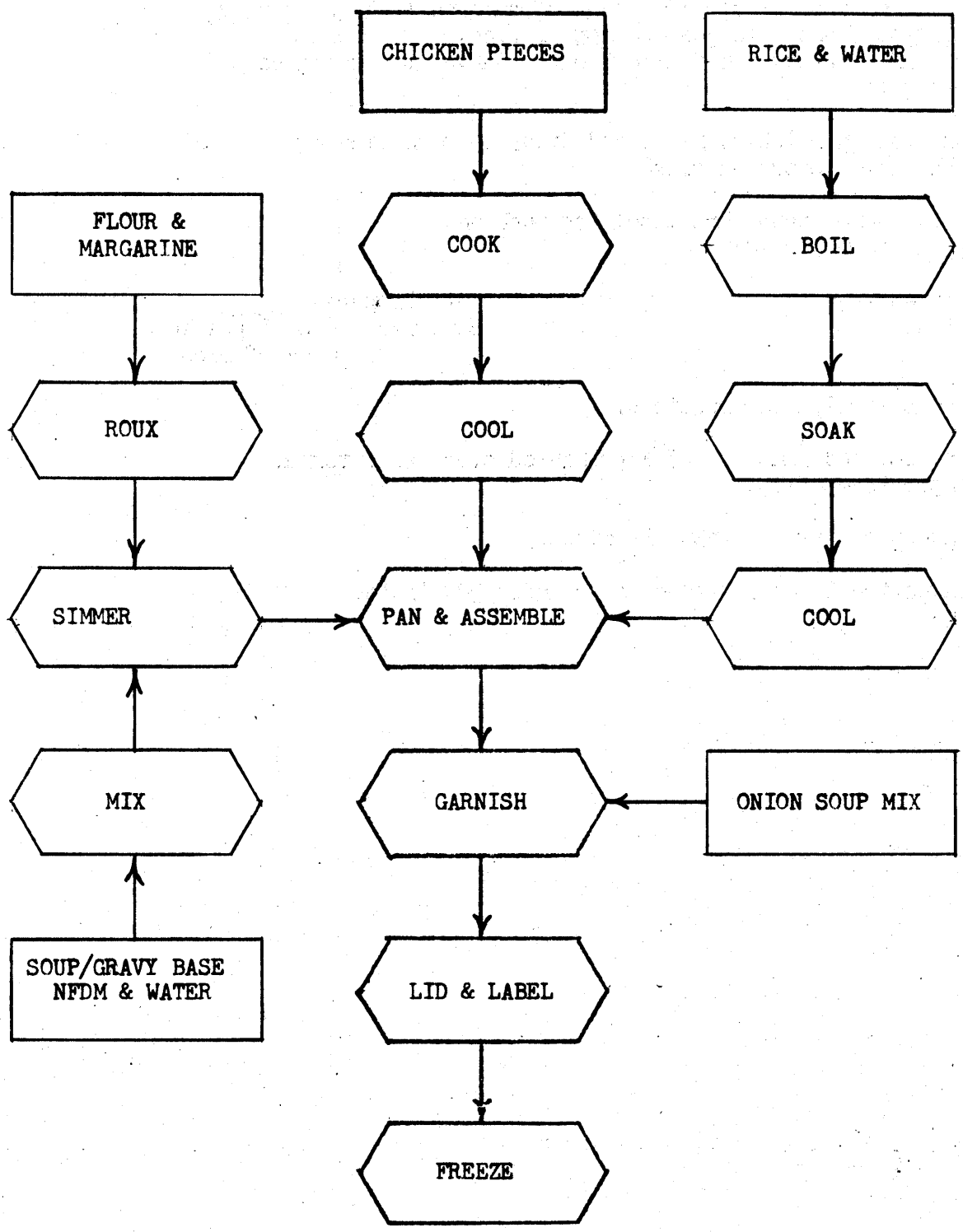
Heat covered pans in 325°F preheated ovens to internal temperature of 165°F.

Convection oven: 1 hour 15 minutes

Conventional (ordinary) oven: 1 hour 30 minutes

MATERIAL FLOW

CHICKEN VEGA



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - CHICKEN VEGA

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

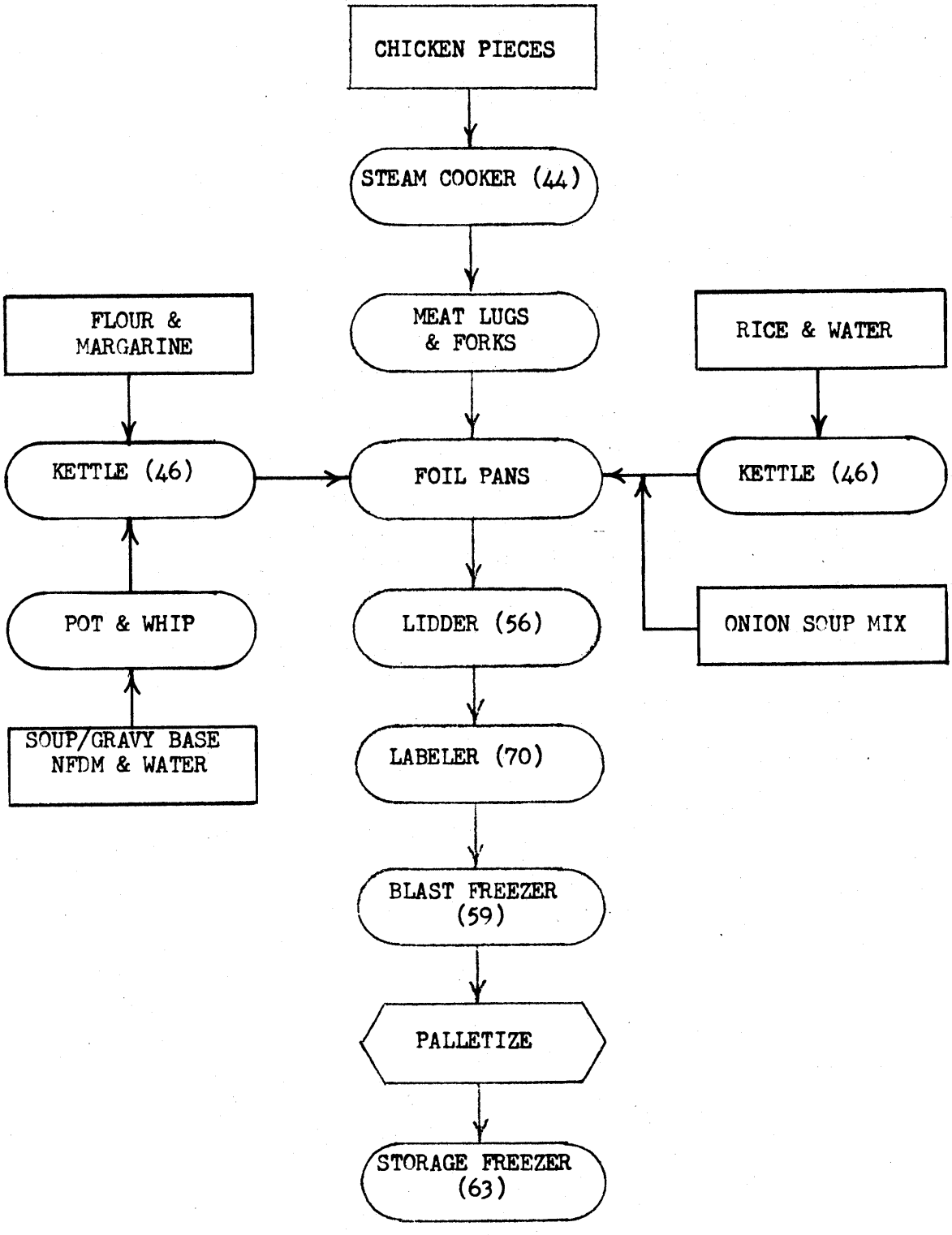
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Chicken, broiler-fryer, cut-up (2 pcs per serving)	150.00 (10 bags 15.00 lbs) Bag size = 15" X 29-1/2"	250.00 (10 bags 25.00 lbs)	Chicken for chicken vega ___*___ lbs
Rice	30.00 (2 bags 15.00 lbs) Bag size = 15" X 29-1/2"	50.00 (4 bags 12.50 lbs)	Rice for chicken vega ___*___ lbs
Milk, nonfat, dry Soup and gravy base, chicken	5.64 (2 bags 4.50 5.07 lbs) Bag size = 10" X 18"	9.40 (2 bags 7.50 8.45 lbs)	Milk and soup and gravy base for chicken vega ___*___ lbs
Butter or margarine	4.50 (1 bag 4.50 lbs) Bag size = 10" X 18"	7.50 (1 bag 7.50 lbs)	Butter for chicken vega ___*___ lbs
Flour, wheat	3.39 (1 bag 3.39 lbs) Bag size = 10" X 18"	5.65 (1 bag 5.65 lbs)	Flour for chicken vega
Dehydrated chicken soup	3.00 (1 bag 3.00 lbs) Bag size = 10" X 18"	5.00 (1 bag 5.00 lbs)	Chicken soup for chicken vega ___*___ lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

CHICKEN VEGA



OPERATIONAL GUIDE FOR TURKEY A-LA-KING L-129-Ch. 2

INGREDIENTS & BATCH SIZE

Controlling Equip: Kettles
Container Net Wt: 5.25 lb

Servings/Container: 10 of 1 cup (8 oz)

Est. Prep Time: 4 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	500 Servings 60-gal Kettle (lb)	800 Servings 80-gal Kettle (lb)	Utensils
1	Margarine/Butter	2360/13980	2.50	7.50	12.50	20.00	Kettle
	Flour, wheat	8300	1.25	3.75	6.25	10.00	Whip
2	Col-flo 67, starch	SP**	1.25	3.75	6.25	10.00	
	Water		25.20	75.60	126.00	201.60	
	Soup & Gravy Base, Chicken	11470	0.75	2.25	3.75	6.00	
3	Salt, table	15850	0.19	0.57	0.95	1.52	
	Pepper, black	15480	0.03	0.09	0.15	0.24	
	Onion, dehyd, chopped	5290	0.13	0.39	0.65	1.04	
	Celery, fresh, chopped	4270	5.00	15.00	25.00	40.00	
4	Turkey roll, cooked diced 3/4 x 3/4	1840	20.00	60.00	100.00	160.00	
	Peppers, sweet, fresh green, chopped	5690	1.00	3.00	5.00	8.00	
	Pimentos, canned, chopped	5730	0.88	2.64	4.40	7.04	
5	Milk, nonfat, dry	3050	0.81	2.43	4.05	6.48	Pot
	Water, tap		7.88	23.64	39.40	63.04	Whip
6	Water, tap		To make 7.5 gal	To make 22.5 gal	To make 37.5 gal	To make 60 gal	

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR TURKEY A-LA-KING L-129-Ch. 2

INSTRUCTIONS

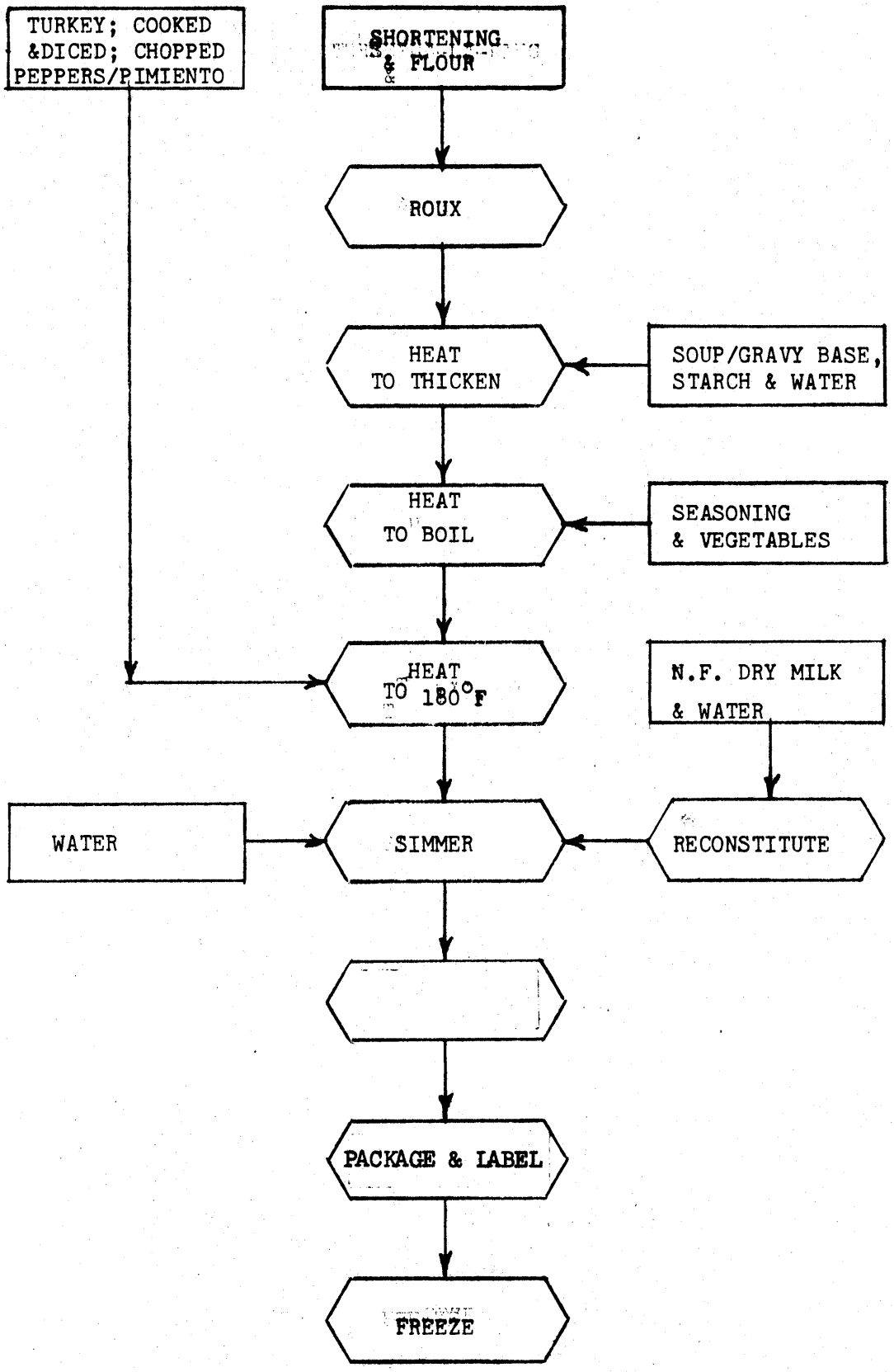
		Check Points	Time (Minutes)
0-	Verify components, ingredients (including chopped celery, diced turkey, and chopped pimentos) and spices as to number and amounts received from Prep. Area.		
00-	Deliver all components, ingredients, etc. to the Kettle Area.		
1-	Place butter in steam kettle and heat. Stir in flour slowly; crush lumps and cook for 10 minutes to make roux. (Note: margarine may be substituted for butter.)		15
2-	Dissolve Soup and gravy base in hot water, starch in cold water and add both mixtures slowly to roux, stirring to mix well; crush all lumps. Heat with agitation till thickened (180°F).		15
3-	Add salt, pepper, onions, and celery to starch-flour mixture in kettle and heat to 200°F, stirring constantly.		15
4-	Add diced turkey, green peppers, and pimentos to mixture in kettle and reheat to 180°F.		10
5-	Reconstitute nonfat dry milk with warm water in a pot. Blend, mix with product in kettle.		
6-	Raise level (volume) of product in kettle with water; mix well, heat to simmering temperature (180°F). <u>DO NOT BOIL</u>.		20
7-	Transfer product to filler.		10
8-	Fill half-size steamtable aluminum pans with 5.25 pounds.		15
9-	Pass filled pans thru lidding machine to cover and close.		10
10-	Pass covered pans thru labelling machine. Labels should read:		10

Turkey a-la-King
Net Wt: 5.25 lb

Date Prepared: _____
Servings: 10 of 1 cup (8 oz)

MATERIAL FLOW

TURKEY-A-LA-KING



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - TURKEY A-LA-KING

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Butter or margarine	7.50 (1 bag 7.50 lbs)	12.50 (1 bag 12.50 lbs) Bag size = 15" X 29-1/2"	20.00 (1 bag 20.00 lbs)	Butter or margarine for turkey a-la-king * lbs
Flour, wheat	3.75 (1 bag 3.75 lbs)	6.25 (1 bag 6.25 lbs) Bag size = 10" X 18"	10.00 (1 bag 10.00 lbs)	Flour for turkey a-la-king * lbs
Col-Flo 67 starch	3.75 (1 bag 3.75 lbs)	6.25 (1 bag 6.25 lbs) Bag size = 10" X 18"	10.00 (1 bag 10.00 lbs)	Starch for turkey a-la-king * lbs
Soup & gravy base, chicken	2.25 (1 bag 2.25 lbs)	3.75 (1 bag 3.75 lbs) Bag size = 10" X 18"	6.00 (1 bag 6.00 lbs)	Soup and gravy base for turkey a-la-king * lbs
Salt, table	0.57	0.95	1.52	Salt, pepper, onions and celery for turkey a-la-king
Pepper, black	0.09 (1 bag	.15 (2 bags	.24 (3 bags	
Onion, dehydrated,chopped	0.39 16.05 lbs)	.65 13.38 lbs)	1.04 14.60 lbs	
Celery, fresh, chopped	15.00	25.00 Bag size = 15" X 29-1/2"	40.00	* lbs
Turkey roll, cooked, diced 3/4" X 3/4"	60.00 (3 bags 20.00 lbs)	100.00 (5 bags 20.00 lbs) Bag size = 15" X 29-1/2"	160.00 (8 bags 20.00 lbs)	Turkey for turkey a-la-king 20.00 lbs

*Appropriate weight to be written is dependent on number of servings.

