Appendix B
NIST Handbook 133

Section 3. Test Procedures – Packages Labeled by Volume

Item:

260-2: Section 3.12. Fresh Oysters Labeled by Volume

NIST Office of Weights and Measures

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Date:	**Worksheet for Determining the Free Liquid and Net Volume of Oysters**			Report Number:
Location (name, address):		Product/Brand Identity: Lot Codes:	Manufacturer:	Container Description:
1. Labeled Quantity:	2. Unit of Measure:	3. Inspection Lot Size:	4. Sample Size:	

Amount of Free Liquid Values

Steps:	**Pkg 1**	**Pkg 2**	**Pkg 3**	**Pkg 4**	**Pkg 5**	**Pkg 6**	**Pkg 7**	**Pkg 8**	**Pkg 9**	**Pkg 10**
1. Weight of Dry Receiving Pan										
2. Gross Weight of Package										
Reference Temperature of Oysters 7 °C (± 1) [45 °F (± 2)]										
3. Tare Weight of Package										
4. Net Weight of Oysters & Liquid (Step 2 – Step 3 =)										
5. Weight of Receiving Pan and Drained Liquid										
6. Weight of Free Liquid (Step 5 – Step 1 =)										
7. Percentage (%) of Free Liquid (Step 6 ÷ Step 4 × 100 =)										

Net Volume

1. Test the oysters at the temperature of 7 °C (± 1) [45 °F (± 2)].
2. Establish the level of fill of the package using a depth gage.
3. Empty and dry the package.
4. Refill the package with water to the level of the depth gage.
5. Record the amount of delivered water and then sum the quantities to obtain the total volume in the package.

	Quantity of Water Delivered into Package									
	Pkg 1	**Pkg 2**	**Pkg 3**	**Pkg 4**	**Pkg 5**	**Pkg 6**	**Pkg 7**	**Pkg 8**	**Pkg 9**	**Pkg 10**
8. Flask Size										
9. Flask Size										
10. Graduate or Cylinder										
11. Graduate or Cylinder										
12. Total (8 + 9 + 10 =)										

Comments:

Date: December 20, 2013	**Worksheet for Determining the Free Liquid and Net Volume of Oysters**		Report Number: 1 of 2
Location (name, address): Superchain Market Main Street Bradenton, FL	Product/Brand Identity: World's Best Oysters – Oyster Standard Lot Codes: 12/26/2012	Manufacturer: World's Best Packing Beach Road, AL	Container Description: Clear Plastic Tub with metal pull top

1. Labeled Quantity:	2. Unit of Measure:	3. Inspection Lot Size:	4. Sample Size:
12 fl. oz. (355 ml)	0.001 lb	206	12

Amount of Free Liquid Values

Steps:	**Pkg 1**	**Pkg 2**	**Pkg 3**	**Pkg 4**	**Pkg 5**	**Pkg 6**	**Pkg 7**	**Pkg 8**	**Pkg 9**	**Pkg 10**
1. Weight of Dry Receiving Pan	11.841	11.841	11.841	11.841	11.841					
2. Gross Weight of Package	0.871	0.884	0.920	0.869	0.8632					
Reference Temperature of Oysters 7 °C (± 1) [45 °F (± 2)]	44 °F	46 °F	44 °F	47 °F	45.5 °F					
3. Tare Weight of Package	0.060	0.060	0.060	0.059	0.060					
4. Net Weight of Oysters & Liquid (Step 2 – Step 3 =)	0.811	0.824	0.86	0.81	0.803					
5. Weight of Receiving Pan and Drained Liquid	12.020	12.121	12.120	12.031	12.242					
6. Weight of Free Liquid (Step 5 – Step 1 =)	0.179	0.28	0.279	0.19	0.401					
7. Percentage (%) of Free Liquid (Step 6 ÷ Step 4 × 100 =)	22 %	33 %	32 %	23 %	49 %					

Net Volume

1. Test the oysters at the temperature of 7 °C (± 1) [45 °F (± 2)].
2. Establish the level of fill of the package using a depth gage.
3. Empty and dry the package.
4. Refill the package with water to the level of the depth gage.
5. Record the amount of delivered water and then sum the quantities to obtain the total volume in the package.

