




Eric J. Holcomb  
Governor

Kristina Box, MD, FACOG  
State Health Commissioner

**Date:** September 6, 2019

**To:** All Local Health Departments & Other Indiana Food Regulatory Agencies

**From:** Manda Clevenger, J.D., Director   
Food Protection Program

**Subject:** Use of Thermo-Cup at Indiana Tim Hortons Establishments

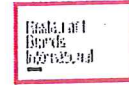
This memorandum is provided to answer questions and promote consistency among regulators at local health departments and other Indiana food regulatory agencies regarding the use of food equipment called a "Thermo-Cup" at Indiana retail food establishments operated by the TDL Group Corporation, an affiliate of Restaurant Brands International Incorporated, which includes the Tim Hortons brand. This company also operates Burger King and Popeye brand restaurants, and the equipment might also be used in the future at any of these facilities. The attached document is provided by the company for ease of description of the equipment. The attached information should be considered as confidential/proprietary information under 410 IAC 7-24-194.

The ISDH Food Protection Program was asked to provide an opinion regarding the attached described equipment as it relates to Section 3-304.12 of the 2013 FDA Model Food Code, which is identical to the same section of the 2017 FDA Model Food Code and has the same purpose as 410 IAC 7-24-234 in the Sanitary Standards for the Operation of Retail Food Establishments rule.

With regards to this equipment, we offer no objections to its use as described so long as the water is maintained at a temperature above 135° F and the vessel continues to be cleanable. With regard to possible allergen transfer, this equipment will be used for drinks containing milk and/or cream and sugar and not used for drinks not containing these ingredients.

Questions related to this document or topic may be directed to [dmiller@isdh.in.gov](mailto:dmiller@isdh.in.gov), your ISDH Food Protection Program field staff, or to the ISDH, Food Protection Program Office at 317-234-8569.

## US FDA Food Code 2013







### 3-304.12 In-Use Utensils, Between-Use Storage.

- > During pauses in FOOD preparation or dispensing, FOOD preparation and dispensing UTENSILS shall be stored:
- > (A) Except as specified under (B) of this section, In the FOOD with their handles above the top of the FOOD and the container;
- > (B) In FOOD that is not TCS FOOD with their handles above the top of the FOOD within containers or EQUIPMENT that can be closed, such as bins of sugar, flour, or cinnamon;
- > (C) On a clean portion of the FOOD preparation table or cooking EQUIPMENT only if the In-use UTENSIL and the FOOD CONTACT surface of the FOOD preparation table or cooking EQUIPMENT are cleaned and SANITIZED at a frequency specified under 4-602.11 and 4-702.11;
- > (D) In running water of sufficient velocity to flush particulates to the drain, if used with moist FOOD such as ice cream or mashed potatoes;
- > (E) In a clean, protected location if the UTENSILS, such as ice scoops, are used only with a FOOD that is not TCS FOOD; or
- > (F) In a container of water if the water is maintained at a temperature of at least 57°C (135°F) and the container is cleaned at a frequency specified under Subparagraph 4-602.11(D)(7).

## Procedure Summary

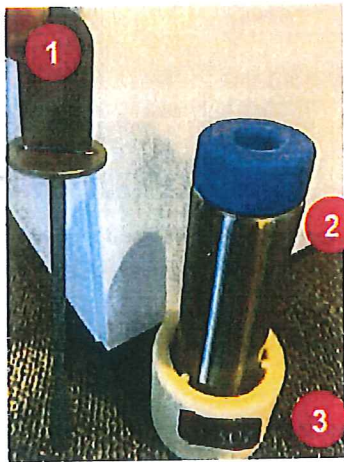


	Hot Water	Running Water	Single Use
Current			
Proposed			

## Proposed Equipment Overview



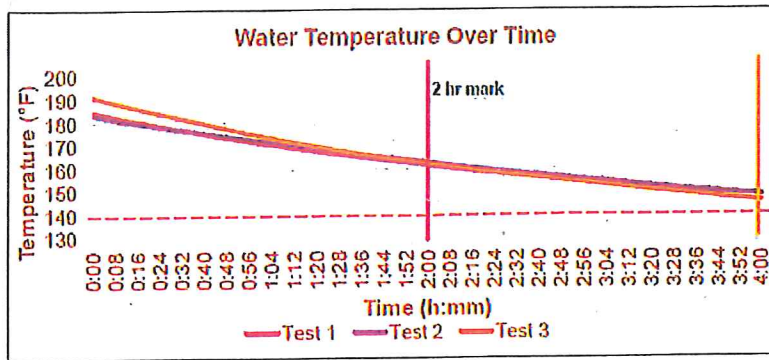
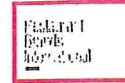
- Thermo-Cup equipment is intended to provide restaurants the ability to maintain hot water at 140°F (60°C) for stir stick holding
- Restaurant will add a hold time when the Thermo-Cup is filled



- 1** Modified stir stick
  - 430 stainless steel
  - Thicker to replace parfait spoon
- 2** Insulated bottle 'Thermo-Cup'
  - 430 stainless steel
- 3** Stand with rubber base
  - Injected molded plastic



## Testing – RBI Test Kitchen



Time (h:mm)	Avg Temp (°F)	Standard Dev. (°F)	Δ°F
0:00	186.5	4.0	
0:30	179.1	3.0	-7.4
1:00	172.8	1.7	-6.3
1:30	167.2	0.8	-5.6
2:00	162.2	0.7	-5.0
2:30	157.9	0.7	-4.3
3:00	154.0	0.8	-3.9
3:30	150.2	1.0	-3.8
4:00	147.0	1.9	-3.3

### Procedure – Static Testing

1. Fill Thermo-Cup with hot water from Coffee Pot. Starting temperature should be above 180°F.
2. Screw the lid back on the Thermo-Cup. Do NOT leave the bottle cap unscrewed! Insert the stir stick back into the hole on the top of the cap.
3. Record temperature every 0.5 seconds over 4 hours.