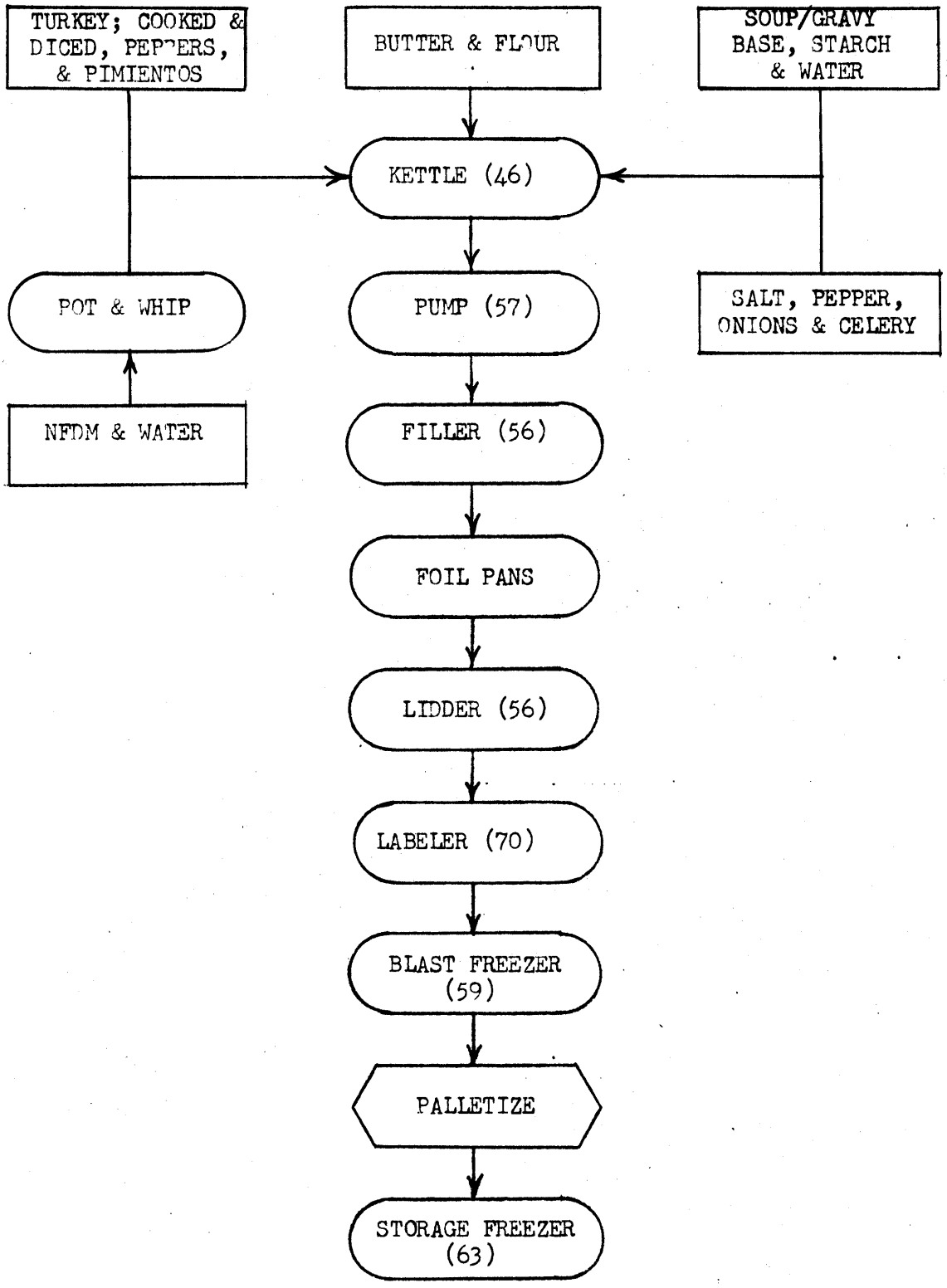
GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - TURKEY A-LA-KING (Cont'd)

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Peppers, sweet, fresh, green, chopped	3.00 (1 bag 5.64 lbs)	5.00 (1 bag 9.40 lbs)	8.00 (1 bag 15.04 lbs)	Peppers and pimentos for turkey a-la-king
Pimentos, canned, chopped	2.64	4.40	7.04	
		Bag size = 15" X 29-1/2"		* lbs
Milk, nonfat, dry	2.43 (1 bag 2.43 lbs)	4.50 (1 bag 4.50 lbs)	6.48 (1 bag 6.48 lbs)	Milk for turkey a-la-king
		Bag size = 10" X 18"		* lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

TURKEY-A-LA-KING



OPERATIONAL GUIDE FOR PORK CHOP SUEY L-80

INGREDIENTS & BATCH SIZE

Controlling Equip: Kettles
Container Wt: 5 lb

Servings/Container: 8 of 1 cup

Est. Prep Time: 4.7 hours
Approx. Yield: 300, 500, & 900 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	500 Servings 60-gal Kettle (lb)	900 Servings 80-gal Kettle (lb)	Utensils
1	Pork, diced 3/4" x 3/4"	1420	32.00	96.00	160.00	288.00	Kettle agitating
	Salt, table	15850	0.26	0.78	1.30	2.34	
	Pepper, black	15480	0.02	0.06	0.10	0.18	
	Water		9.18	27.54	45.90	82.62	Pot
2	Onions, dehyd, sliced	5310	1.50	4.50	7.50	13.50	
	Celery, fresh, sliced 3/16" x 3/4"	4270	8.01	24.03	40.05	72.09	Strainer
3	Bean sprouts, canned, drained	3680	12.01	36.03	60.05	108.09	Pot
	Col-flo 67, starch	SP**	1.25	3.75	6.25	11.25	Strainer
	Ginger, ground	15140	0.01	0.03	0.05	0.09	Pot
	Soy sauce, liquid	15910	1.00	3.00	5.00	9.00	Pot
	Molasses, dark	9790	0.35	1.05	1.75	3.15	Whip
4	Water		To make 6.25 gal	To make 18.75 gal	To make 31.25 gal	To make 56.25 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR
PORK CHOP SUEY L-80
INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients, and spices as to number and amounts received from Prep. Area.		10
00-	Deliver all components etc., to the Kettle Area.		
1-	Place diced pork in steam kettle; sprinkle with salt and pepper, Brown (sear) in its own juices. Add water to browned pork in Kettle; bring to a boil; cover and simmer for 40 minutes.		20 40
2-	Add onions and sliced celery to kettle and continue to cook for 20 minutes longer.		20
3-	Drain bean sprouts, reserve liquid. Combine starch and ginger with bean sprouts liquid stirring to make a smooth slurry. Add slurry slowly to pork mixture in kettle with continuous stirring and continue to cook for 20 minutes or until it thickens. Stir in bean sprouts, mix well. Add soy sauce and molasses; blend well.		20
4-	Raise level (volume) of kettle with water (using measuring stick) to required number of gallons. Shut off steam.		10
5-	Transfer product to filling machine.		10
6-	Fill each half-size steamtable pan with 5 lb of product.		10
7-	Pass filled pans thru lidding machine to cover and close.		10
8-	Pass closed pans thru labelling machine. Labels should read:		10

Pork Chop Suey
Net Wt: 5 lb

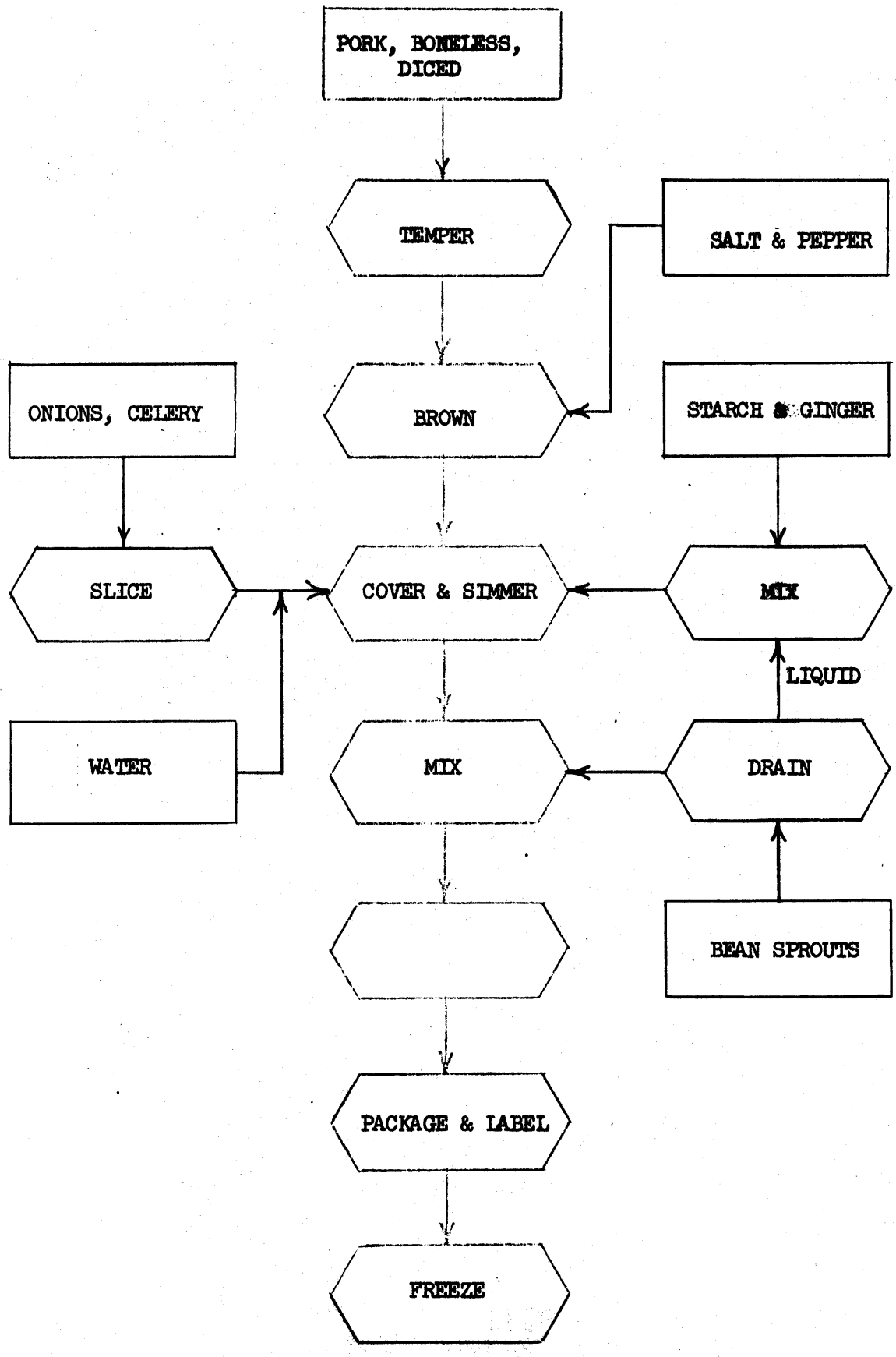
Date Prepared:_____
Servings: 8 of 1 cup

Reconstitution Instructions:

Heat covered pans in 325°F preheated ovens to internal temperature of 160°F.
Convection Oven: approx. 1 hour 15 minutes
Conventional (ordinary) oven: approx. 1 hour 30 minutes
Alternatively pork chop suey may be poured (removed from foil pans) in kettle and heated to 160°F.

MATERIAL FLOW

PORK CHOP SUEY



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - PORK CHOP SUEY

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire tie; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

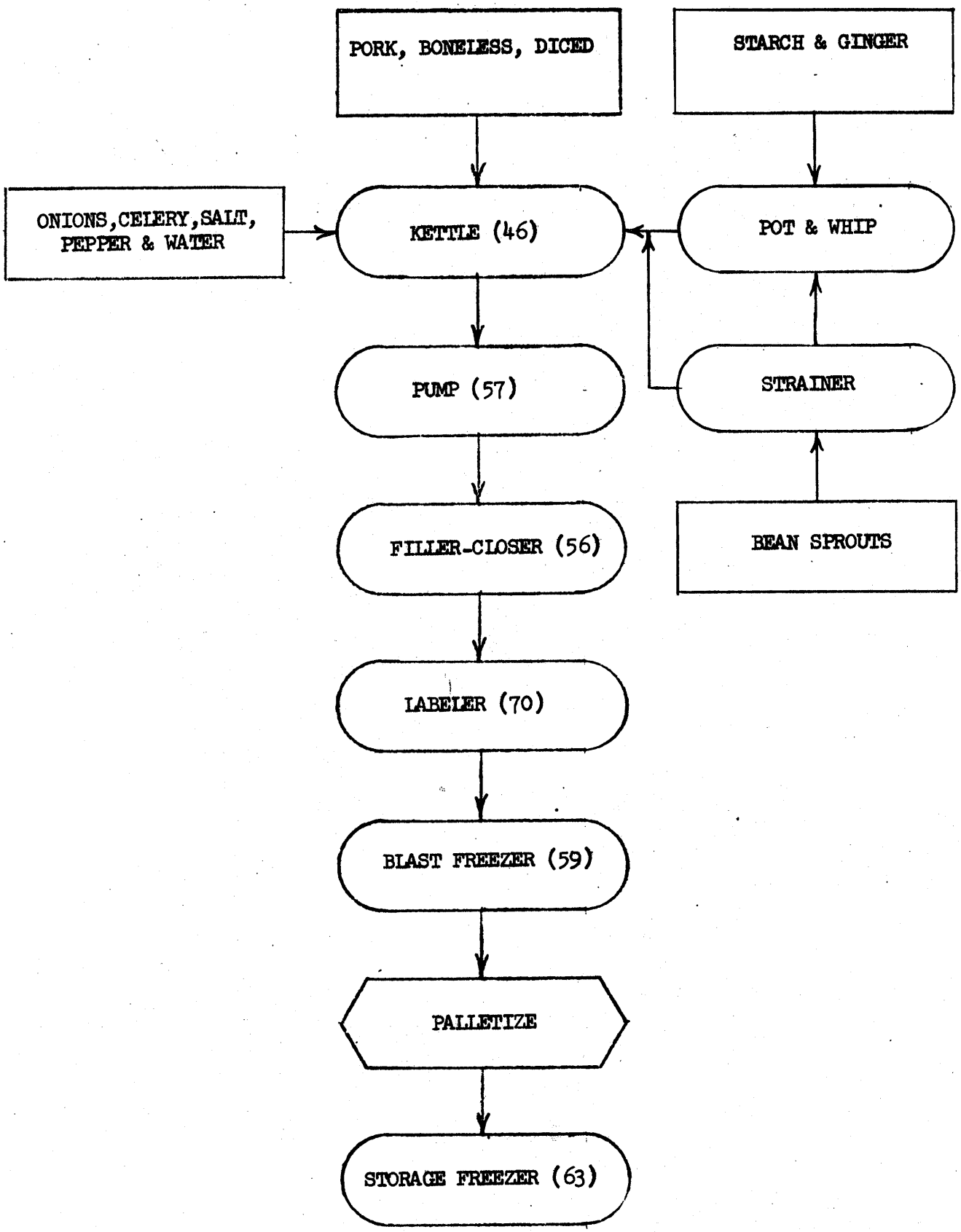
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	900 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Pork, diced	96.00 (4 bags	160.00 (6 bags	288.00 (12 bags	Pork, salt and pepper for pork chop suey
Salt, table	0.78 24.21 lbs)	1.30 26.9 lbs)	2.34 24.21 lbs)	
Pepper, black	0.06	0.10	.18	
		Bag size = 15" X 29-1/2"		* lbs
Onions, dehydrated, sliced	4.50 (2 bags	7.50 (3 bags	13.50 (6 bags	Onions and celery for pork chop suey
Celery, fresh, sliced	24.03 14.26 lbs)	40.05 15.85 lbs)	72.09 14.26 lbs)	
		Bag size = 15" X 29-1/2"		* lbs
Bean sprouts, canned	36.03 (2 bags 18.02 lbs)	60.05 (3 bags 20.02 lbs)	108.09 (6 bags 18.02 lbs)	Bean sprouts for pork chop suey
		Bag size = 15" X 29-1/2"		* lbs
Col-Flo 67 starch	3.75 (1 bag	6.25 (1 bag	11.25 (1 bag	Starch and spices for pork chop suey
Ginger, ground	0.03 7.83 lbs)	0.05 13.05 lbs)	0.09 23.50 lbs)	
Soy sauce, liquid	3.00	5.00	9.00	
Molasses, dark	1.05	1.75	3.15	
		Bag size = 15" X 29-1/2"		* lbs

*Appropriate weight to be written is dependent on number of servings

EQUIPMENT UTILIZATION

PORK CHOP SUEY



OPERATIONAL GUIDE FOR ROAST PORK (LOIN) L-81-1

INGREDIENTS & BATCH SIZE

Controlling Equip: Ovens
Container Net Wt:

Servings/Container: 10 of 2 slices & 4 oz gravy

Est. Prep Time: 6.6 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Utensils
1	Pork loin, boneless	1450	40.00	120.00	200.00	320.00	Baking pans
	Salt, table	15850	0.50	1.50	2.50	4.00	OVEN
	Pepper, black	15480	0.06	0.18	0.30	0.48	Baking sheets
2	GRAVY			40-gal Kettle	40-gal Kettle	40-gal Kettle	
	Meat drippings or Shortening	14080	1.50	4.50	7.50	12.00	Kettle
	Flour, wheat	8300	0.56	1.68	2.80	4.48	Agitating
	Col-flo 67, starch	SP**	0.56	1.68	2.80	4.48	Pot
	Water, tap		16.80	50.40	84.00	134.40	Whip
	Beef Soup & Gravy Base	11440	0.50	1.50	2.50	4.00	
	Pepper, black	15480	0.01	0.03	0.05	0.08	
3	Water, tap		To make 3.25 gal	To make 9.75 gal	To make 16.25 gal	To make 26.00 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR
ROAST PORK (LOIN) L-81-1
INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients and spices as to number and amounts received from Prep. Area.		10
00-	Deliver pork loins to oven area and remaining ingredients to Kettle Area.		10
1-	Rub loins well with salt and pepper; place in baking pans and roast in preheated 325°F oven until the internal temperature (at the thickest part) is 165°F. Roasting time will be between 2 and 3 hours. Remove pork roasts from oven; transfer to baking sheets to cool. Hold for Step 4. Reserve drippings for Step 2.		150
2-	Scrape drippings from roasting pans into kettle; add shortening and heat. Sprinkle flour into drippings, and with continued stirring, cook for 10 minutes to make roux.		15
	Mix starch, water, soup and gravy base, and pepper in a pot; mix well to dissolve all lumps and slowly add to roux in kettle with constant stirring until all starch mixture is added. Heat to 200°F for 20 minutes with agitation.		30
3-	Raise level (volume) of product in kettle with water to required number of gallons. Mix well to blend. Shut off steam. Held for Step 5.		10
4-	Slice cooled pork loin on meat slicer. Slices should weigh approximately 2 oz each. Shingle 20 slices (2-½lb) of pork in half-size steamtable aluminum pans. Hold for Step 6.		20
5-	Transfer gravy to filling machine.		10
6-	Top (fill) panned pork slices with 2½ pounds of gravy.		10
7-	Pass panned pork and gravy thru lidding machine to cover and close.		10
8-	Pass covered pans thru labelling machine.		10

Labels should read:

Roast Pork with Gravy
Net Wt:

Date Prepared:_____
Servings: 10 of 2 pork slices and 4 oz gravy

Reconstitution Instructions:

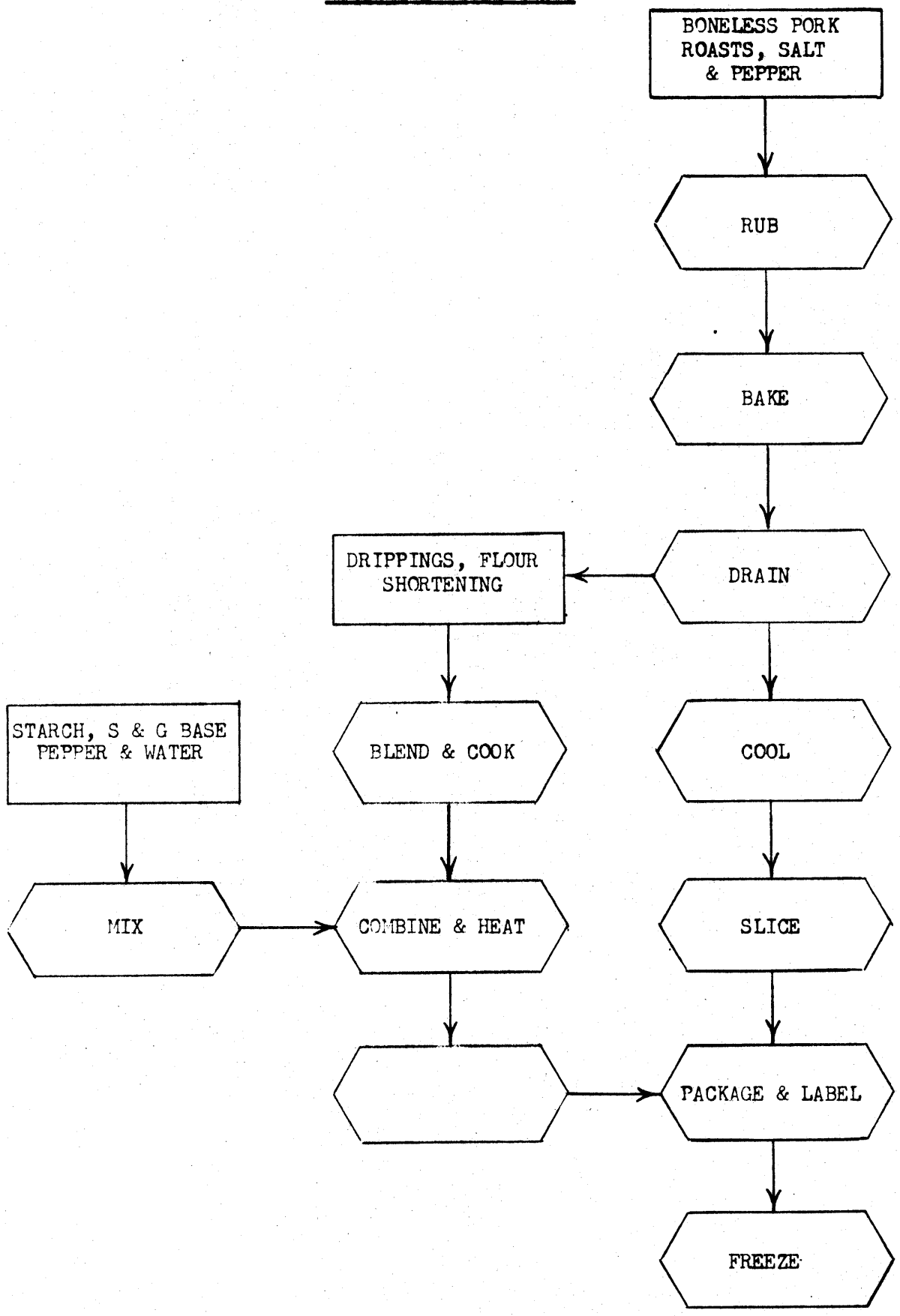
Heat covered pans in preheated 325°F oven to internal temperature of 165°F.

Convection: 1 hour 15 minutes

Convectional (ordinary) oven: 1 hour 30 minutes

MATERIAL FLOW

ROAST PORK WITH GRAVY



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - ROAST PORK (LOIN)

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

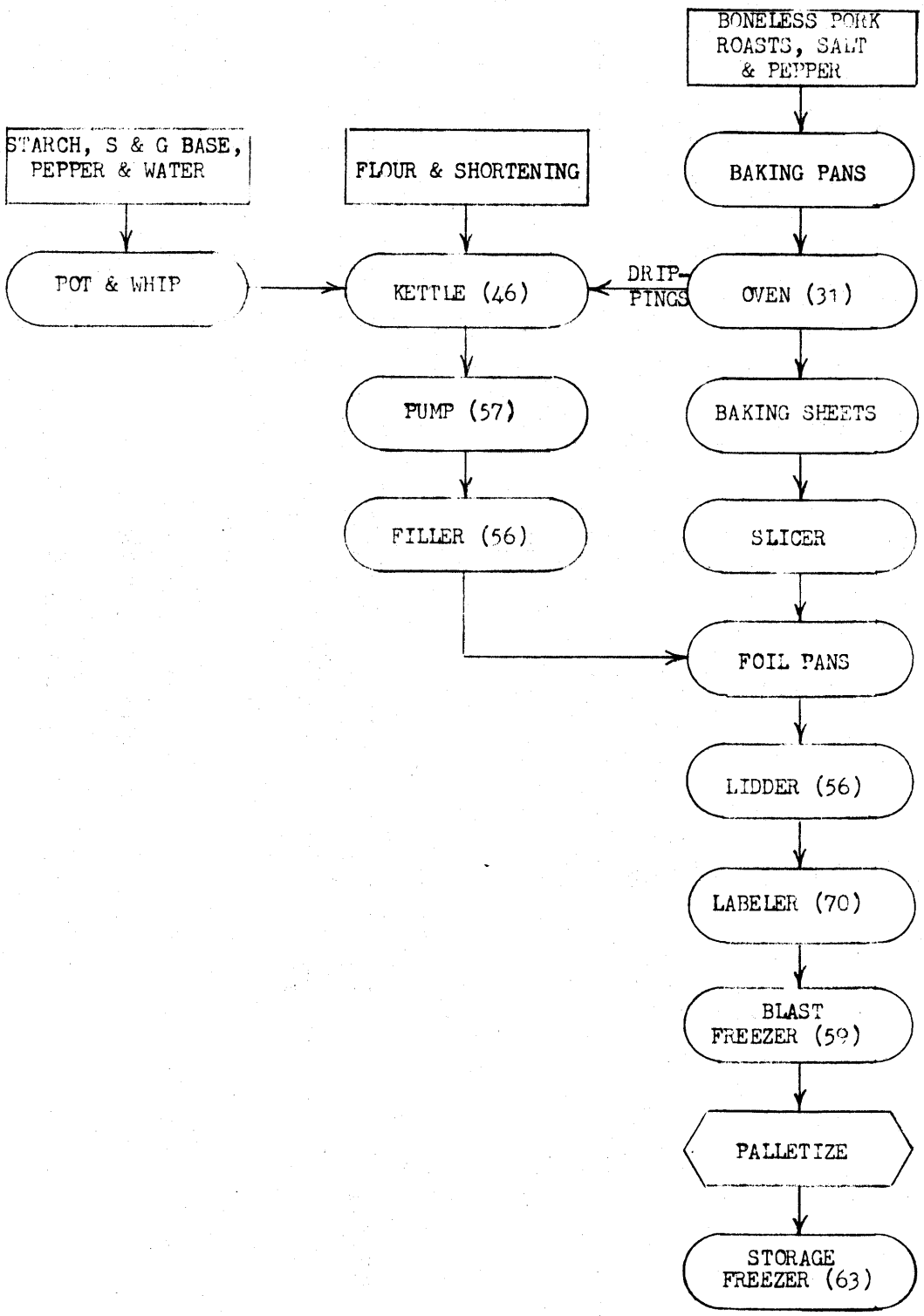
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Pork loin, boneless	120.00	200.00	320.00	Pork loin for roast pork
	NOTE:	Place individual ham in polyethylene bag of appropriate size and seal with wire or plastic tie and label with weight.		* lbs
Salt, table	1.50 (1 bag	2.50 (1 bag	4.00 (1 bag	Salt and pepper for
Pepper, black	.18 1.68 lbs)	.30 2.80 lbs)	0.48 4.48 lbs)	roast pork (loin)
		Bag size = 10" X 18"		* lbs
GRAVY				
Meat drippings or shortening	4.50 (1 bag	7.50 (1 bag	12.00 (1 bag	Shortening of dripping and flour for roast pork (loin) (Gravy)
Flour	1.68 6.18 lbs)	2.80 10.30 lbs)	4.48 16.48 lbs)	
		Bag size = 15" X 29-1/2"		* lbs
Col-Flo 67, starch	1.68 (1 bag	2.80 (1 bag	4.48 (1 bag	Starch, beef base and
Beef soup & gravy base	1.50	2.50	4.00	pepper for roast pork
Pepper, black	.03 3.21 lbs)	.50 5.80 lbs)	.08 8.56 lbs)	(loin) (Gravy)
		Bag size = 10" X 18"		* lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

ROAST PORK WITH GRAVY



OPERATIONAL GUIDE FOR BAKED PORK SLICES

WITH BROWN GRAVY L-83

INGREDIENTS & BATCH SIZE

Controlling Equip: Fryer & Kettle
Container Net Wt:

Standard Serving: 1 slice & ½ cup gravy

Est Prep Time: 4 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings Breader-Fryer (lb)	500 Servings Breader-Fryer (lb)	800 Servings Breader-Fryer (lb)	Utensils
1	Dredging Mixture						
	Salt, table	15850	0.25	0.75	1.25	2.00	Breader
	Paprika, ground, dry	15440	0.03	0.09	0.15	0.24	Fryer
	Oregano, ground	15420	0.01	0.03	0.05	0.08	
	Pepper, black	15480	0.01	0.03	0.05	0.08	
	Flour, wheat	8300	1.75	5.25	8.75	14.00	
2	Pork slices, bnls, 1 per serving	1470	35.00	105.00	175.00	280.00	
				40-gal Kettle	40-gal Kettle	40-gal Kettle	
3	Brown Gravy						
	Flour, wheat	8300	0.55	1.65	2.75	4.40	Kettle
	Col-flo 67, starch	SP**	0.55	1.65	2.75	4.40	
	Pepper, black	15480	0.01	0.03	0.05	0.08	Whip
	Soup & Gravy Base, Beef	11440	0.50	1.50	2.50	4.00	
	Water, tap		20.42	61.26	102.10	163.36	
4	Water		To make 3.0 gal	To make 9 gal	To make 15 gal	To make 24 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR BAKED PORK SLICES WITH BROWN GRAVY L-83

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients, and spices as to number and amounts received from Prep. Area.		10
00-	Deliver pork and dredging mixture (salt, paprika, oregano, pepper, flour) to breader-fryer area; remaining ingredients and spices to the Kettle Area.		10
1-	Combine salt, pepper, paprika, oregano and flour; mix well to blend. Load Breading machine with blended dredging mixture.		10
2-	Preheat continuous fryer to 350°F. Pass pork slices thru breading machine then thru fryer at 350°F for 2 to 3 minutes until golden brown. Drain pork slices. Place 10 pork slices in half-size steamtable pans; hold for Step 7 below.		30
3-	Combine flour, starch, pepper, beef soup and gravy base with water in kettle; stir vigorously to mix well. Crush all lumps. Heat to 200°F and simmer for 20 minutes stirring constantly. Shut off steam.		30
4-	Raise level (volume) of gravy in kettle with water to required number of gallons using measuring stick.		10
5-	Transfer gravy to filler.		10
6-	Fill each pan of sliced pork with 2 lb of gravy.		20
7-	Pass filled pans thru lidding machine to cover and close.		10
8-	Pass covered pans thru labelling machine. Labels should read:		10

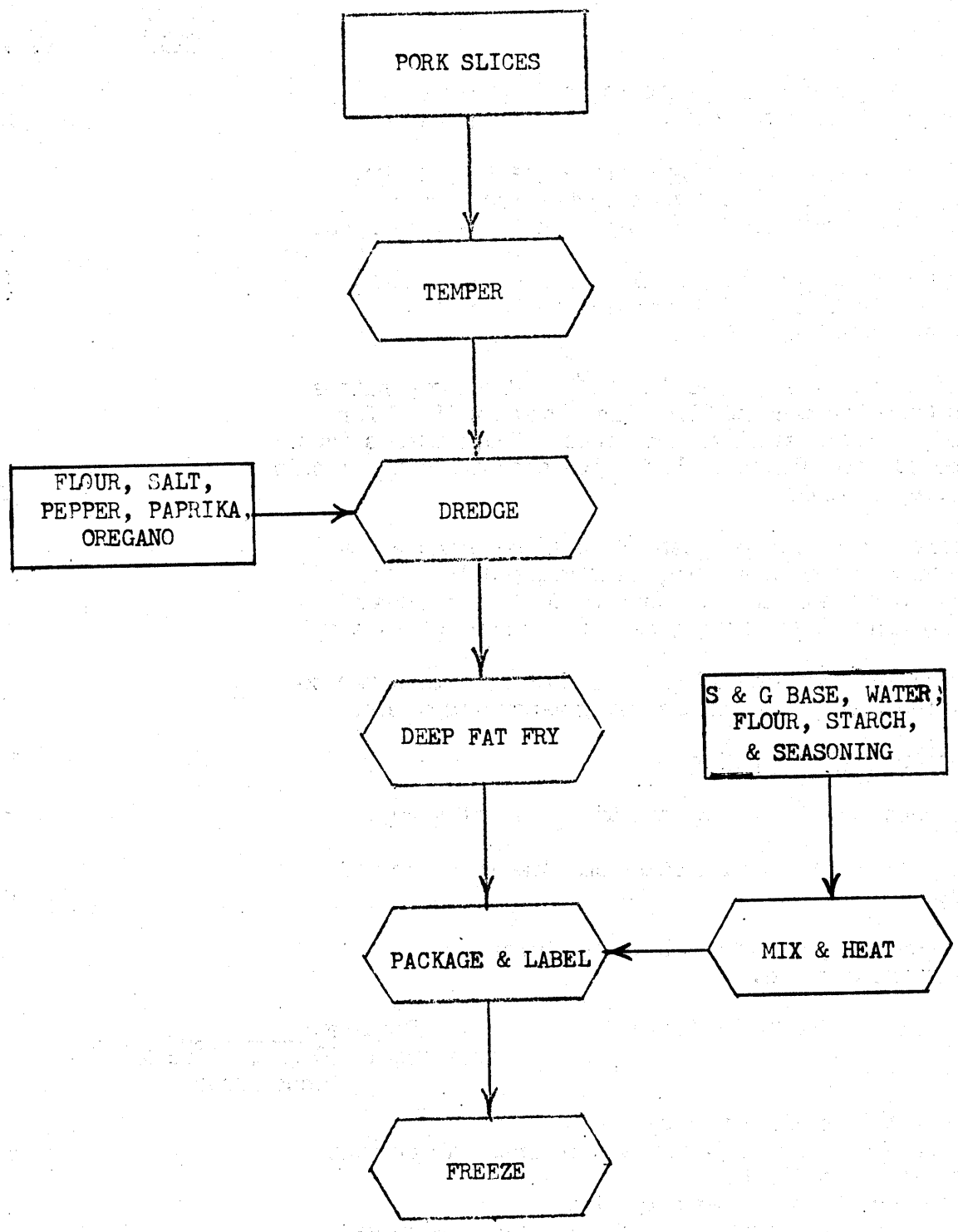
Baked Pork Slices with Gravy
Net Wt:

Date Prepared:_____
Servings: 10 of 1 slice & ½ cup gravy

Reconstitution Instructions:
Heat covered pans in 325°F oven to internal product temperature of 160°F.
Convection ovens: 1 hour 15 minutes
Conventional (ordinary) ovens: 1 hour 30 minutes