	Quantity of Water Delivered into Package									
	Pkg 1	**Pkg 2**	**Pkg 3**	**Pkg 4**	**Pkg 5**	**Pkg 6**	**Pkg 7**	**Pkg 8**	**Pkg 9**	**Pkg 10**
8. Flask Size										
9. Flask Size										
10. Graduate or Cylinder										
11. Graduate or Cylinder										
12. Total (8 + 9 + 10 =)										

Comments:

Issued: May 17, 2013

Drawings for an Oyster Strainer and Drain Pan

This design of strainer is required in AOAC International 35.1.07 (953.11) for use in determining the drained liquid from shucked oysters. The specifications for the diameter of the perforations and their spacing were adopted by the AOAC in 1955.

THESE DRAWINGS ARE NOT TO SCALE

This document based on a drawing (No. 1847 - August 1997) provided by the North Carolina Department of Agriculture, Division of Standards & Division of Marketing's Engineering Program.

AOAC Description

- Apparatus:
  - Strainer (skimmer): flat metal pan with 50.8 mm (2 inches) sides.
  - Area: 1,900 square centimeters (300 square inches) for each 3.785 L (1 gallon) of oysters to be poured onto the pan. A smaller strainer and pan may be constructed for testing package sizes less than 3.785 L (1 gallon).
  - Perforations and Spacing: 6 mm (1/4 inch) diameter and spaced in a 32 mm (1-1/4 inches) square pattern.
- Use: Quickly distribute oysters evenly over draining surface with minimum of handling.
  - Drain Time: 2 minutes.
  - Temperature: 7 °C (± 1 °C) 45 °F (± 2 °F)

General Notes

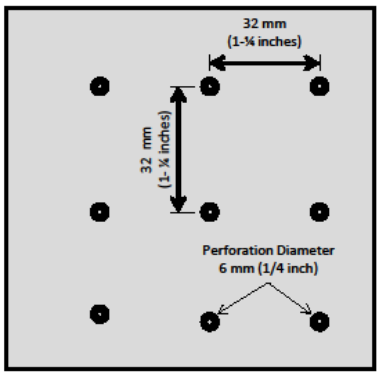
- Construct with 12 gage stainless steel (recommended but lighter or heavier gages are permitted). For ease of handling the weight should be kept to a minimum.
- The strainer and pan may be one-piece boxes with bent and welded sides or constructed entirely of plate.
- Containers will be used to weigh and measure food products so all welds must be watertight for ease of cleaning and to prevent the accumulation of water that may promote bacteria growth.
- Grind, smooth and polish all joints, and perforations.