### Results

- > The solution is capable of maintaining water above 140°F for 2 hours, pending start temperature is above 180°F
- > Water temperature drops about 10°F per hour

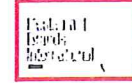
## Thermo-Cup Procedures

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1. Remove stir stick and unscrew the cap from the top of the bottle.
2. From the coffee machine hot water dispenser, fill an empty coffee pot with 2 inches of hot water.
3. Pour hot water slowly from Coffee Pot into Thermo-Cup. Do NOT fill to the brim!
4. Screw the lid back on the bottle. Do NOT leave the bottle cap unscrewed!
5. Insert the stir stick back into the hole on the top of the cap.
6. With a white China Marker, mark 2-hour discard time on the black label that should be placed on the base.
7. Use the included stainless steel stirrer as you would a parfait spoon to stir beverages, placing stir stick back in hole in the lid each time.
8. After 2 hours, discard the water by removing the stir stick, unscrewing the cap from the bottle, and pouring the water out in to the dump sink.
9. Wash, rinse and sanitize Thermo Cup and Stirrer every 2 hours. Do NOT put in dishwasher.
10. Fill an empty coffee pot with 2 inches of hot water and pour into Thermo-Cup.

## Thermo-Cup Procedures

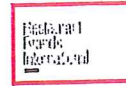


1. Remove stir stick and unscrew the cap from the top of the bottle.



2. From the coffee machine hot water dispenser, fill an empty coffee pot with 2 inches of hot water.

## Thermo-Cup Procedures



3. Pour hot water slowly from Coffee Pot into Thermo-Cup. Once the bottle narrows, stop filling. Do NOT fill to the brim!



4. Screw the lid back on the bottle. Do NOT leave the bottle cap unscrewed!
5. Insert the stir stick back into the hole on the top of the cap.



## Thermo-Cup Procedures

Restaurant  
Equipment  
International

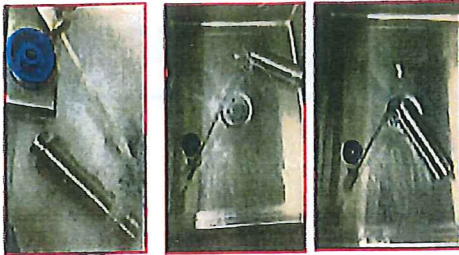


6. With a white China Marker, mark 2-hour discard time on the black label that should be placed on the base.
7. Use the included stainless steel stirrer as you would a parfait spoon to stir coffees, placing stir stick back in hole in the lid each time.

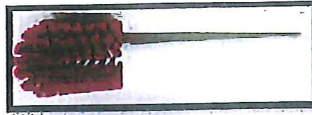


8. After 2 hours, discard the water by removing the stir stick, unscrewing the cap from the bottle, and pouring the water out in to the dump sink.

## Thermo-Cup Procedures

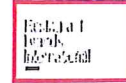


9. Wash, rinse and sanitize Thermo Cup and stirrer every 2 hours. Do NOT put in dishwasher.

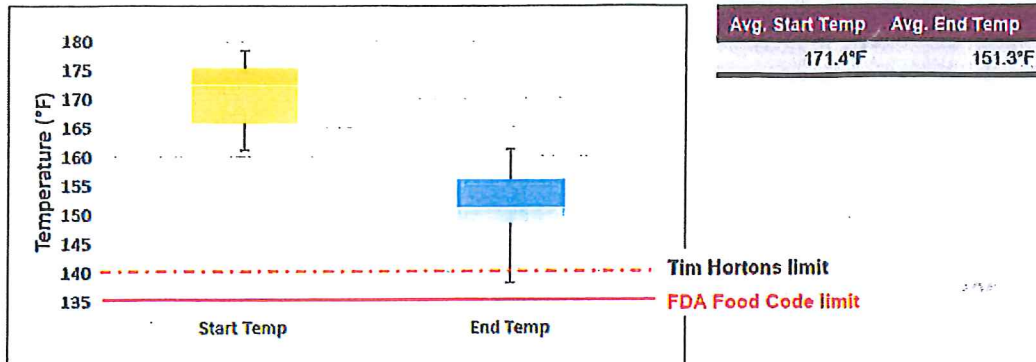


10. Fill an empty coffee pot with 2 inches of hot water and pour into Thermo-Cup.

## Field Test Results



10 Thermo-Cups were sent to 3 restaurants in Ohio for a preliminary field test.



- > The above graph represents a summary of daily start and end temperatures from a Thermo-Cup in one restaurant for 28 days
  - Results are consistent with lab testing
- > Crew feedback was mostly positive
  - There is a slight adjustment period to grow accustomed to the sharper insertion angle of the stirrer
  - Some training required to ensure hot water was only poured when hot water tank was ready

## Summary

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The Tim Hortons Brand requires stirring of Coffee to ensure sugar and cream/milk are evenly distributed before serving to guest:

1. Add milk/cream and sugar, if required
2. Pour beverage
3. Stir using stir stick
4. Place stir stick into **Thermo-Cup (> 135° F)**
5. Serve beverage with lid