

# Is it ready-to-eat (RTE)? How do you know?

## **79TH ANNUAL SEAFOOD PROCESSORS WORKSHOP**

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Bell Harbour Conference Center

2211 Alaskan Way, Pier 66

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# Are frozen vegetables RTE?



# Not a theoretical problem

**May 6, 2016**

**At least six nationwide Listeria recalls** have been issued this week as the list expanded again Friday.

**Certain brands of frozen vegetables,** granola bars and sunflower seeds have been recalled . . .

**In each recall, the product was contaminated with Listeria monocytogenes.**

# Recalled for *E coli* O121 April 2013



**Real-Life Good™**

- Made with 100% Real Mozzarella
- Good Source of Calcium
- Good Source of Protein
- 0g Trans Fat per Serving

**Cooking Instructions:**

Due to differences in appliances, cooking times may vary and require adjustment.  
CAUTION – PRODUCT WILL BE HOT!

- For food safety, quality and thorough cooking, please follow the instructions below.
- Product is not ready to eat until fully cooked.
- Keep frozen until ready to prepare.
- If cheese becomes visible, remove from heat.

	<b>Conventional Oven</b>		<b>Toaster Oven</b>		<b>Home Fryer</b>
	<ul style="list-style-type: none"> <li>• Preheat oven to 450°F.</li> <li>• Arrange product in a single layer on baking sheet and place on middle rack of oven.</li> <li>• Bake for 9–10 minutes (half box) or 10–11 minutes (full box).</li> </ul>		<ul style="list-style-type: none"> <li>• Preheat oven to 450°F.</li> <li>• Arrange product in a single layer on baking sheet.</li> <li>• Bake 2 servings (4 pieces) for 8–9 minutes.</li> </ul>		<ul style="list-style-type: none"> <li>• Preheat fryer oil to 350°F.</li> <li>• Fry 2 servings (4 pieces) for 2 minutes 15 seconds.</li> </ul>

“A total of 35 persons infected with the outbreak strain of Shiga toxin-producing *Escherichia coli* O121 (STEC O121) were reported from 19 states.

**82% [29] of ill persons were 21 years of age or younger.”**

CDC report, May 30, 2013

# Are cooking instructions enough?



Keep frozen until ready to prepare.

Due to differences in appliances, cooking times may vary and require adjustment.

Caution – Product will be hot!

## Conventional Oven:



- Preheat oven to 450°F.
- Arrange product in a single layer on baking sheet and place on middle rack of oven.

	Half Bag	Full Bag
Conventional Oven	13–14 mins	15–16 mins

## Toaster Oven:



- Preheat oven to 450°F.
- Arrange product in a single layer on baking sheet.
- Bake 2 servings (16 pieces) 14–15 minutes.

## Home Fryer:



- Preheat fryer oil to 350°F.
- Fry 2 servings (16 pieces) for 4 minutes 30 seconds.

## Are cooking instructions enough?

- What would a child, or an inebriated young man be more likely to do?
- Bake at 450° F for 13 minutes?
- Or microwave for 2 minutes?

# Frozen fish sticks

## COOKING DIRECTIONS:

**NOT FULLY COOKED, KEEP FROZEN UNTIL READY TO COOK.**  
**For food safety and quality, follow cooking directions below.**

### CONVENTIONAL OVEN:

- |   |   |   |
|---|---|---|
| <p><b>1</b> Move oven rack to middle of oven.</p> <p><b>2</b> Heat oven to 425°F.</p> | <p><b>3</b> Arrange uncooked fish sticks in a shallow metal baking pan, leaving space between sticks.</p> | <p><b>4</b> Bake uncovered <b>14 to 17 minutes*</b> until coating is golden brown and crunchy. <b>Turn sticks over after 10 minutes of cooking.</b> For extra crunch or if cooking more than 20 fish sticks, add 2 minutes to the cooking time.</p> |
|---|---|---|

**Cook sticks thoroughly before serving.**

\* Fully cooked fish must reach an internal temperature of 165°F or higher.