THIS DRAWING NOT TO SCALE

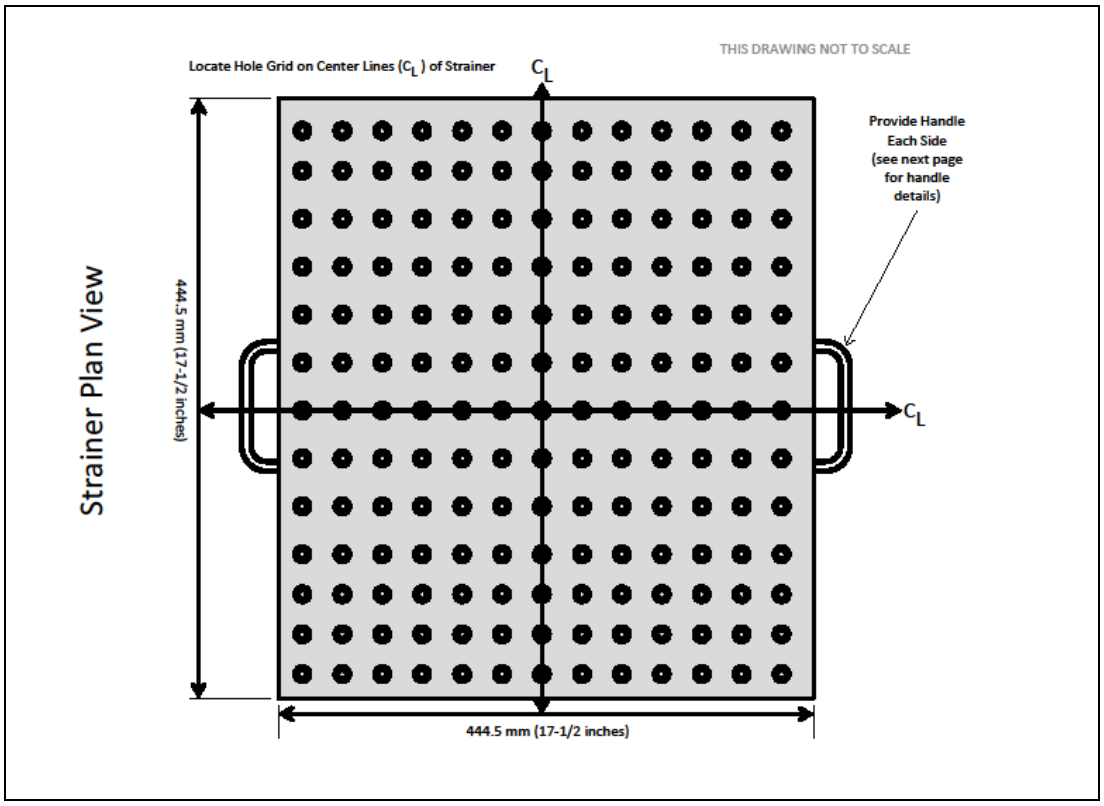
Typical Layout of Perforations

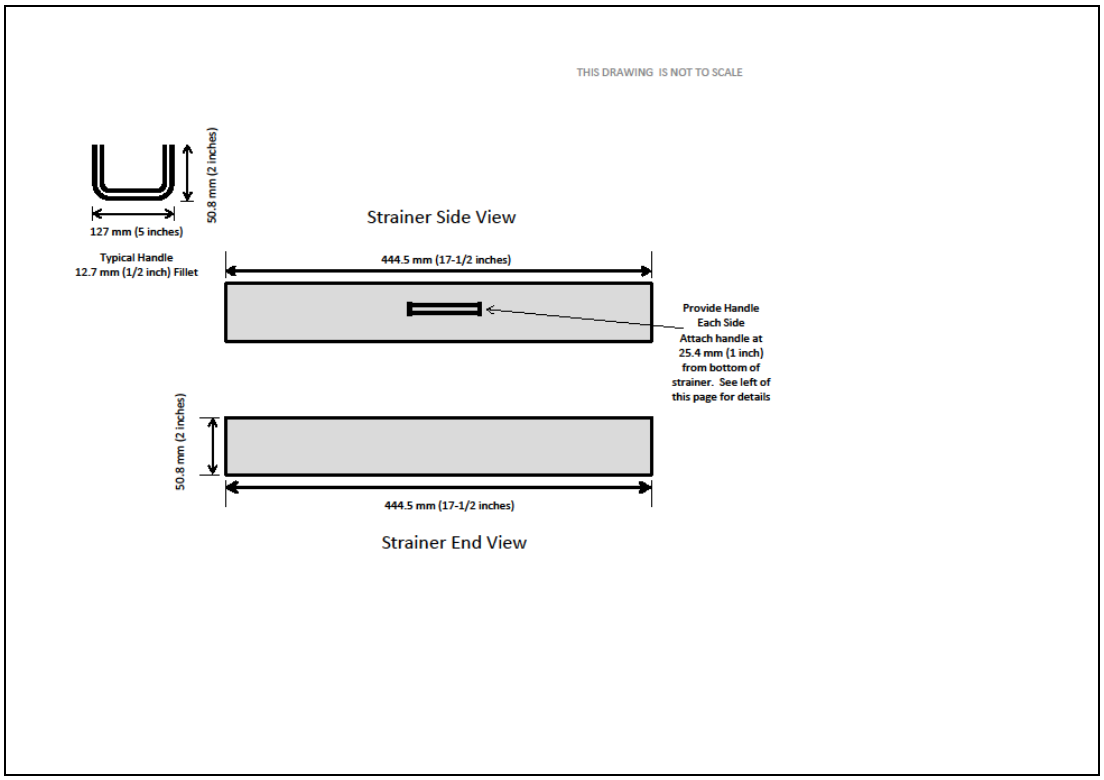
Perforation Diameter: 6 mm (1/4 inch).