MATERIAL FLOW

BAKED PORK SLICES WITH GRAVY



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BAKED PORK SLICES

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

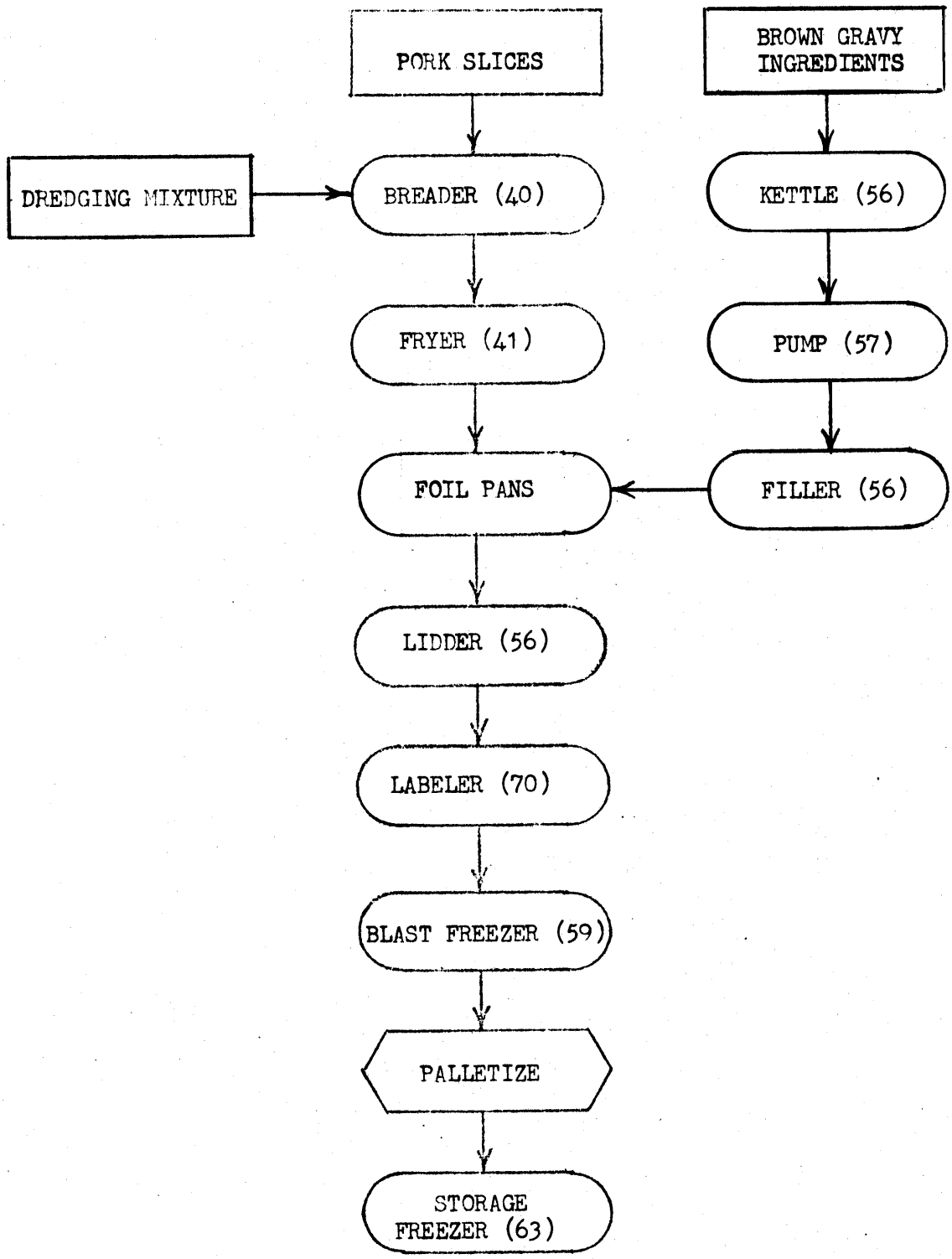
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Dredging Mixture				
Salt, table	0.75	1.25	2.00	Salt, paprika, oregano, pepper and flour for baked pork slices (dredging mixture)
Paprika, ground, dry	.09 (1 bag	.15 (1 bag	.24 (1 bag	
Oregano, ground	.03 6.15 lbs)	.05 10.25 lbs)	.08 16.40 lbs)	
Pepper, black	.03	.05	.08	
Flour, wheat	5.25	8.75	14.00	
		Bag size = 15" X 29-1/2"		* lbs
Pork slices, boneless, 1 per serving	105.00 (5 bags 21.00 lbs)	175.00 (7 bags 25.00 lbs)	280.00 (14 bags 20.00 lbs)	Pork for baked pork slices
		Bag size = 15" X 29-1/2"		* lbs
Brown Gravy				
Flour, wheat	1.65 (1 bag	2.75 (1 bag	4.40 (1 bag	Flour, starch, pepper and gravy base for baked pork slices (brown gravy)
Col-Flo 67, starch	1.65 4.83 lbs)	2.75 8.05 lbs)	4.40 12.88 lbs)	
Pepper, black	.03	.05	.08	
Soup & gravy base, beef	1.50	2.50	4.00	
		Bag size = 15" X 29-1/2"		* lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

BAKED PORK SLICES WITH GRAVY



OPERATIONAL GUIDE FOR BARBECUED PORK SPARERIBS L-92

INGREDIENTS & BATCH SIZE

Controlling Equip: Oven & Kettles
Container Net Wt: 5 lb

Standard Serving: 8 of 2 double ribs & 1/4 cup sauce

Est. Prep Time: 4.6 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	500 Servings 40-gal Kettle (lb)	800 Servings 60-gal Kettle (lb)	Utensils
1	Pork spareribs, cut 2 ribs per piece or double rib	1480	75.00	225.00	375.00	600.00	Oven Sheet Baking Pans Oven
2	Sauce						
	Chili powder	14480	0.75	2.25	3.75	6.00	Kettle agitating
	Pepper, black	15480	0.02	0.06	0.10	0.16	
	Pepper, Cayenne, red	15510	0.02	0.06	0.10	0.16	Whip
	Salt, table	15850	0.25	0.75	1.25	2.00	
	Onion, powder	SP**	0.07	0.21	0.35	0.56	
	Brown sugar, light	9870	0.33	0.99	1.65	2.64	
	Paprika, ground	15440	0.11	0.33	0.55	0.88	
	Col-flo'67, starch	SP**	0.30	0.90	1.50	2.40	
	Catsup, tomato	14410	23.00	69.00	115.00	184.00	
	Worcestershire sauce	16030	2.00	6.00	10.00	16.00	
	Mustard, prepared	15310	1.00	3.00	5.00	8.00	
	Vinegar, cider	16000	2.00	6.00	10.00	16.00	
	Lemon juice	4960	0.75	2.25	3.75	6.00	
	Water, tap		5.00	15.00	25.00	40.00	
3	Water		To make 5 gal	To make 12 gal	To make 20 gal	To make 32 gal	Measuring stick Skinner Pot

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR BARBECUED SPARE RIBS L-92

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients, and spices as to number and amounts received from Prep. Area.		
00-	Deliver spare ribs (cut 2 ribs per piece) to oven area; remaining ingredients to Kettle Area.		10
1-	Place cut ribs in single layer, fat side up in baking pans. Bake 40 minutes in preheated 400°F oven or until golden brown. Drain ribs, if browned in deep baking pans. If in shallow pans, transfer to deep baking pans and hold for Step 4.		50
2-	Sauce: Combine all remaining ingredients in steam kettle; mix well to slurry; crush all lumps. Turn steam on and heat to boil; reduce heat and simmer 10 minutes.		20
3-	Raise level of kettle (volume) to required number of gallons with hot water using measuring stick.		5
4-	Pour simmer sauce equally over browned ribs; cover and bake in preheated 325°F for 1-½ hours. Remove lids and continue baking until ribs are tender.		100
5-	Place 16 double ribs (2 ribs per piece) in half-size steamtable pans; cool.		15
6-	Skim off excess fat from sauce. Pour 2 lb of sauce over ribs; cool.		60
7-	Pass pans thru lidding machine to cover and close.		10
8-	Pass covered pans thru labelling machine. Labels should read:		10

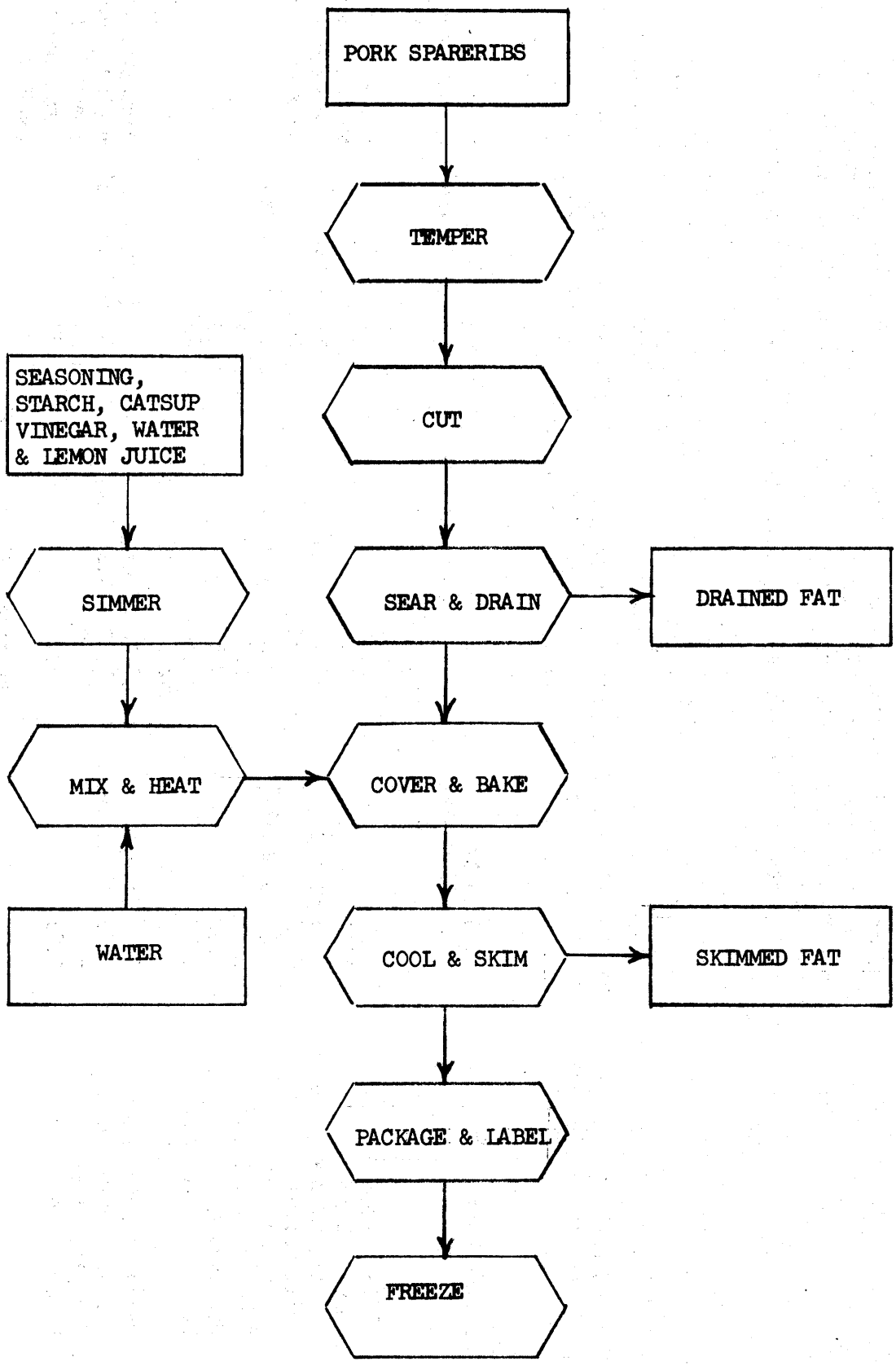
Barbecued Spare Ribs
Net Wt:

Date Prepared:_____
Servings: 8 of 2 double ribs & 1/4 cup sauce

Reconstitution Instructions:
Heat covered pans in a preheated 325°F oven to internal temperature of 160°F.
Convection Ovens: 1 hour 15 minutes
Conventional Ovens (ordinary): 1 hour 30 minutes

MATERIAL FLOW

BARBECUED SPARE RIBS



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BARBECUED PORK SPARERIBS

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

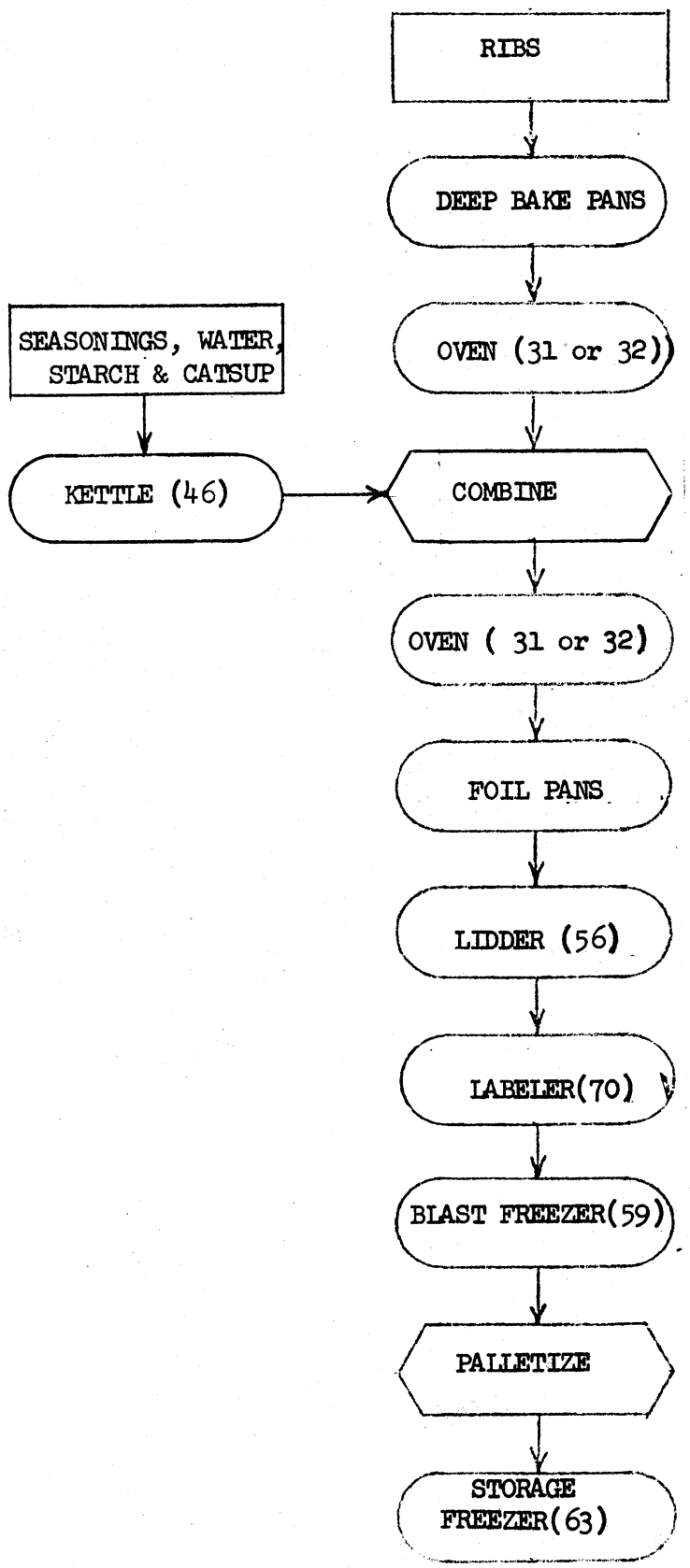
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Pork spareribs, cut 2 ribs per piece or double rib	225.00 (15 bags 15.00 lbs)	375.00 (25 bags 15.00 lbs) Bag size = 15" X 29-1/2"	600.00 (40 bags 15.00 lbs)	Pork spareribs for barbecued pork spareribs 15.00 lbs
Sauce				
Catsup, tomato	69.00 (3 bags 23.00 lbs)	115.00 (5 bags 23.00 lbs) Bag size = 15" X 29-1/2"	184.00 (8 bags 23.00 lbs)	Catsup for barbecued pork spareribs (sauce) 23.00 lbs
Chili powder	2.25	3.75	6.00	Chili, pepper (2), salt, onion, sugar, paprika, and starch for barbecued pork spareribs (sauce)
Pepper, black	0.06	0.10	0.16	
Pepper, cayenne, red	0.06 (1 bag	0.10 (1 bag	0.16 (1 bag	
Salt, table	0.75	1.25	2.00	
Onion, powder	0.21 5.55 lbs)	0.35 9.25 lbs)	0.56 14.74 lbs)	
Brown sugar, light	0.99	1.65	2.64	
Paprika, ground	0.33	0.55	0.88	
Col-Flo 67 starch	0.90	1.50	2.40	
		Bag size = 15" X 29-1/2"		* lbs
Worcestershire sauce	6.00 (1 bag	10.00 (2 bags	16.00 (3 bags	Worcestershire sauce, mustard, vinegar and lemon juice for barbecued pork spareribs (sauce)
Mustard, prepared	3.00 17.25 lbs)	5.00 14.35 lbs)	8.00 15.33 lbs)	
Vinegar, cider	6.00	10.00	16.00	
Lemon juice	2.25	3.75	6.00	
		Bag size = 15" X 29-1/2"		* lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