**MICROWAVING IS NOT RECOMMENDED**

**INGREDIENTS:** ALASKA COD, UNBLEACHED ENRICHED FLOUR (WHEAT FLOUR, NIACIN, REDUCED IRON, FERROUS SULFATE, THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID), MODIFIED CORN STARCH, EXPELLER PRESSED CANOLA OIL, WATER, YELLOW CORN FLOUR, UNBLEACHED WHEAT FLOUR, SALT, SUGAR, GARLIC POWDER, ONION POWDER, LEAVENING (SODIUM ACID PYROPHOSPHATE, SODIUM BICARBONATE), INULIN (A NATURAL CHICORY ROOT EXTRACT), DRIED YEAST, SUNFLOWER OIL, SPICE, PAPRIKA EXTRACT (COLOR).

**CONTAINS ALASKA COD, WHEAT.**

Dist. & Sold Exclusively By:  
 Trader Joe's, Monrovia, CA 91016

## COOKING INSTRUCTIONS:

### CONVENTIONAL OVEN:

Preheat oven to 400°F. Place cod fillets on baking sheet on center oven rack. Bake for 18-22 minutes, until internal temperature reaches 145°F and fillets turn golden brown. Not recommended for microwave oven cooking.

# Nestle Cookie Dough, before & after recall

**COOKIE DOUGH CONTAINS RAW INGREDIENTS. BAKE BEFORE CONSUMING.**

**LA MASA DE GALLETAS CONTIENE INGREDIENTES CRUDOS. HORNEE LA MASA ANTES DE CONSUMIR.**

**INSTRUCTIONS INSTRUCCIONES**

**Preheat**  
oven to 350°F.

**Precaliente**  
el horno a 350°F.

**Just Break...**  
along pre-scored lines. Place 2" apart on ungreased baking sheet(s).

**Simplemente Desprenda...**  
a lo largo de las líneas premarcadas. Coloque en una bandeja(s) de hornear sin engrasar, separándolas 2".

**and Bake!**

**350°F**

**DO NOT CONSUME RAW COOKIE DOUGH.**  
Use safe food handling procedures.

**PREHEAT** oven to 350°F

**1 SPOON** heaping teaspoons of well-chilled dough about 2 inches apart onto ungreased baking sheets.

**2 BAKE** 12 to 13 mins. or until golden brown.

**3 COOL** on baking sheets



# ConAgra label after 2007 Salmonella recall

**MICROWAVE OVEN** *Cook only one product at a time.*

- 1 PLACE** pot pie on microwave-safe plate; **slit** top crust. 
- 2 MICROWAVE** on HIGH.  
**1100 watt oven or more** **4 to 5 minutes**  
**DO NOT COOK** in microwave ovens below 1100 watts as pot pie may not cook thoroughly. Conventional oven preparation is recommended. 
- 3 LET STAND 3 MINUTES** in microwave to complete cooking. **CAREFULLY REMOVE** as **product will be hot.** 
- 4 CHECK** that pot pie is **cooked thoroughly.**
  - **Internal temperature needs to reach 165°F** as measured by a food thermometer in several spots. 
  - Crust is golden brown and steam rises from filling.

## Revised Food CGMP:

§ 117.3 Definitions. *Ready-to-eat food (RTE food)* means any food . . . normally eaten in its raw state **Or any other food . . . for which it is reasonably foreseeable that the food will be eaten without further processing that would significantly minimize biological hazards.** (*Translation: properly cooked*)

# Who decides, manufacturers or consumers?

## *just like chipotle's corn salsa*

### Ingredients:

**1 - 12-ounce bag of frozen yellow corn, defrosted and drained**

2 medium-sized jalapenos, seeded and chopped (leave in some seeds for more heat if desired)

1/2 red onion, finely chopped (about 1/3 cup)

3/4 cup fresh cilantro, torn or chopped . . .

### Directions:

**Combine all ingredients in a bowl and mix, mix, mix.**

Season with additional salt and pepper if desired. Add more cilantro, jalapeno or lime according to your tastes!