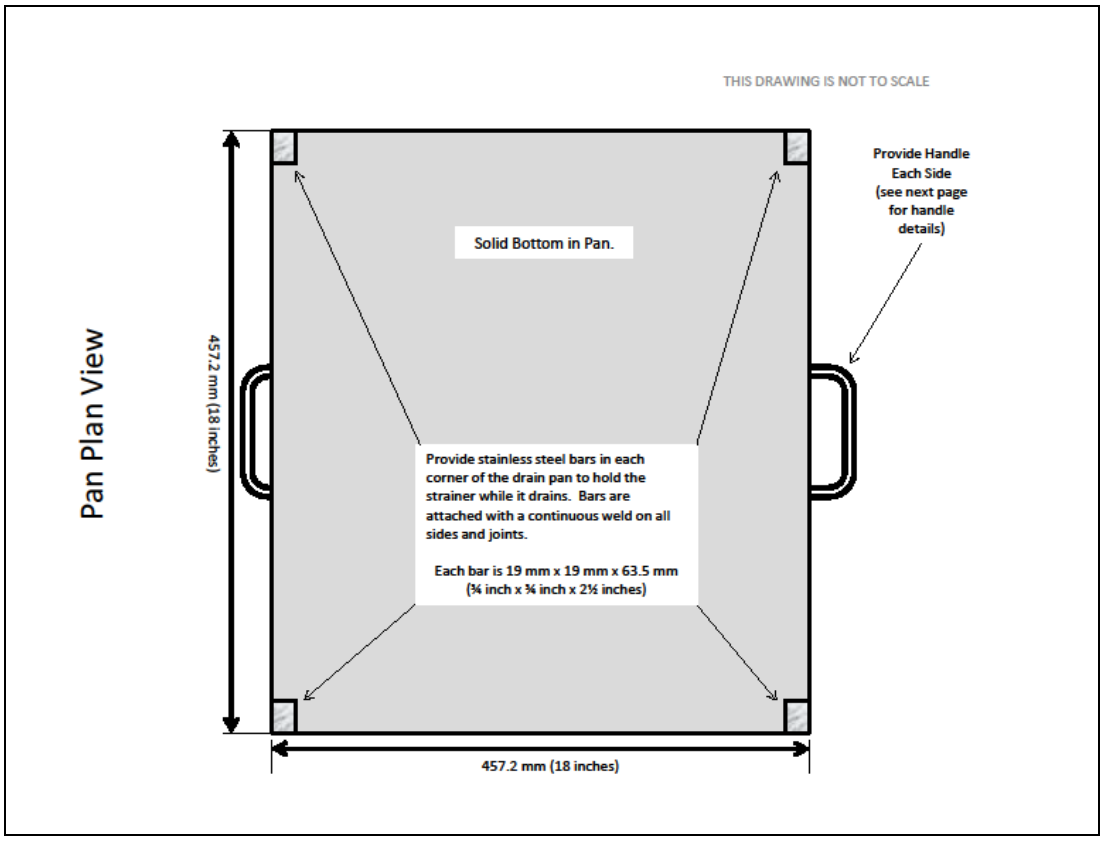
Spacing: a 32 mm (1-1/4 inches) square pattern as show in the detail to left.