BARBECUED SPARERIBS



OPERATIONAL GUIDE FOR BRAISED SPARERIBS

WITH SAUERKRAUT L-93

INGREDIENTS & BATCH SIZE

Controlling Equip: Ovens
Container Net Wt: Approx. 5 lb

Standard Servings: 13 of 2 double ribs
½ cup sauekraut

Est Prep. Time: 3.9 hours
Approx. Yield: 300, 500, & 700 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings OVEN (lb)	500 Servings OVEN (lb)	700 Servings OVEN (lb)	Utensils
1	Pork Spareribs - 2 ribs per piece serving)	1400	75.00	225.00	375.00	525.00	Oven
2	Onions, dehyd, chopped	5310	0.70	2.10	3.50	4.90	Pot or Kettle
	Salt, table	15850	0.40	1.20	2.00	2.80	Whip
	Pepper, black	15480	0.06	0.18	0.30	0.42	
	Water, tap		24.00	72.00	120.00	168.00	
3	Sauerkraut, canned, drained	6260	26.00	78.00	130.00	182.00	Scoop

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

OPERATIONAL GUIDE FOR BRAISED SPARERIBS WITH SAUERKRAUT L-93

		Check Points	Time (Minutes)
NOTE:	This product requires work space for hand-filling ½ steamtable pans.		
0-	Verify components (including ribs, cut 2 ribs/piece) ingredients and spices as to number and amounts.		
00-	Deliver components, ingredients and spices to the Kettle Area. Deliver Ribs to oven area.		10
1-	Check ribs for proper cut of 2 ribs per piece. Place ribs in single layer, fat side up in baking sheet pans. Bake in 400°F oven for about 40 minutes or until golden brown. Drain browned ribs or transfer ribs to field lugs (50 portions per pan).		60
2-	In a large pot or kettle combine onions, salt, pepper, and water; mix thoroughly and spread evenly over ribs. Bake covered at 325°F for approximately 1-½ hours or until ribs are tender. Remove from oven and cool to room temperature.		110
3-	When ribs are cooled, pan as follows:		
	(a) Spread 8 double ribs over bottom of pan.		30
	(b) Spread 1 pound of drained sauerkraut over ribs.		
	(c) Spread 8 more double ribs over sauerkraut.		
	(d) Spread 1 pound of drained sauerkraut over the last layer of ribs.		
4-	Pass pan of spareribs with sauerkraut thru lidding machine to cover and close.		10
5-	Pass covered, closed pans thru labelling machine. Labels should read:		10

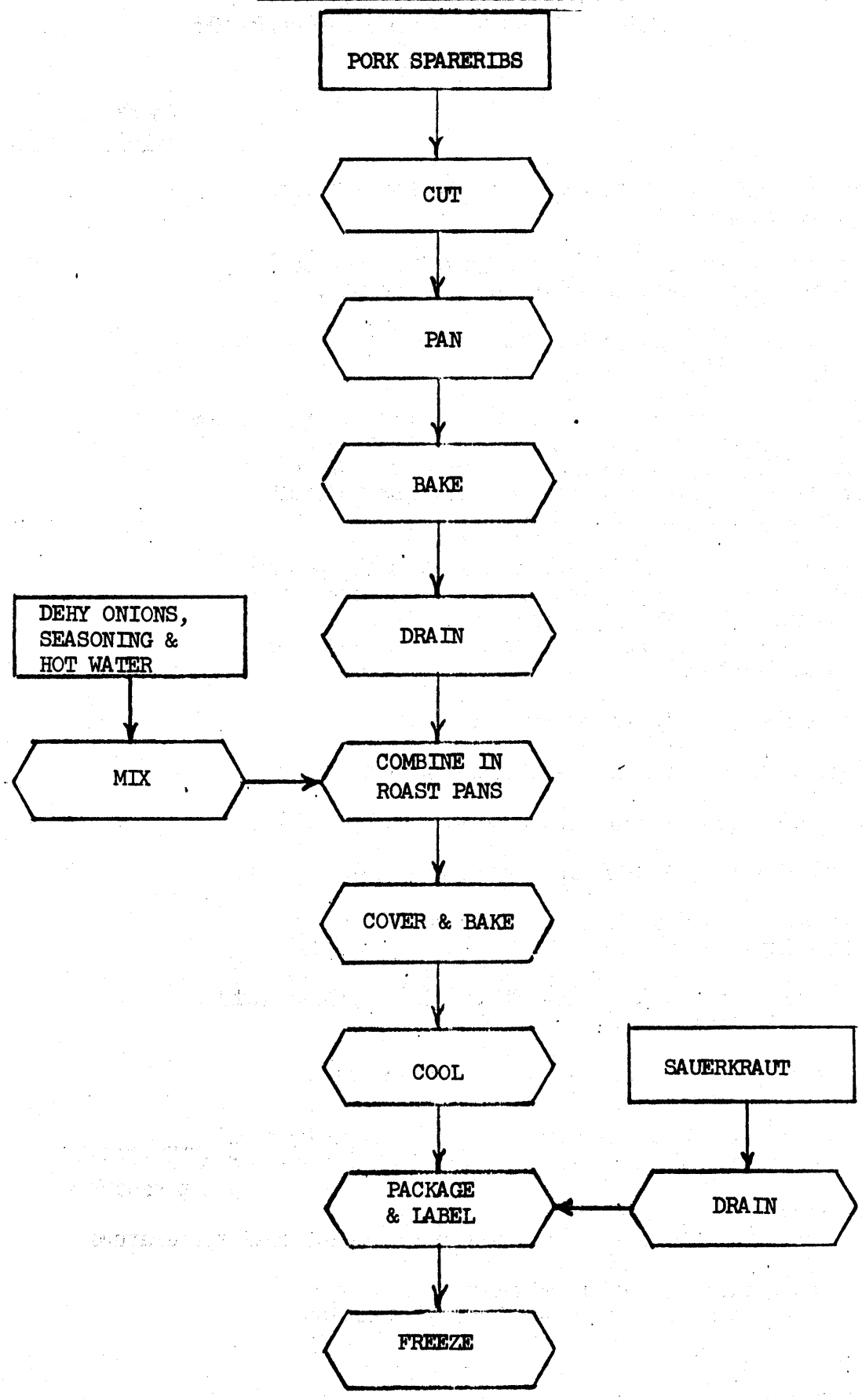
Braised Spareribs W/Sauerkraut
Net Wt: Approx 5 lb

Date Prepared: _____
Servings: 8 of 2 ribs & ½ cup sauerkraut

Reconstitution Instructions:
Heat covered pans in preheated 325°F ovens to internal temperature of 160°F.
Convection ovens: 1 hour 15 minutes
Conventional (ordinary) oven: 1 hour 30 minutes

MATERIAL FLOW

BRAISED SPARERIBS AND SAUERKRAUT



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - BRAISED SPARERIBS WITH SAUERKRAUT

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

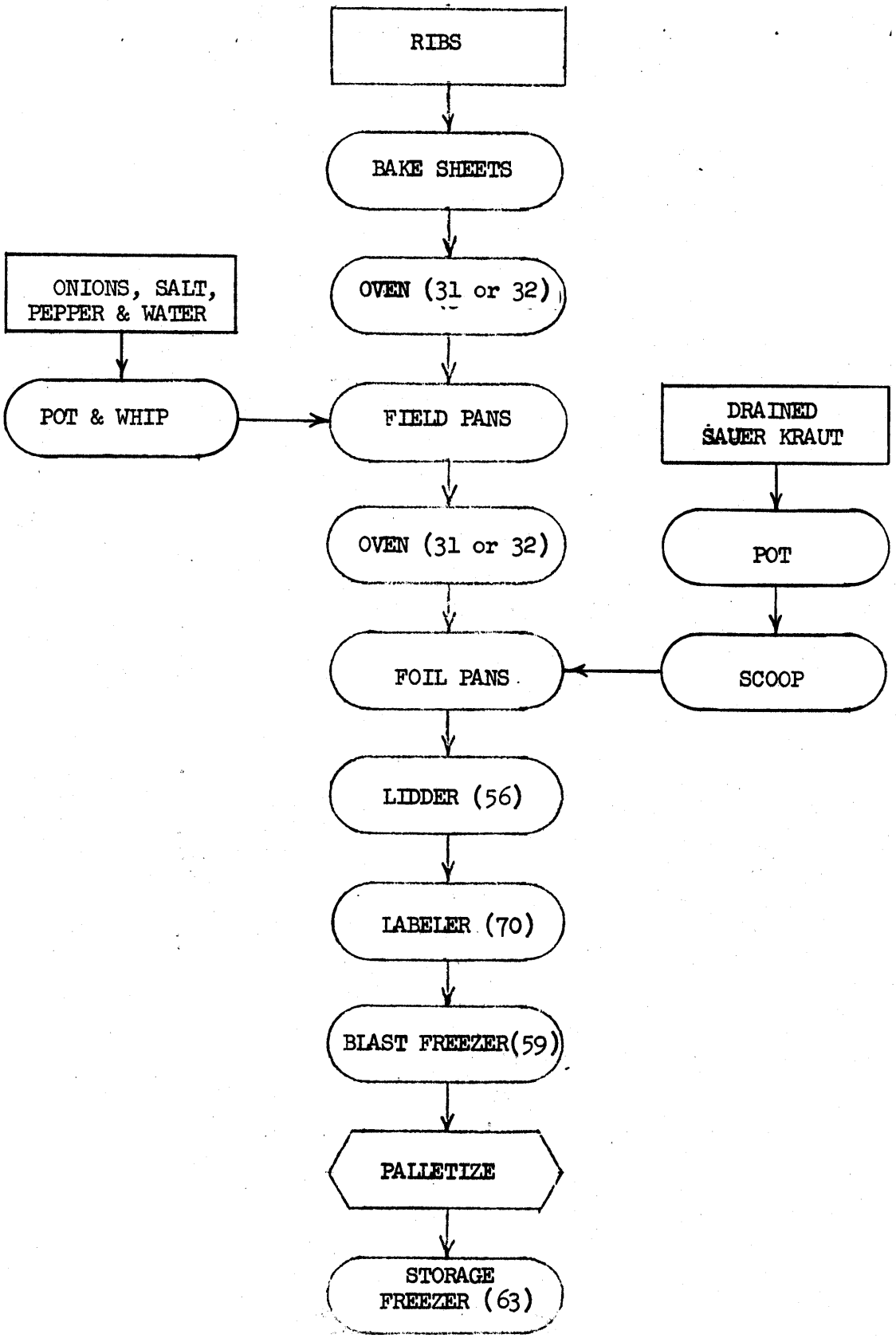
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	700 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Pork spareribs - 2 ribs piece (2 pieces per serving)	225.00 (9 bags 25.00 lbs)	375.00 (15 bags 25.00 lbs)	525.00 (21 bags 25.00 lbs)	Pork spareribs for braise spareribs w/sauerkraut
		Bag size = 15" X 29-1/2"		25.00 lbs
Onions, dehydrated, chopped	2.10	3.50	4.90	Onions, salt and pepper for braised spareribs with sauerkraut
Salt, table	1.20 (1 bag 3.48 lbs)	2.00 (1 bag 5.80 lbs)	2.80 (1 bag 8.12 lbs)	
Pepper, black	0.18	.30	0.42	
		Bag size = 10" X 18"		* lbs
Sauerkraut, canned, drained	78.00 (6 bags 13.00 lbs)	130.00 (10 bags 13.00 lbs)	182.00 (14 bags 13.00 lbs)	Sauerkraut for braised spareribs w/sauerkraut
		Bag size = 15" X 29-1/2"		13.00 lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

BRAISED SPARERIBS AND SAUERKRAUT



OPERATIONAL GUIDE FOR SWEET AND

SOUR PORK L-82

INGREDIENTS & BATCH SIZE

Controlling Equip: Fryer & Kettles
Container Net Wt: 5 lb

Servings/Container: 9 of 1 cup

Est. Prep Time: 6.4 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings 40-gal Kettle (lb)	500 Servings 60-gal Kettle (lb)	800 Servings 80-gal Kettle (lb)	Utensils
1	Pork, diced 3/4" X 3/4"	1420	32.00	96.00	160.00	256.00	Pot & Whip
	Egg, whole, beaten	2620	0.96	2.88	4.80	7.68	Mixer
	Soy sauce	15910	0.96	2.88	4.80	7.68	Fryer
	Col-flo 67, starch	SP**	0.96	2.88	4.80	7.68	
	Salt, table	15850	0.24	0.72	1.20	1.92	
	Garlic, powder	4700	0.01	0.03	0.05	0.08	
2	Bean sprouts, canned	3680	12.96	38.88	64.80	103.68	Strainer
	Pineapple, chunks, canned	5770	6.48	19.44	32.40	51.84	Pot
3	Sauce						
	Pineapple juice, beansprout liquid, & water		26.02	78.06	130.10	208.16	Pot
	Soy Sauce	15910	0.48	1.44	2.40	3.84	Whip
	Salt, table	15850	0.12	0.36	0.60	0.96	Kettle
	Sugar, granulated	9930	4.00	12.00	20.00	32.00	
	Col-flo 67, starch	SP**	0.99	2.97	4.95	7.92	
	Peppers, sweet, fresh, green, diced or strips	5690	1.99	2.97	9.95	15.92	
4	Vinegar, white	16000	2.25	6.75	11.25	18.00	
	Water		To make 7 gal	To make 21 gal	To make 35 gal	To make 56 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR SWEET AND SOUR PORK L-82

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients, and spices as to number and amounts received from Prep. Area.		10
00-	Deliver diced pork, egg, soy sauce, starch, salt, and garlic powder to mixing area; pineapple, bean sprouts and remaining ingredients to kettle area.		
1-	Place pork pieces in mixer. Combine eggs (beaten), soy sauce, starch, salt, and garlic powder. Stir until blended. Pour egg mixture over meat and mix to coat pieces. Let stand 10 minutes to mariante:		25
	fry coated pork in deep fat fryer preheated to 360°F for approximately 2 minutes or until internal temperature is 160°F. Hold for Step 4.		20
2-	Drain bean sprouts and pineapple chunks. Hold for Step 4. Use liquid in (Step 3) next operation.		10
3-	Sauce: In kettle, combine bean sprout liquid, pineapple juice, salt, sugar, starch, soy sauce with water if necessary to make required amount; mix to make slurry; crush all lumps. Add green peppers and cook mixture for 20 minutes or until mixture is thickened.		25
4-	Add diced fried pork pieces, bean sprouts, and pineapple chunks to the thickened pepper mixture. Mix well and heat to 180°F. Add vinegar; mix thoroughly. Raise level (volume) of kettle with water to required number of gallons using measuring stick; mix well.		20
5-	Pump product to filler.		10
6-	Fill half-size steamtable pans with 5 lb of product.		10
7-	Pass pans thru lidding machine to cover and close.		10
8-	Pass closed pans thru labelling machine. Labels should read:		

Sweet and Sour Pork
Net Wt: 5 lb

Date Prepared: _____
Servings: 9 of 1 cup

Reconstitution Instructions:

Heat covered pans in 325°F preheated oven to internal temperature of 160°F.

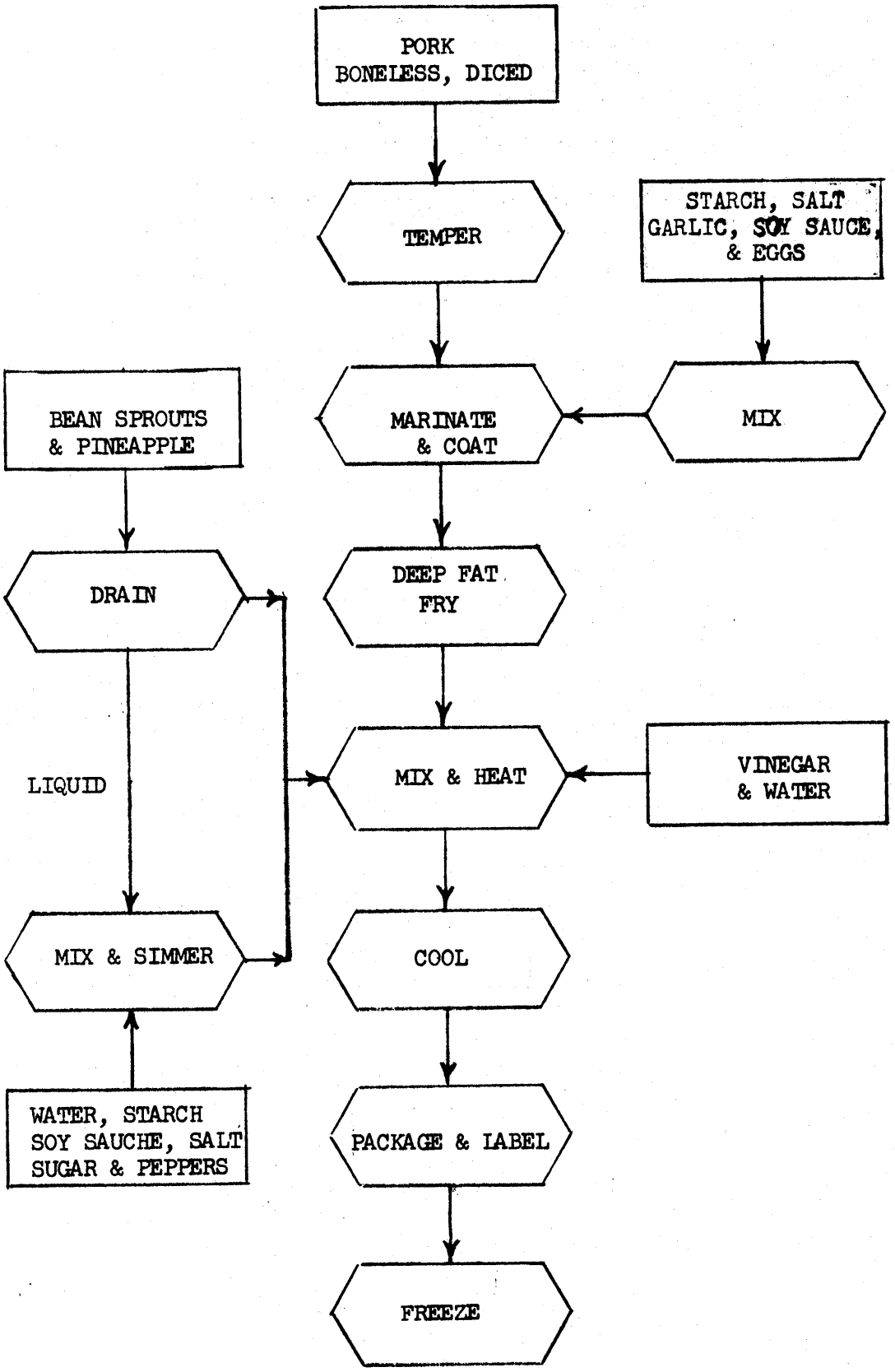
Convection oven: 1 hour 15 minutes

Conventional (ordinary) oven: 1 hour 30 minutes

Alternatively the Sweet & Sour Pork may be poured (removed from pans) in kettle and heated to 160°F.