# Mommy blogs

## More Mom-Tested Teething Tricks

- ➔ We used **frozen crinkle-cut French fries**. Whenever . . . we knew that a new tooth was coming through, we would grab one fry from the fridge and let him chew on it.  
–M. M., Omaha, NE

# Is this a food?

## Home made Play Dough

### ➤ Ingredients

➤ 3 cups flour

➤ 1 cup cold water

➤ 1 cup salt

➤ 2 teaspoons oil

➤ Food coloring or powdered paint

➤ Mix it all together in a bowl ...

keep kneading it until it's just right. You can even add a touch of vanilla or peppermint to make it smell wonderful!

# Some degree of rodent filth in wheat flour is inevitable

## Defect Action Level:

- ▶ “The FDA set these action levels because it is **economically impractical** to grow, harvest, or process raw products that are **totally free of non-hazardous**, naturally occurring, unavoidable defects. Products harmful to consumers are subject to regulatory action whether or not they exceed the action levels.”

<https://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/SanitationTransportation/ucm056174.htm>

## Defect Action Level (DAL)

<b>Wheat</b>	<b>Rodent filth</b>	<b>Average of 9 mg or more rodent excreta pellets and/or pellet fragments per kilogram</b>
<b>Wheat Flour</b>	<b>Rodent filth</b>	<b>Average of 1 or more rodent hairs per 50 grams</b>

## FDA draws a clear line:

**“Eating raw dough or batter – . . . for bread, cookies, pizza or tortillas – could make you, and your kids, sick,”** says Jenny Scott, a senior advisor in FDA’s Center for Food Safety and Applied Nutrition. . . .

**“Why? Flour . . . can contain bacteria that cause disease.”** (June 28, 2016)



## Seafood is exempt from FSMA preventive controls – if in compliance with Part 123



# FDA draws a fuzzy line:

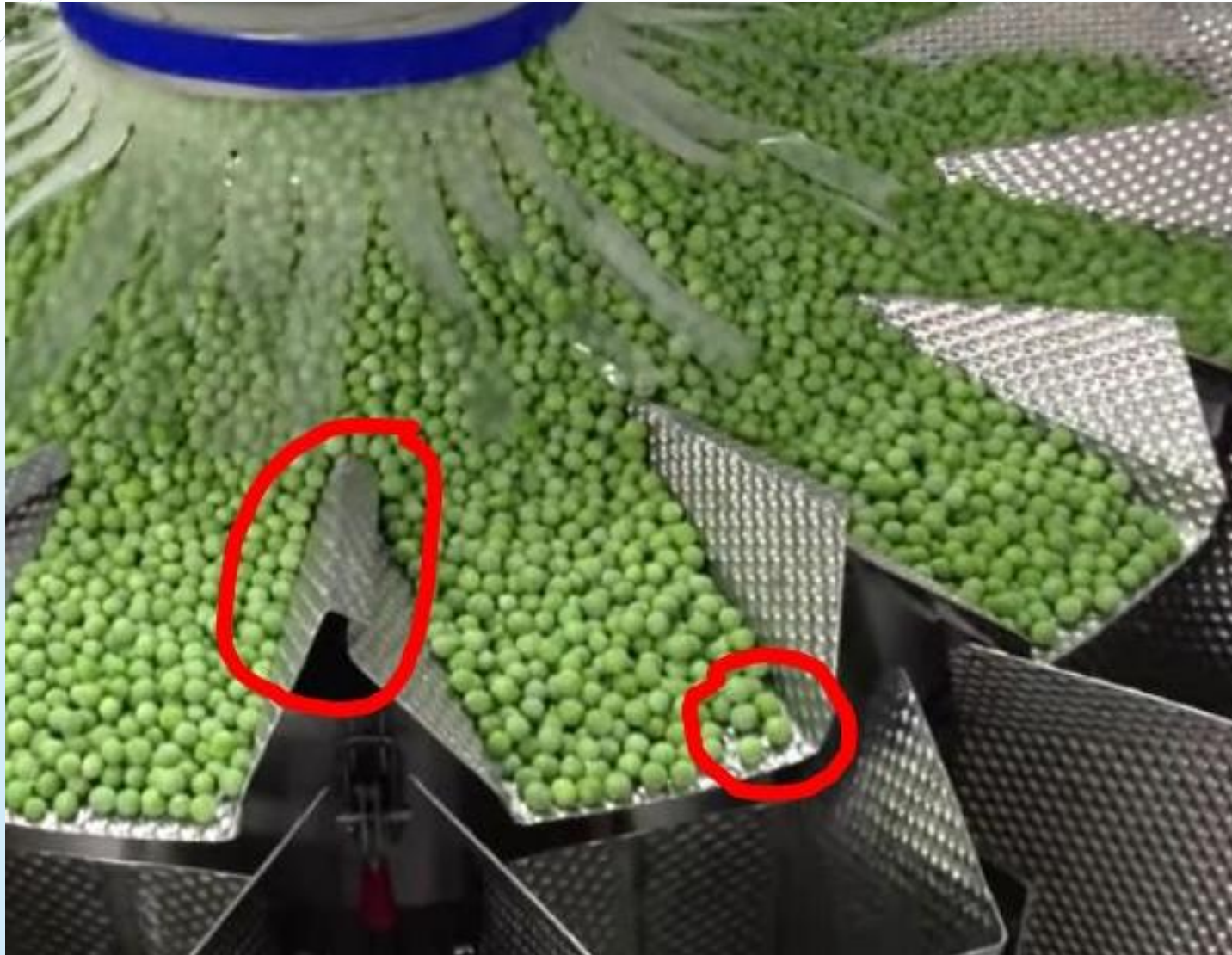
- ➔ **Eating Raw Seafood -What You Need To Know**
- ➔ It's always best to cook seafood thoroughly . . . . However, if **you choose to eat raw fish anyway**, . . . eat fish that has been previously frozen.
- ➔ . . . **freezing will kill any parasites** that may be present.
- ➔ However, be aware that **freezing doesn't kill all harmful microorganisms**. That's why the safest route is to cook your seafood. (Aug 15, 2016)

