

Public Health Food Safety Controls for Retail Hot Food Programs: Which Approach Works Best?

Food safety has long been a crucial concern for prepared food retailers. According to the US Food Code and most state and local health departments, one of two approaches to maintaining hot food safety must be used — Time Only or Time and Temperature — as a Public Health Control. For supermarkets in particular, where the “Ready-to-Eat” segment has become a key component of their strategy, the choice of which approach to use is now more critical than ever.

The importance of food safety in today’s competitive environment cannot be over emphasized. Just a glimpse at the news only confirms this is the case. Fast casual dining chain Chipotle Mexican Grill started out the new year in 2016 with a federal subpoena following multiple outbreaks of foodborne illness.¹ Same-store sales for the chain dropped by more than 14 percent over the preceding quarter, and overall sales were off by more than a third.

While the type of problem Chipotle faced is not one likely to hit a supermarket’s Ready-to-Eat program, the fact of the matter is that anyone selling prepared foods cannot take food safety for granted. According to the Center for Disease Control, one in six Americans will suffer from foodborne illness.² This is particularly important with supermarket ready-to-eat programs, which must take strict care in adhering to allowable methods of public health control. The question is: Which approach works best?

¹ bloomberg.com/news/articles/2016-01-06/chipotle-says-sales-dropped-even-more-than-expected-last-quarter

² The Evolution of Food Safety, qsrmagazine.com/print/45531

Time and Temperature or Time Only?

This decision becomes all the more important when the market for grocery store prepared meals is taken as a whole. As reported by the Wall Street Journal, market-research firm NPD Group has found that eating dinner at grocery stores has increased by 7% over the past five years.³ That works out to 1.8 billion visits per year. Whole Foods alone, which pioneered the sale of fresh-cooked items in its stores, more than doubled their sales between 2007 and 2014, from \$1.3 billion to \$2.7 billion. That, ironically enough, puts them on par with beleaguered traditional restaurateur Chipotle. Apart from Chipotle's problems, other chains, such as McDonalds, are facing an ongoing two-year slump in sales. Looking ahead, A.T. Kearney sees the segment growing at a 6-7% compound annual growth rate (CAGR) through 2017. That compares to just 3-4% for overall foodservice over the same period.⁴ Clearly, the momentum is in grocers' favor.

In order to capitalize on this trend and to avoid the kinds of problems that have beset restaurants, supermarket hot food programs must choose one of the two approaches to protecting public health that are required by federal, state and local authorities. Until recently, Time and Temperature as a Public Health Control, or Temperature Control for Safety (TCS) as it is sometimes referred to, has been the predominant approach. But, over time more and more retailers have moved to, or are considering, Time Only as a Public Health Control (TPHC).

Both approaches to hot food safety are acceptable under the U.S. FDA Food Code and most state and local health departments. Although most retailers today still use Time and Temperature as a Public Health Control there are an increasing number who are switching over to Time Only as a Public Health Control. This option helps them manage their hot food programs without running the risk of being sighted or shut down by the local Health Department for not holding proper product temperatures.

In determining which route to take — TCS or TPHC — retailers should consider a few basic questions about their goals and existing operations:

³ wsj.com/articles/supermarkets-convenience-stores-now-woo-diners-too-1419899444

⁴ supermarketguru.com/articles/prepared-meals-will-outpace-foodservice,-packaged-foods-growth.html

1. What do their customers expect when purchasing hot foods – hot and ready-to-eat, or ready-to-heat?
2. Do they already offer an area in which their customers can sit down to dine?
3. Is their program focused on providing takeout or items to be reheated at home?
4. Do they already have, and use, a written SOP that is supported by proper training for one program or the other?⁵
5. Will one approach or the other affect product integrity?
6. Is employee turnover and training an issue?

The answers to these questions can go a long way toward deciding which method for ensuring food safety makes the most sense. Before considering which method is best it's good to know something about how each works.

The ServSafe® certification program⁶ created by the National Restaurant Association points out that the “Danger Zone” for foods is between 41°F and 135°F. It is within this temperature range where there can be rapid bacterial growth and toxin production. Hot foods must be kept above 135 degrees to prevent the occurrence of harmful agents, and in order to ensure this, food temperatures should be checked every 2 hours. Consequently, retailers have relied on TCS to guarantee that both time and temperature are closely observed.

According to a section of the FDA Food Code,⁷ Time Only is permissible as a public safety control. Based on research, there have been findings that the increased risk in bacterial growth or toxin production is less concerning within a four-hour window, therefore this approach can be used. Provided that foods are cooked and handled according to the regulations laid out in the code, Time Only (also referred to as Time Alone in the food code) is completely acceptable.