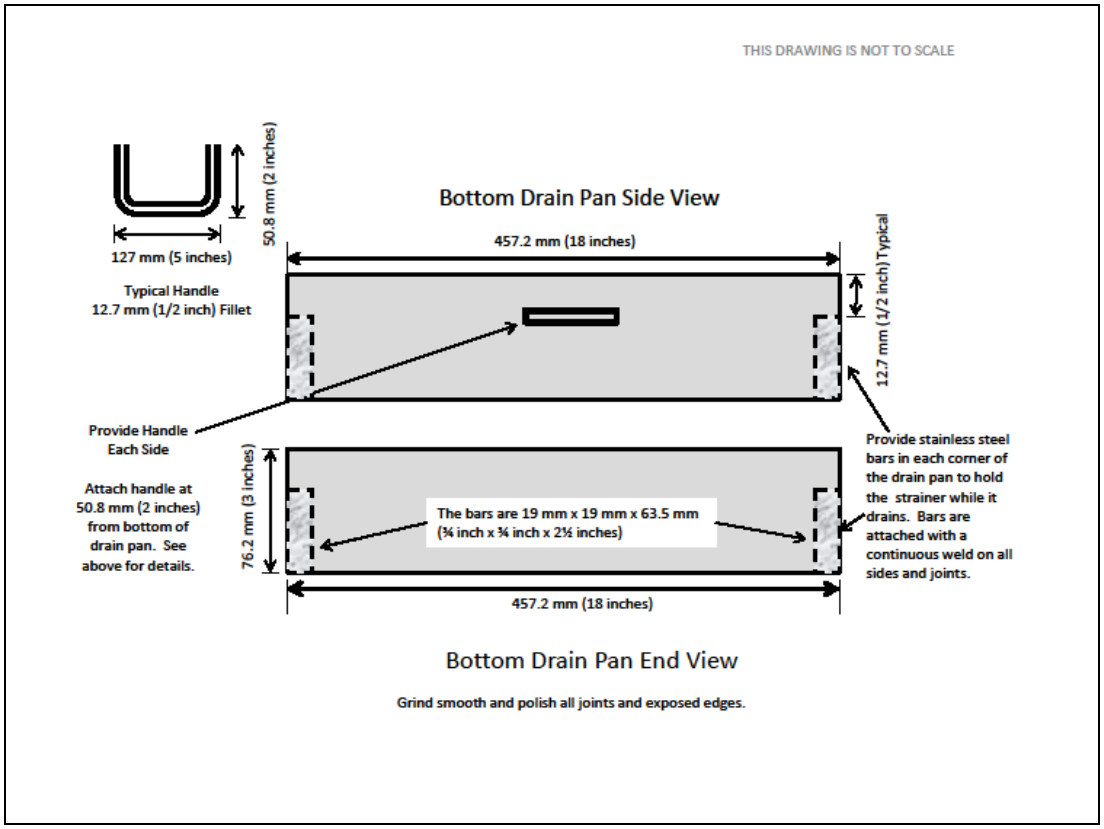


Locate Hole Grid on Center Line (C_L) of strainer (see next page). For a strainer with given dimensions there will be 13 holes per row and 13 rows. For strainers of other dimensions the number of holes per row and number or rows will vary.


THIS DRAWING NOT TO SCALE
Locate Hole Grid on Center Lines (C_L) of Strainer
C_L
Provide Handle Each Side (see next page for handle details)
Strainer Plan View
444.5 mm (17-1/2 inches)
C_L
444.5 mm (17-1/2 inches)


THIS DRAWING IS NOT TO SCALE
50.8 mm (2 inches)
127 mm (5 inches)
Typical Handle
12.7 mm (1/2 inch) Fillet
Strainer Side View
444.5 mm (17-1/2 inches)
Provide Handle Each Side
Attach handle at 25.4 mm (1 inch) from bottom of strainer. See left of this page for details
50.8 mm (2 inches)
444.5 mm (17-1/2 inches)
Strainer End View


THIS DRAWING IS NOT TO SCALE
Pan Plan View
457.2 mm (18 inches)
Solid Bottom in Pan.
Provide Handle Each Side (see next page for handle details)
Provide stainless steel bars in each corner of the drain pan to hold the strainer while it drains. Bars are attached with a continuous weld on all sides and joints.
Each bar is 19 mm x 19 mm x 63.5 mm (¾ inch x ¾ inch x 2½ inches)
457.2 mm (18 inches)


THIS DRAWING IS NOT TO SCALE
50.8 mm (2 inches)
127 mm (5 inches)
Typical Handle
12.7 mm (1/2 inch) Fillet
Bottom Drain Pan Side View
457.2 mm (18 inches)
12.7 mm (1/2 inch) Typical
Provide Handle Each Side
Attach handle at 50.8 mm (2 inches) from bottom of drain pan. See above for details.
76.2 mm (3 inches)
The bars are 19 mm x 19 mm x 63.5 mm (¾ inch x ¾ inch x 2½ inches)
Provide stainless steel bars in each corner of the drain pan to hold the strainer while it drains. Bars are attached with a continuous weld on all sides and joints.
457.2 mm (18 inches)
Bottom Drain Pan End View
Grind smooth and polish all joints and exposed edges.