<https://www.fda.gov/food/resourcesforyou/consumers/ucm077331.htm>

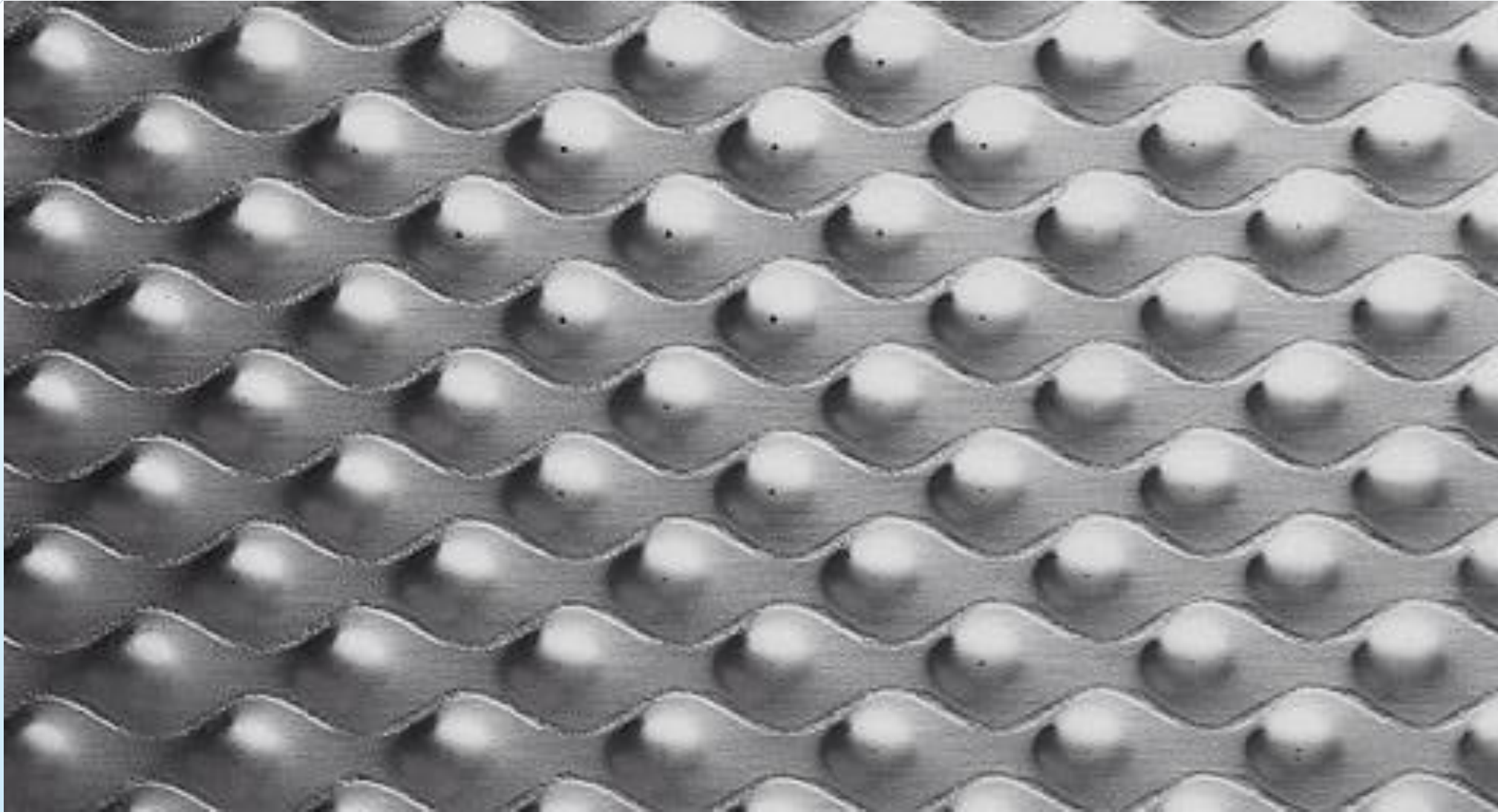
## **This relates to FSMA how?**

- CGMPs require proper equipment, cleaning, and maintenance.
- PCHF mandates hazard analysis, hazard controls, validation, and verification.
- RTE food must include environmental monitoring as a verification measure.

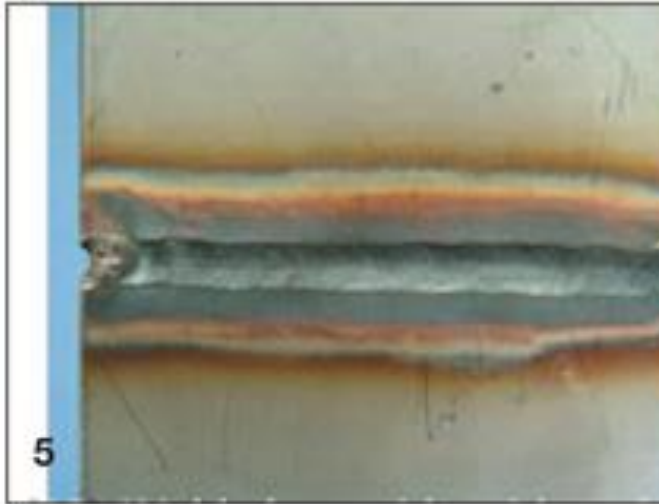
# What's going on?