MATERIAL FLOW

SWEET AND SOUR PORK



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SWEET AND SOUR PORK

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (Typed)
Pork, diced 3/4" X 3/4"	96.00 (4 bags 24.00 lbs)	160.00 (8 bags 20.00 lbs) Bag size = 15" X 29-1/2"	256.00 (10 bags 25.6 lbs)	Pork for sweet and sour pork * lbs
Eggs, whole, beaten	2.88	4.80	7.68	Eggs, soy sauce, starch, salt and garlic for sweet and sour pork
Soy sauce	2.88 (1 bag	4.80 (1 bag	7.68 (2 bags	
Col-Flo 67 starch	2.88 9.39 lbs)	4.00 15.65 lbs)	7.68 12.52 lbs)	
Salt, table	0.72	1.20	1.92	
Garlic powder	0.03	0.05	.08	
		Bag size = 15" X 29-1/2"		* lbs
Bean sprouts, canned	38.88 (2 bags 19.44 lbs)	64.80 (3 bags 21.60 lbs) Bag size = 15" X 29-1/2"	103.68 (6 bags 17.28 lbs)	Bean sprouts for sweet and sour pork * lbs
Pineapple, chunks, canned	19.44 (1 bag 19.44 lbs)	32.40 (2 bags 16.20 lbs) Bag size = 15" X 29-1/2"	51.84 (3 bags 17.28 lbs)	Pineapple for sweet and sour pork * lbs
Pineapple juice and water	78.06 (6 bags 13.01 lbs)	130.10 (10 bags 13.01 lbs) Bag size = 15" X 29-1/2"	208.16 (16 bags 13.01 lbs)	Pineapple juice and water for sweet and sour pork * lbs

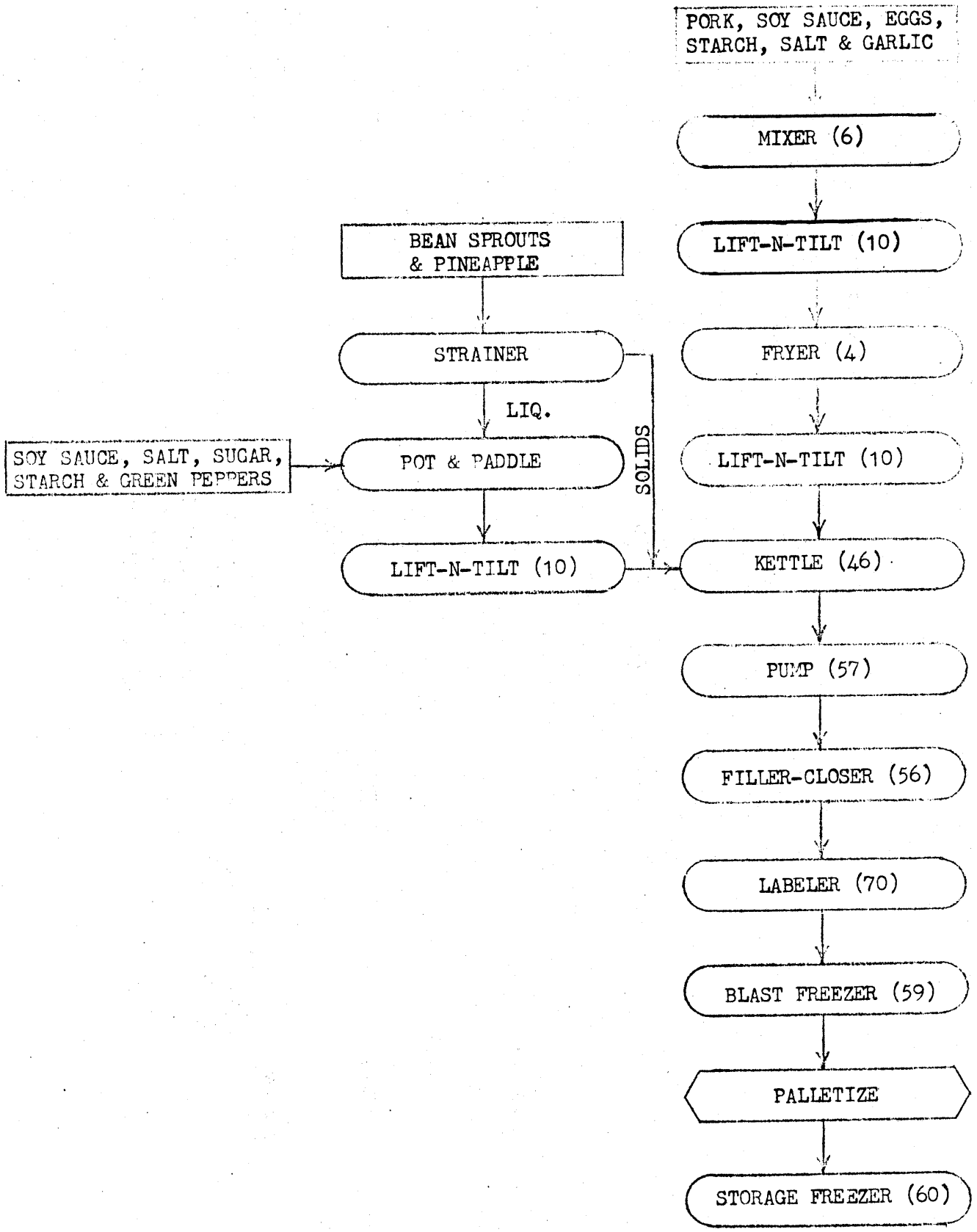
GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - SWEET AND SOUR PORK (Cont'd)

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (If used)
Soy sauce	1.44	2.40	3.84	Soy sauce, salt, sugar, starch and peppers for sweet and sour pork
Salt, table	0.36 (2 bags	.60 (3 bags	.96 (6 bags	
Sugar, granulated	12.00 11.37 lbs)	20.00 12.63 lbs)	32.00 10.11 lbs)	
Col-Flo 67 starch	2.97	4.95	7.92	
Peppers, sweet, fresh, green, diced or strips	5.97	9.95	15.92	
		Bag size = 15" X 29-1/2"		* ___ lbs
Vinegar, white	6.75 (1 bag 6.75 lbs)	11.25 (1 bag 11.25 lbs)	18.00 (2 bags 9.00 lbs)	Vinegar for sweet and sour pork
		Bag size = 15" X 29-1/2"		* ___ lbs

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

SWEET AND SOUR PORK



OPERATIONAL GUIDE FOR

GLAZED HAM LOAF L-56(2)

INGREDIENTS & BATCH SIZE

Controlling Equip: Mixer, Ovens
Container Net Wt:

Servings/Container: 13 of 1 slice

Est. Prep Time: 5 hours
Approx. Yield: 300, 500, & 600 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings (lb)	500 Servings (lb)	600 Servings (lb)	Utensils
1	Ham, cooked, ground 3/16 inch	1040	18.00	54.00	90.00	108.00	Grinder
	Pork butts, ground 3/16 inch	1350	12.00	36.00	60.00	72.00	
2							
2	Milk, nonfat, dry	3050	0.36	1.08	1.80	2.16	Pot & Whip
	Water, tap		3.75	11.25	18.75	22.50	
	Bread, dry, broken	6920	2.00	6.00	10.00	12.00	
	Onions, dehyd, chopped	5290	0.16	0.48	0.80	0.96	Mixer
	Pepper, black	15480	0.02	0.06	0.10	0.12	Oven
	Eggs, whole, beaten	2620	1.75	5.25	8.75	10.50	
3	Shortening	14080	0.50	1.50	2.50	3.00	
4	GLAZE						
	Brown sugar	9870	1.00	3.00	5.00	6.00	Pot
	Mustard, dry, ground	15280	0.13	0.39	0.65	0.78	Whip
	Vinegar, cider	16000	0.75	2.25	3.75	4.50	

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

OPERATIONAL GUIDE FOR GLAZED HAM LOAF L-56(2)

PREPARATION AREA INSTRUCTIONS

	Check Points	Time (Minutes)
1- Ham and Pork Butts should be cut in pieces to fit meat grinder. Grind meat thru 1/2- or 3/4-inch plate and then regrind thru 3/16-inch plate. Hold meat for Step 2 below.		30
2- Reconstitute dry milk with water; add onions and broken bread mix to moisten bread. Let stand ten minutes and mix again until smooth.		20
(a) Add beaten eggs, pepper, ham, and pork to milk-bread mixture in mixer and mix until blended. Pack meat mixture in shipping containers to be transferred to Central Kitchen. Keep refrigerated until shipped.		10

OPERATIONAL GUIDE FOR GLAZED HAM LOAF L-35(2)

CENTRAL KITCHEN INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify bulk Ham Loaf mixture, shortening, and glaze ingredients (brown sugar, mustard and vinegar) received from Prep. Area as to quantity and state of refrigeration.		10
00-	Note: Steps 1 and 2 are performed in Preparation Area; glaze preparation and baking in Central Kitchen as Step 3, etc.		
3-	Lightly grease half-size steamtable aluminum pans with shortening and load with 5-½ pounds of bulk ham loaf mixture. Pack pans well to eliminate air pockets and voids, pat top evenly to smooth out. CARE MUST BE EXERCISED NOT TO DISTORT ALUMINUM PANS WHILE HANDLING. COVERS WILL NOT FIT DISTORTED OR DENTED PANS.		20
4-	Combine brown sugar, ground mustard, and vinegar, blend well to dissolve all lumps. Pour 4 oz of resulting glaze mixture over each panned ham loaf. Place glazed ham loaf in preheated 350°F oven and bake for 1-½ hours or until an internal temperature of 165°F is attained.		100
5-	Take cooked panned loaves out of oven; remove (drain off) excess liquids and set aside to cool to room temperature (70-75°F).		90
6-	Pass cooled panned ham loaves thru lidding machine to cover and close.		10
7-	Pass covered pans thru labelling machine. Labels should read:		10

Glazed Ham Loaf — Date Prepared: _____
Net Wt: — Servings: 13 of 4 oz

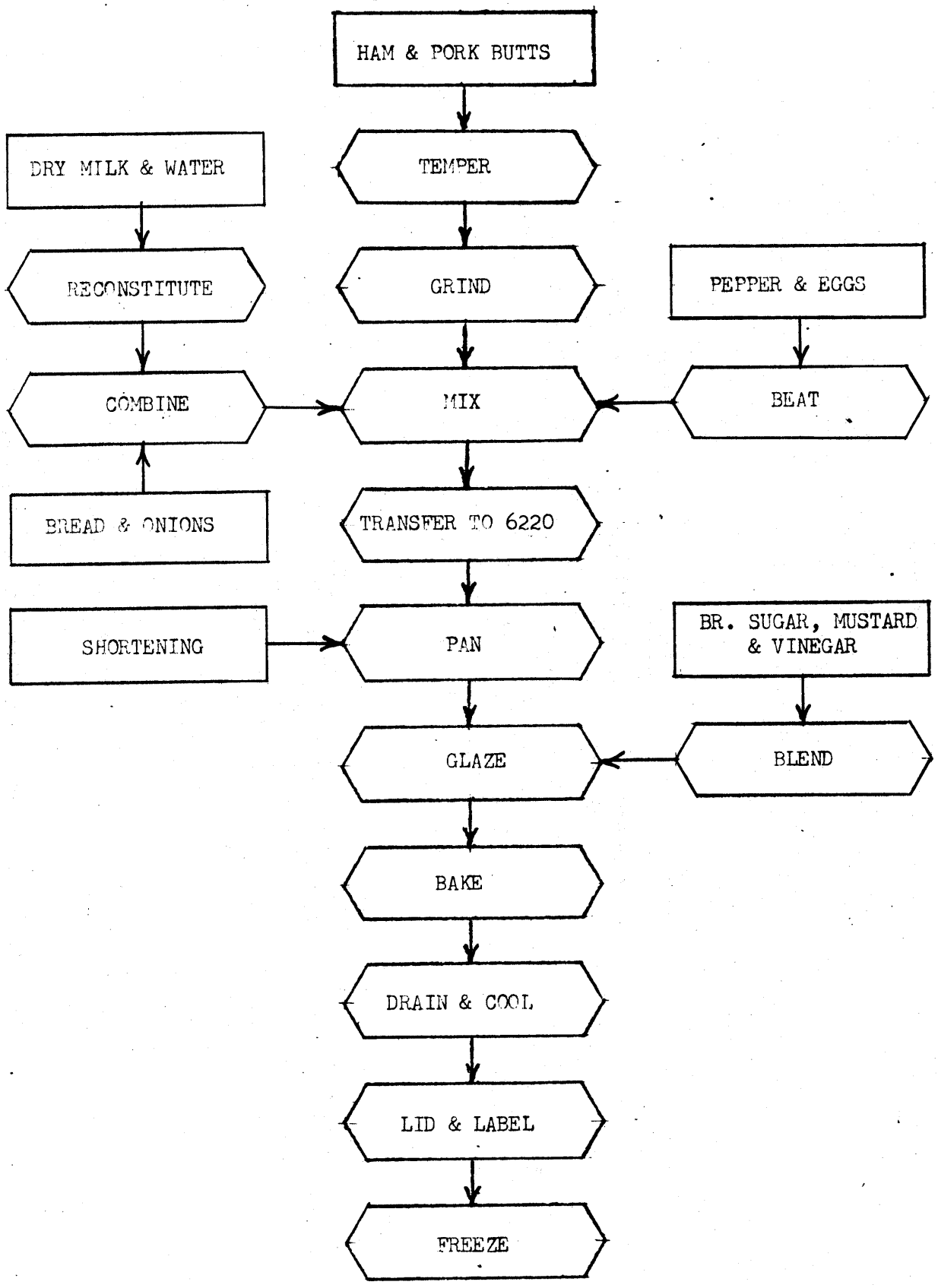
Heat covered pans in preheated 325°F oven to internal temperature of 165°F.

Convection Ovens: 1 hour 15 minutes

Conventional (ordinary) Ovens: 1 hour 30 minutes

MATERIAL FLOW

GLAZED HAM LOAF



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - GLAZED HAM LOAF

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

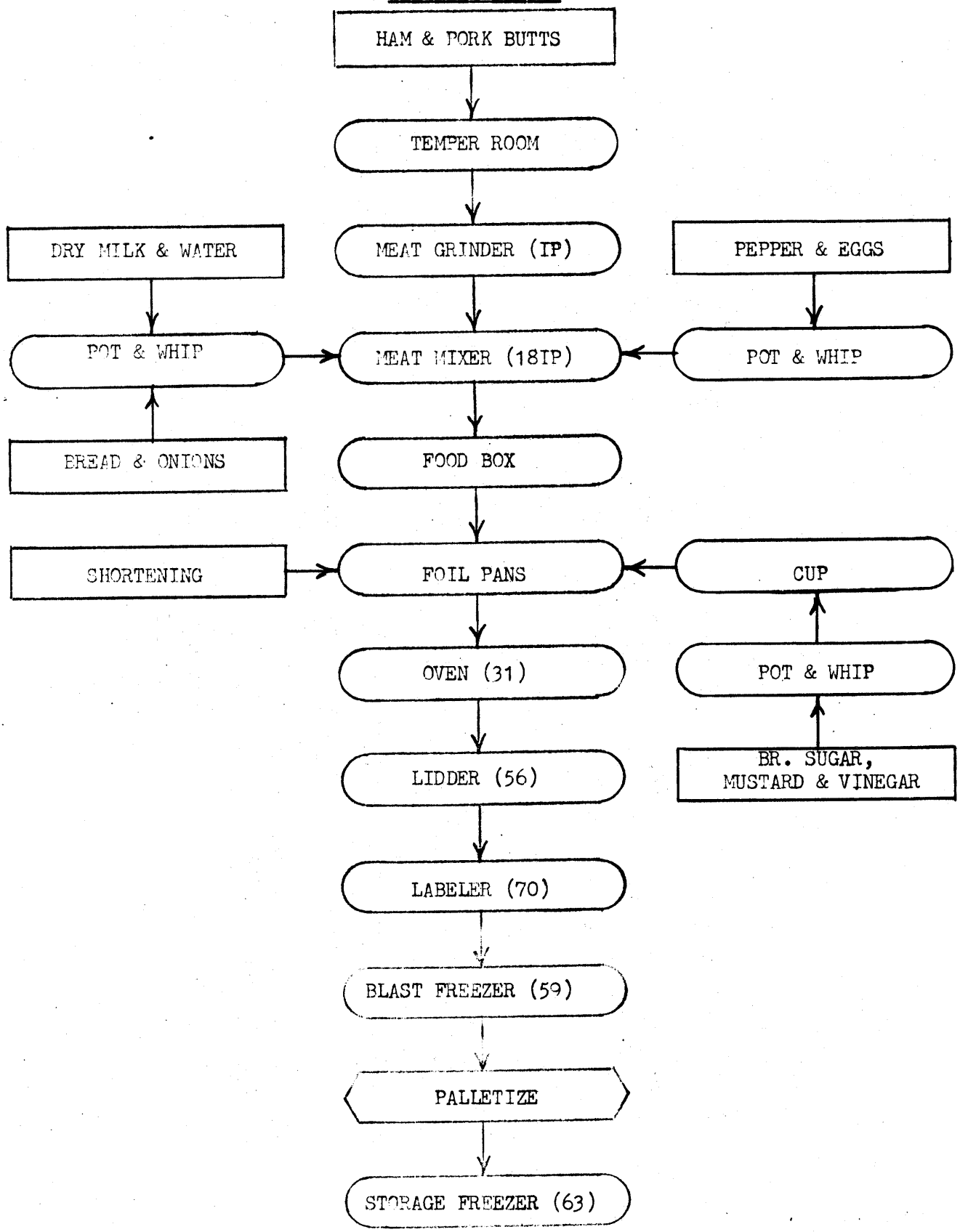
Ingredients	300 Servings (lbs)	500 Servings (lbs)	600 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Ham loaf mixture*	114.12 (6 bags 19.02 lbs)	190.20 (10 bags 19.02 lbs)	228.24 (12 bags 19.02 lbs)	Ham loaf mixture for glazed ham loaf
		Bag size = 15" X 29-1/2"		19.02 lbs
Shortening	1.50 (1 bag 1.50 lbs)	2.50 (1 bag 2.50 lbs)	3.00 (1 bag 3.00 lbs)	Shortening for glazed ham loaf
		Bag size = 10" X 18"		** lbs
GLAZE				
Brown sugar Mustard, dry, ground Vinegar, cider	3.00 (1 bag 0.39 5.64 lbs) 2.25	5.00 (2 bags 0.65 4.70 lbs) 3.75	6.00 (2 bags 0.78 5.64 lbs) 4.50	Sugar, mustard and vinegar for glazed ham loaf (Glaze)
		Bag size = 10" X 18"		** lbs

*The mixture is prepared in Ingredients Preparation Area.

**Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

GLAZED HAM LOAF



OPERATIONAL GUIDE FOR ROAST FRESH HAMS

WITH GRAVY L-72-1

INGREDIENTS & BATCH SIZE

Controlling Equip: Oven
Container Net Wt:

Standard Servings: 2 slices (4 oz)

Est. Prep Time: 7.6 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Utensils
1	Pork Ham, uncured, boneless	1430	41.00	123.00	205.00	328.00	Baking Pans
	Salt, table	15850	0.50	1.50	2.50	4.00	OVEN
	Pepper, black	15480	0.03	0.09	0.15	0.24	Baking sheets
	GRAVY						
2	Meat Drippings or Shortening	14080	1.50	4.50	7.50	12.00	Kettle
	Flour, wheat	8300	0.56	1.68	2.80	4.48	
	Col-flo 67, starch	SP**	0.56	1.68	2.80	4.48	Pot and Whip
	Water, tap		16.80	50.40	84.00	134.40	
	Beef Soup & Gravy Base	11440	0.50	1.50	2.50	4.00	
	Pepper, black	15480	0.01	0.03	0.50	0.08	
3	Water, tap		To make 3.5 gal	To make 9.75 gal	To make 16.25 gal	To make 26.00 gal	Measuring stick

* FSC Group 89 Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR ROAST FRESH HAMS WITH GRAVY L-72-1

INSTRUCTIONS

		Check Points	Time (Minutes)
0-	Verify components, ingredients and spices as to number and amounts received from Prep. Area.		10
00-	Deliver pork hams to oven area and remaining ingredients to Kettle Area.		10
1-	Rub hams well with salt and pepper; place in baking pans and roast in preheated 325°F oven until the internal temperature (at the thickest part) is 165°F. Roasting time will be between 3 and 5 hours. Remove ham roast from oven; transfer to baking sheets to cool. Hold for Step 4. Reserve drippings for Step 2.		230
2-	Scrape drippings from roasting pans into kettle; add shortening and heat. Sprinkle flour into drippings and with continued stirring; cook for 10 minutes to make roux.		15
	Mix starch, water, soup & gravy base, and pepper in a pot; mix well to dissolve all lumps and slowly add to roux in kettle with constant stirring until all starch mixture is added. Heat to 200°F for 20 minutes with agitation.		30
3-	Raise level (volume) of product in kettle with water to required number of gallons. Mix well to blend. Shut off steam. Hold for Step 5.		10
4-	Slice cooled pork hams on meat slicer. Slices should weigh approximately 2 oz each. Shingle 20 slices (2-½ lb) of pork into half-size steamtable aluminum pans. Hold for Step 6.		20
5-	Transfer gravy to filling machine.		10
6-	Top (fill) panned pork slices with 2-½ pounds of gravy.		10
7-	Pass panned pork and gravy thru lidding machine to cover and close.		10
8-	Pass covered pans thru labelling machine.		10

Labels should read:

Roast Fresh Ham w/Gravy
Net Wt:

Date Prepared:_____
Servings: 10 of 2 ham slices
and 4 oz gravy

Reconstitution Instructions:

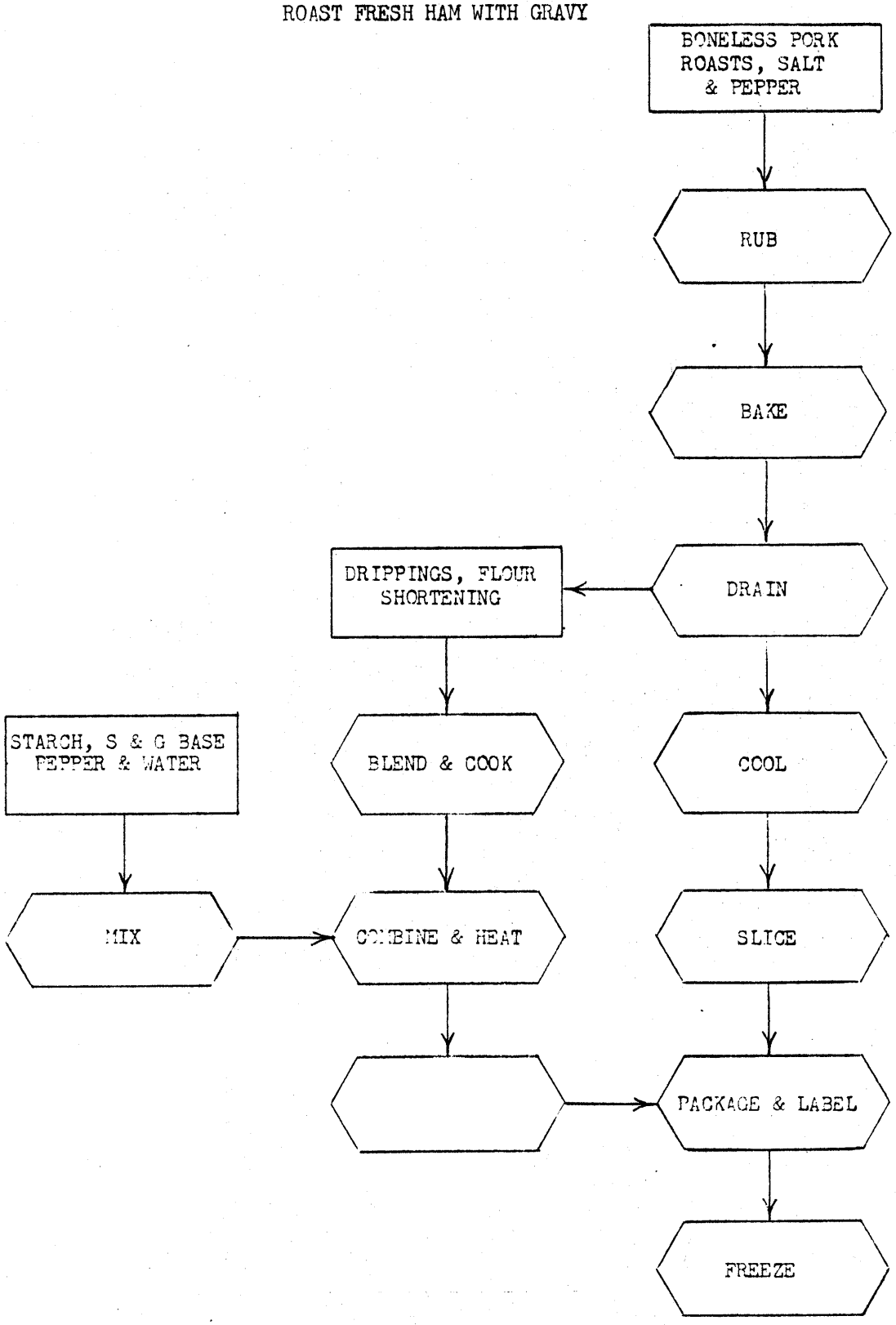
Heat covered pans in preheated 325°F oven to internal temperature of 165°F.

Convection oven: 1 hour 15 minutes

Conventional (ordinary) oven: 1 hour 30 minutes

MATERIAL FLOW

ROAST FRESH HAM WITH GRAVY



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - ROAST FRESH HAMS

Prepare items for transportion in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Pork ham, uncured, boneless	123.00	205.00	328.00	Ham for roast ham
	NOTE: Place individual ham in polyethylene bag of appropriate size and seal with wire or plastic tie and label with weight.			* lbs
Salt, table	1.50 (1 bag	2.50 (1 bag	4.00 (1 bag	Salt and pepper for roast fresh hams
Pepper, black	1.50 lbs)	2.50 lbs)	4.00 lbs)	* lbs
		Bag size = 10" X 18"		
GRAVY				
Meat drippings or shortening	4.50 (1 bag	7.50 (1 bag	12.00 (1 bag	Shortening of dripping and flour for roast fresh hams (Gravy)
Flour	1.68 6.18 lbs)	2.80 10.30 lbs)	4.48 16.48 lbs)	* lbs
		Bag size = 15" X 29-1/2"		
Col-Flo 67, starch	1.68 (1 bag	2.80 (1 bag	4.48 (1 bag	Starch, beef base and pepper for roast fresh ham (Gravy)
Beef soup and gravy base	1.50	2.50	4.00	
Pepper, black	.03 3.21 lbs)	.50 5.80 lbs)	.08 8.56 lbs)	* lbs
		Bag size = 10" X 18"		

*Appropriate weight to be written is dependent on number of servings.

[illegible] - ROAST BEEF

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

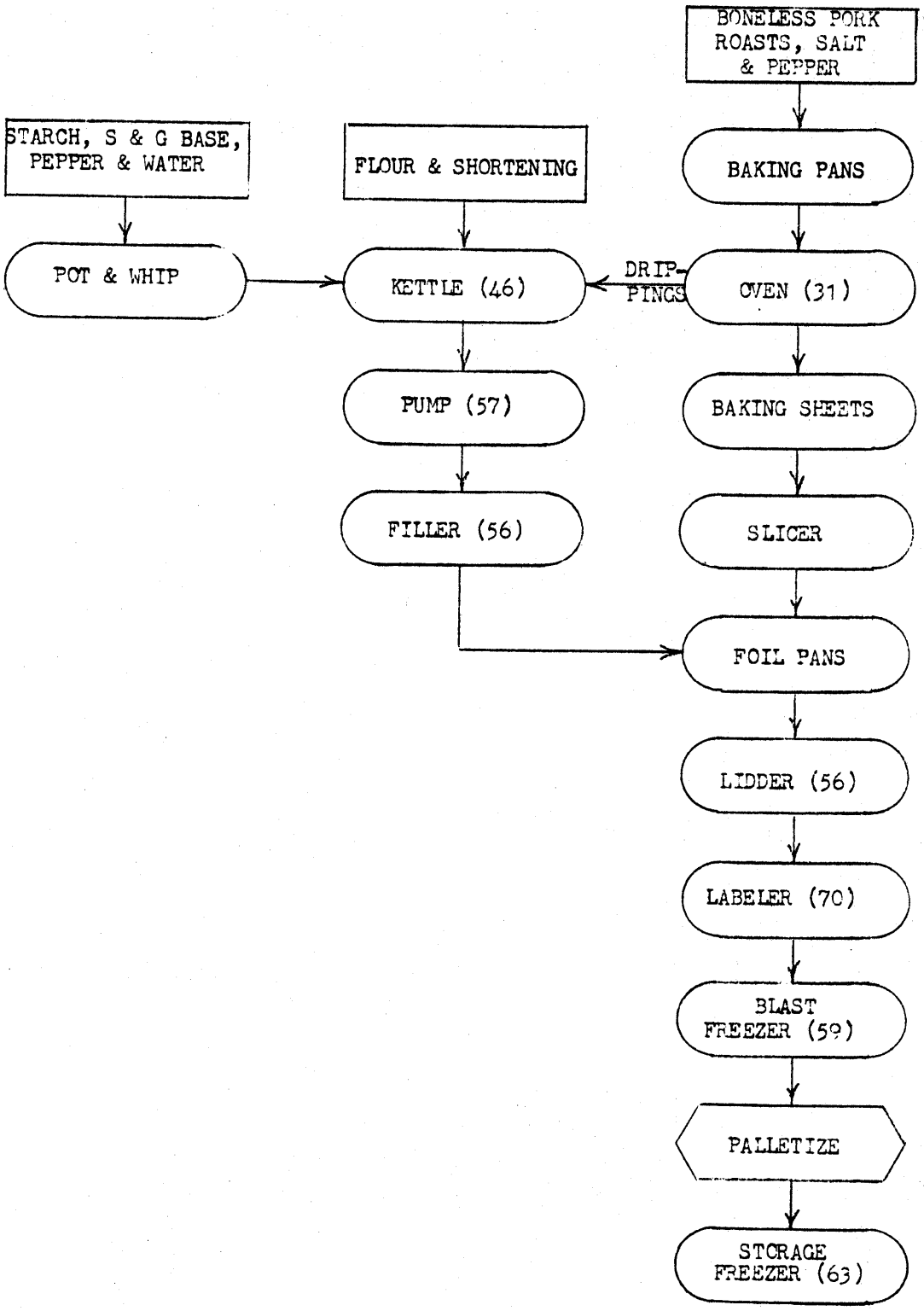
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	600 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, bnls, oven roast	120**	200** Bag size = 15" X 29-1/2"	320**	Beef for Roast Beef
Salt, table Pepper, black	1.14 (1 bag .06 1.20 lbs)	1.90 (1 bag .10 2.00 lbs) Bag size = 15" X 29-1/2"	3.04 (1 bag 0.16 3.20 lbs)	Salt and pepper for Roast Beef * lbs
GRAVY				
Shortening***	4.89 (1 bag 4.89 lbs)	8.15 (1 bag 8.15 lbs) Bag size = 10" X 18"	13.04 (2 bags 6.52 lbs)	Shortening for Roast Beef (Gravy) * lbs
Flour	2.79 (1 bag 2.79 lbs)	4.65 (1 bag 4.65 lbs) Bag size = 10" X 18"	7.44 (1 bag 7.44 lbs)	Flour for Roast Beef (Gravy) * lbs
Soup & gravy base, beef Carmel coloring, powder Col-Flo 67 starch Pepper, black	1.50 0.03 (1 bag 1.86 3.45 lbs) 0.06	2.50 0.05 (1 bag 3.10 5.75 lbs) 0.10 Bag size = 10" X 18"	4.00 0.08 (1 bag 4.96 9.20 lbs) 0.16	Soup & gravy base, carmel coloring, starch and pepper for Roast Beef (Gravy) * lbs

*Appropriate weight to be written is dependent on number of servings.
**Individual roasts will be placed in each bag for shipment from Ingredient Preparation Area.
***Shortening will be used only when drippings from the cooked roasts are not used.