Time Only as a Public Health Control

Time Only as a Public Health Control allows for a variety of food types that can be safely held within a four-hour window for hot foods without monitoring of

⁵ HACCP (Hazard Analysis Critical Control Point) principles can be used as a basis [fda.gov/downloads/Food/GuidanceRegulation/HACCP/UCM077957.pdf](https://www.fda.gov/downloads/Food/GuidanceRegulation/HACCP/UCM077957.pdf)

⁶ [servsafe.com](https://www.servsafe.com)

⁷ [fda.gov/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/ucm189211.htm](https://www.fda.gov/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/ucm189211.htm)

temperature.⁸ These include prior to cooking, for instance, shell eggs on a cooking line for waffle batter in a self-serve breakfast bar. With respect to foods prepared for immediate consumption, those held for service in a buffet like pizza, pasta, chicken wings, sushi rice, egg rolls and rice noodles are also included.

In order to implement a TPHC program, a number of requirements must be met. These start with submitting written notification to most regulatory authorities under which the facility proposing to adopt the program operates.⁹ Another factor is that the store does not have facilities to adequately refrigerate or hold high risk foods¹⁰. These include, for instance, hamburger patties ready for grilling. Items also taken into consideration are the aforementioned pizza, pasta, chicken wings and egg rolls. Other items for which TPHC can be used are products that cannot be kept within the load limits of refrigerated display cases. These are typically items prepared for the lunch or dinner rush at a store with high-traffic volumes. Sandwiches, for example, fall under this category, as do burritos, salads with chicken or other cooked meats. However, even when a store may have adequate facilities but is unable to effectively implement adequate procedures required for TTPCH, then Time Only is an option. Finally, a set of written procedures must be maintained and available at all times for inspectors in jurisdictions where they are required.

The written procedures necessary for a TPHC program typically include a number of specific points. These begin with a list of items that are going to be held using TPHC, where these items will be held, and whether they are for a working supply or ready-to-eat products. A description of how any cooked food was cooled for sale, along with an explanation of when the food will be cooked, served or discarded within four hours must also be included. Another requirement is to describe how any containers or packages used will be marked. Along with these points, the persons responsible for each task must be identified.

⁸ With proper planning, cold foods that do not exceed 70 degrees F, can be held up to six hours.

⁹ Minnesota does not require written notification

¹⁰ According to FDA, these are foods also called that fall into the category of potentially hazardous foods “that may contain pathogenic microorganisms” such as raw meat, fish, oysters, poultry, milk, tofu, fresh filed pasta, meat pies, frankfurts, salami, cooked rice, and lasagna.” Nov 26, 2014

As required by the FDA, written procedures are always good to have even though some places do not specifically require them. Doing so helps to ensure that a consistent approach on food safety is in place, as well as the integrity and reputation of the business. These procedures can usually be developed with input from inspectors so their standards are met and safeguards are in place against any potential problems that might otherwise occur.

Another factor to take into account when considering TPHC is its effect on shrink and the bottom line. Foremost among these is that once TPHC is declared for a particular product, that item cannot be switched back to TCS. After the lunch or dinner rush, for example, any remaining items held under TPHC cannot then be moved to TCS. Another factor is that the four-hour limit must be strictly observed. Rotisserie chicken that doesn't sell within four hours, for instance, cannot be reused for chicken salad or other kinds of products. Different batches cannot be mixed into a fresh deli salad on an existing salad bar. Beyond the four-hour window, nothing can be saved and reheated to serve again, and any unmarked containers must be discarded.

Along with these concerns, stores must also guard against any misuse of THCP due to labor shortages or lack of adequate training. High-risk foods not cooked to the required internal temperatures as established in the FDA Food Code, could be at risk of increased bacteria counts if, at any point during the four hours, they are held in the danger zone of from 41°F to 135°F. This includes items that might be held out of temperature prior to labeling for the four-hour window. Food handling procedures must be consistent in order to maintain safe product temperatures throughout the allowable time.

Adopting TPHC can significantly benefit a supermarket hot foods ready-to-eat program. By implementing this, a retailer would eliminate the need to continuously monitor product temperature required by TCS, and have the costs and resources for using the TCS approach available to use elsewhere. But, before committing to the TPHC approach, a retailer should carefully examine whether it is right for their business and customers. The six questions about one's operation mentioned above are a good place to start.