# To make a dimpled surface



# Welding repairs



**Photo 5**, a flat plate welded on one side without backer rod - depression is a hiding place for microbes and soils.

**Photo 6**, plate is welded with backer rod but not ground and polished – a food safety risk.

**Photo 7**, a ground and polished sanitary weld.

## 3A SSI, dairy industry standards

### Food Product Contact Surfaces are:

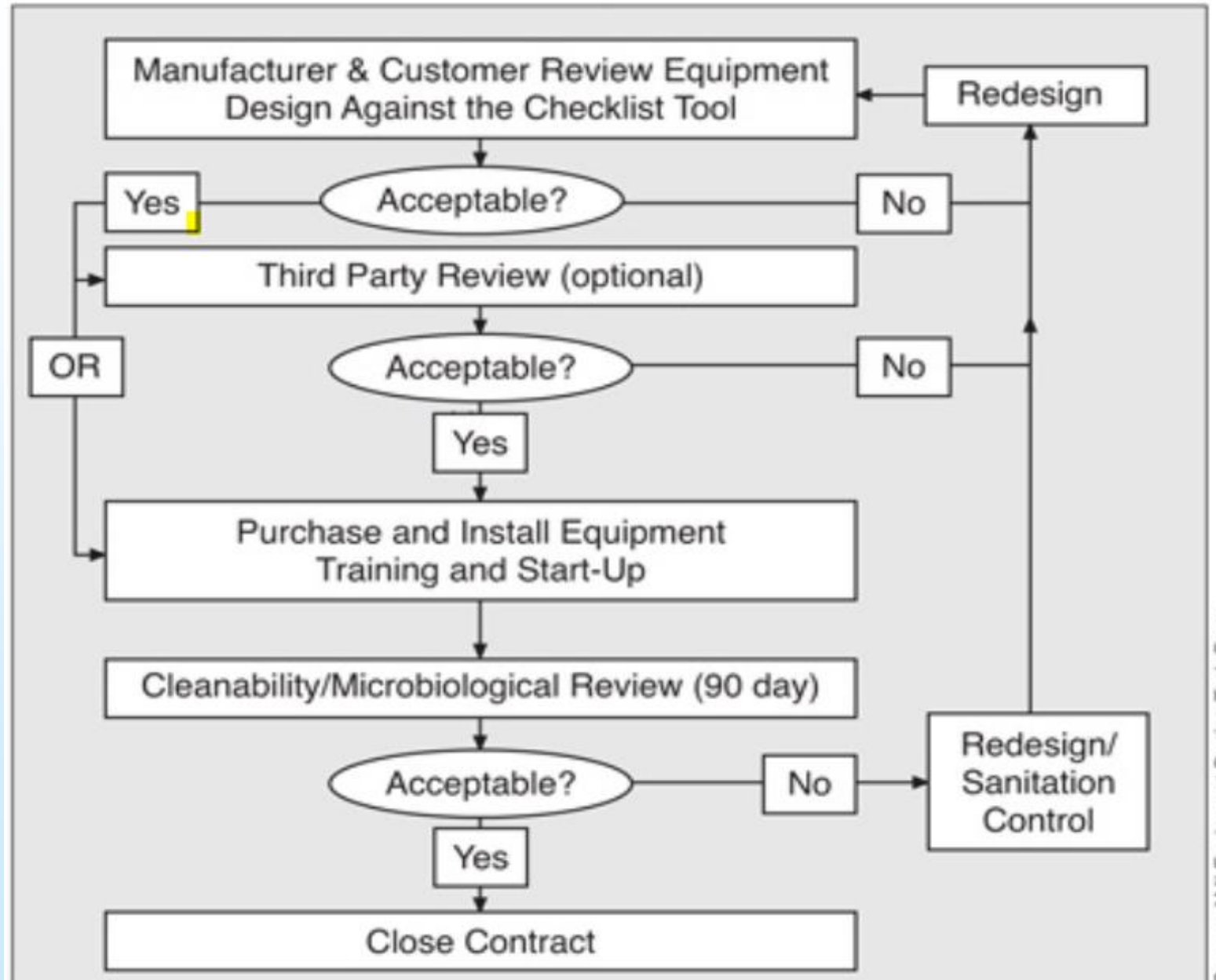
- Smooth,
- Impervious,
- Free of cracks and crevices,
- Nonporous,
- Nonabsorbent,
- Non-contaminating,
- Nonreactive,
- Corrosion resistant,
- Durable and maintenance free,
- Nontoxic, and
- **Cleanable.**

# American Meat Institute – 10 Principles of Sanitary Design (2003)

- ➔ **Cleanable to a microbiological level**
- ➔ Made of compatible materials,
- ➔ Accessible for inspection, maintenance, cleaning and sanitation without the use of tools,
- ➔ No product or liquid collection,
- ➔ Hollow areas hermetically sealed,
- ➔ No niches,
- ➔ Sanitary operational performance,
- ➔ Hygienic design of maintenance enclosures,
- ➔ Hygienic compatibility with other plant systems,
- ➔ Validated cleaning and sanitizing protocols.



# How RTE food processor should buy equipment:





# Questions?