EQUIPMENT UTILIZATION

ROAST FRESH HAM WITH GRAVY



[illegible] - ROAST BEEF

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

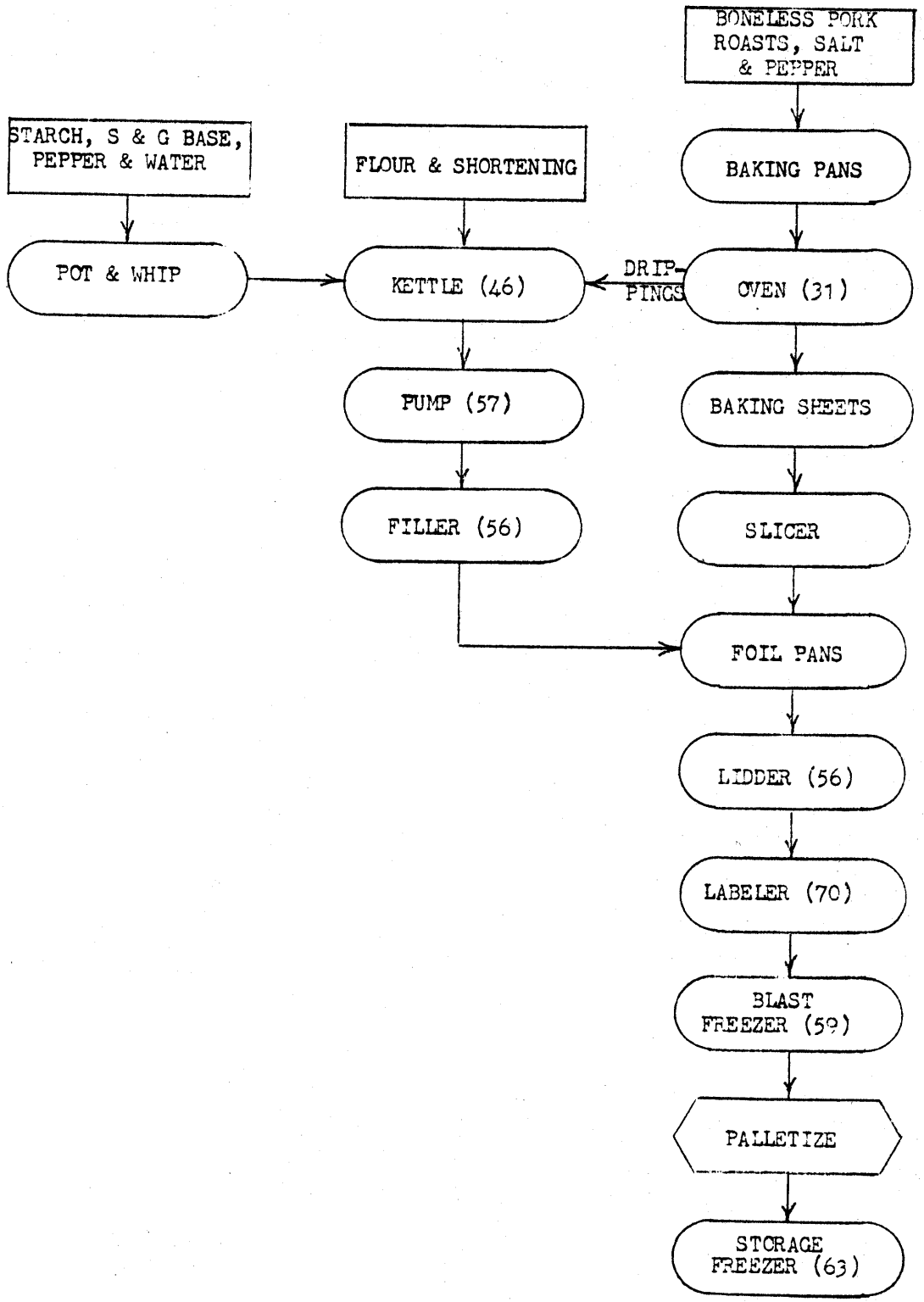
or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Beef, bnls, oven roast	120**	200**	320**	Beef for Roast Beef
		Bag size = 15" X 29-1/2"		
Salt, table	1.14 (1 bag	1.00 (1 bag	3.04 (1 bag	Salt and pepper for
Pepper, black	.06 1.20 lbs)	.10 2.00 lbs)	0.16 3.20 lbs)	Roast Beef
		Bag size = 15" X 29-1/2"		* lbs
GRAVY				
Shortening***	4.89 (1 bag 4.89 lbs)	8.15 (1 bag 8.15 lbs)	13.04 (2 bags 6.52 lbs)	Shortening for Roast Beef (Gravy)
		Bag size = 10" X 18"		* lbs
Flour	2.79 (1 bag 2.79 lbs)	4.65 (1 bag 4.65 lbs)	7.44 (1 bag 7.44 lbs)	Flour for Roast Beef (Gravy)
		Bag size = 10" X 18"		* lbs
Soup & gravy base, beef	1.50	2.50	4.00	Soup & gravy base, carmel
Carmel coloring, powder	0.03 (1 bag	0.05 (1 bag	0.08 (1 bag	coloring, starch and pepper
Col-Flo 67 starch	1.86 3.45 lbs)	3.10 5.75 lbs)	4.96 9.20 lbs)	for Roast Beef (Gravy)
Pepper, black	0.06	0.10	0.16	
		Bag size = 10" X 18"		* lbs

*Appropriate weight to be written is dependent on number of servings.
**Individual roasts will be placed in each bag for shipment from Ingredient Preparation Area.
***Shortening will be used only when drippings from the cooked roasts are not used.

EQUIPMENT UTILIZATION

ROAST FRESH HAM WITH GRAVY



OPERATIONAL GUIDE FOR VEAL PARMESAN

INGREDIENTS & BATCH SIZE

Controlling Equip: Fryer
Container Net Wt:

Servings/Container: 10 of 1 cutlet & 3 oz sauce

Est. Prep Time: 4 hours
Approx. Yield: 300, 500, & 800 servings

Steps	Ingredients	*Index No.	100 Servings (lb)	300 Servings (lb)	500 Servings (lb)	800 Servings (lb)	Utensils
1	Veal Cutlets, breaded 1 cutlet per serving	2010	35.00	105.00	175.00	280.00	Continuous Deep Fat Fryer
2	SAUCE						
	Onions, dry, sliced	5320	1.33	3.99	6.65	10.64	Kettle agitating
	Garlic, fresh, chopped	4710	0.15	0.45	0.75	1.20	
	Salad Oil	14000	0.63	1.89	3.15	5.04	
	Tomatoes, canned, whole in heavy puree	SP**	8.10	24.30	40.50	64.80	
	Tomato Puree	SP**	10.65	31.95	53.25	85.20	
	Parmesan cheese, grated	2480	1.33	3.99	6.65	10.64	
	Sugar, white	9930	0.34	1.02	1.70	2.72	
	Salt	15850	0.22	0.66	1.10	1.76	
	Oregano, ground	15420	0.03	0.09	0.15	0.24	
	Basil, ground	14300	0.02	0.06	0.10	0.16	
3	Water		0.90	2.70	4.50	7.20	Pot & Whip
	Col-flo 67, starch	SP**	0.34	1.02	1.70	2.72	
4	Water		To make 2.75 gal	To make 8.25 gal	To make 13.75 gal	To make 22 gal	Measuring stick

* FSC Group Subsistence Catalog (C8900-SL) 1 Jan 77

** Special Purchase

OPERATIONAL GUIDE FOR VEAL PARMESAN

INSTRUCTIONS

NOTE: These instructions are based on using Breaded Veal Cutlets.	Check Points	Time (Minutes)
0- Verify components, ingredients, and spices as to number and amounts received from Prep. Area.		10
00- Deliver breaded veal cutlets to deep fat fryer area; remaining items to kettle area.		10
1- Cook breaded veal cutlets by passing thru preheated (375°F) continuous deep fat fryer to internal temperature of 160°F (about 3 minutes). Place 10 cutlets in half-size steamtable aluminum pans. Hold for Step 6 below.		30
2- Heat salad oil in kettle and saute chopped onions and garlic until light brown. Combine tomato products, cheese, salt, sugar, oregano, and basil; mix well; add to sauteed onions in kettle and heat to 160°F.		20
3- Make slurry of starch and water; mix well. Add to tomato mixture in kettle and heat to 180°F; cook for 5 minutes.		15
4- Raise level (volume) of product in kettle with water to required number of gallons using measuring stick; mix well. Shut off steam.		5
5- Transfer sauce to filling machine.		10
6- Top (fill) panned cutlets with 2-1/4 lb of sauce.		15
7- Pass pans of Veal Parmesan thru closing machine to cover and close.		10
8- Pass covered pans thru labelling machine. Labels should read:		10

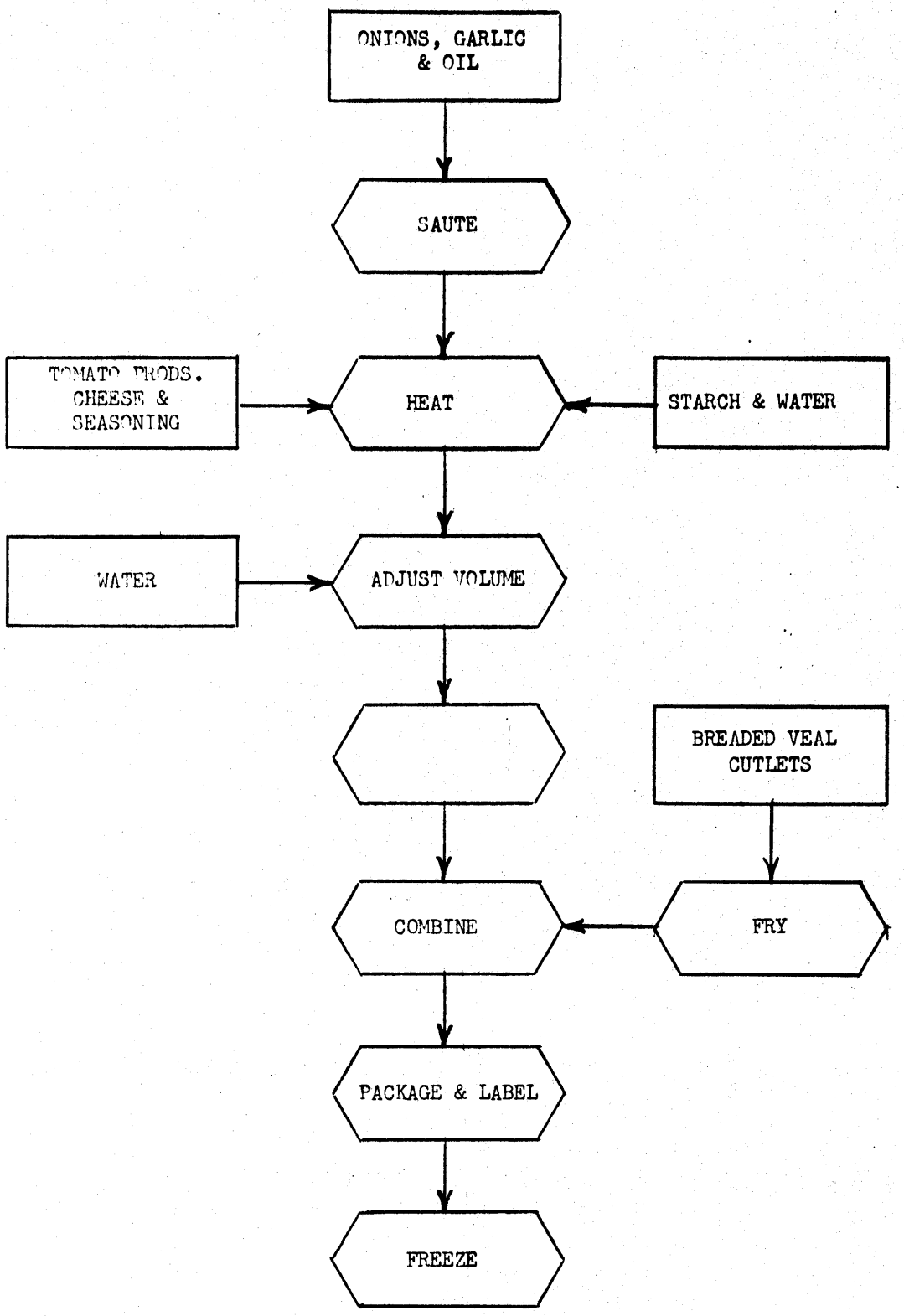
Veal Parmesan
Net Wt:

Date Prepared:_____
Servings: 10 of 1 cutlet & 3 oz sauce

Reconstitution Instructions:
Heat covered pans in preheated 325°F ovens to internal temperature of 165°F.
Convection oven: 1 hour 15 minutes
Convectional (ordinary) oven: 1 hour 30 minutes

MATERIAL FLOW

VEAL PARMESAN



GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - VEAL PARMESAN

Prepare items for transportation in one of the following manners:

1. Place items in specified amounts in appropriate size polyethylene bag. Secure all bags with plastic or wire ties; label with label instructions. Place bagged items in wire baskets for transportation. If plastic food boxes are used for transportation, they shall be lidded and labelled (preferably on the side of the box) prior to shipment.

or 2. Place #10 cans of ingredients in wire baskets for transportation. NOTE: If cans are opened prior to shipment, cover with plastic lid.

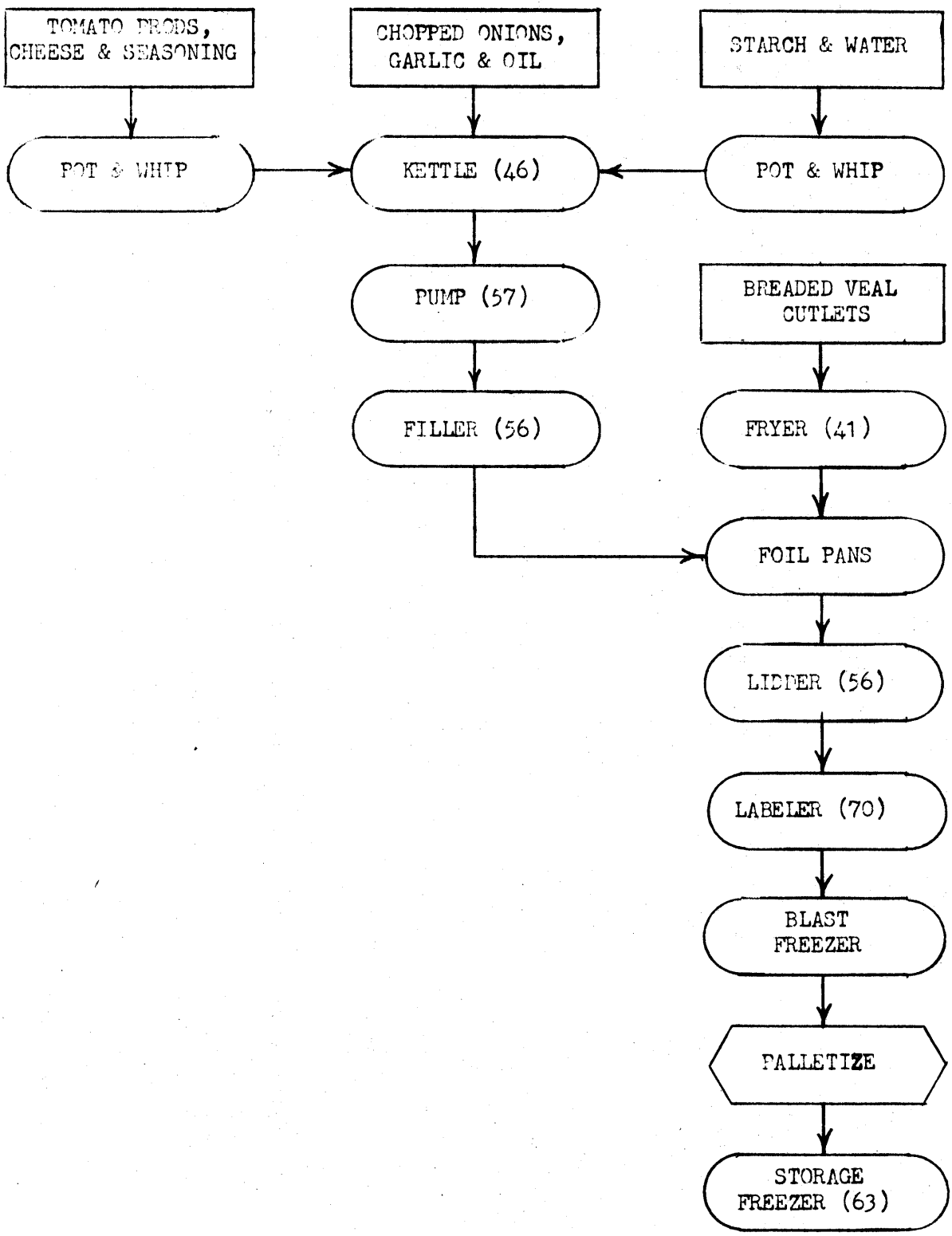
Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Veal cutlet, breaded (1 cutlet per serving)	105.00 (5 bags 21.00 lbs)	175.00 (7 bags 25.00 lbs)	280.00 (14 bags 20.00 lbs)	Veal cutlets for veal parmesan * lbs
	Bag size = 15" X 29-1/2"			
SAUCE				
Onions, dry, sliced	3.99 (1 bag	6.65 (1 bag	10.64 (2 bags	Onions and garlic for veal parmesan (Sauce) * lbs
Garlic, fresh, chopped	0.45 4.44 lbs)	0.75 7.40 lbs)	1.20 5.92 lbs)	
	Bag size = 10" X 18"			
Salad oil	1.89 (1 bag 1.89 lbs)	3.15 (1 bag 3.15 lbs)	5.04 (1 bag 5.04 lbs)	Salad oil for veal parmesan (Sauce) * lbs
	Bag size = 10" X 18"			
Tomatoes, canned, whole in heavy puree	24.30 (2 bags 12.15 lbs)	40.50 (3 bags 13.50 lbs)	64.80 (4 bags 16.20 lbs)	Tomatoes for veal parmesan (Sauce) * lbs
	Bag size = 15" X 29-1/2"			
Tomato Puree	31.95 (2 bags 15.98 lbs)	53.25 (3 bags 17.75 lbs)	85.20 (4 bags 21.30 lbs)	Tomato puree for veal parmesan (Sauce) * lbs
	Bag size = 15" X 29-1/2"			
Parmesan cheese, grated	3.99	6.65	10.64	Cheese, sugar, salt, oregano and basil for veal parmesan (Sauce) * lbs
Sugar, white	1.02 (1 bag	1.70 (1 bag	2.72 (2 bags	
Salt	0.66 5.82 lbs)	1.10 9.70 lbs)	1.76 7.76 lbs)	
Oregano, ground	0.09	0.15	0.24	
Basil, ground	0.06	0.10	0.16	
	Bag size = 10" X 18"			

*Appropriate weight to be written is dependent on number of servings.

GENERAL PACKAGING INSTRUCTIONS FOR INGREDIENTS PREPARATION - VEAL PARMESAN (Cont'd)

Ingredients	300 Servings (lbs)	500 Servings (lbs)	800 Servings (lbs)	Label Instructions for Polyethylene Bag or Box (if used)
Col-Flo 67, starch	1.02 (1 bag 1.02 lbs)	1.70 (1 bag 1.70 lbs)	2.72 (1 bag 2.72 lbs)	Starch for veal parmesan * lbs
	Bag size = 10" X 18"			

*Appropriate weight to be written is dependent on number of servings.

EQUIPMENT UTILIZATION

VEAL PARMESAN