



City of Madison Fire Department

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MADISON FIRE DEPARTMENT BULLETIN

FIRE HAZARD

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Overview:

The Madison Fire Department has identified a fire hazard related to food preparation through two separate, but similar, restaurant fires within the City of Madison resulting in combined damage estimates at \$575,000.

During the course of these investigations, Madison Fire identified seven other restaurants (five in Wisconsin, two nationwide) that also sustained fire damage due to this same food preparation technique.

Fire Investigation:

Fire Investigators have determined these fires to be a result of a preparation technique used to create a food product commonly referred to as “crunch” or “crunchy.” It’s a commonly-prepared garnish, similar to tempura, made by restaurants that serve sushi. The “crunch” is produced from a water and flour batter which is deep fried in cooking oil then placed in a container to drain and cool.

The following is what fire investigators have identified as an environment for the “crunch” product to self-heat:

- The use of vegetable oil (soybean oil) or other cooking oil
- Deep frying the batter in batches and piling it in a bowl or colander to drain/cool
- Leaving the product unattended while it cools

Cooking oils, especially soybean oil and canola oil, are known to have a propensity to self-heat under certain circumstances. For example, rags saturated with cooking oil residue can self-heat and undergo spontaneous combustion after being laundered.

Because the “crunch” product is heated during the cooking process, then placed in a bowl or colander to cool and drain, the ability for the heat to dissipate is compromised. These conditions can create an environment for a fire to occur.

Recommended Prevention & Safety Measures:

The Madison Fire Department recommends that any restaurant or home cook that prepares “crunch” follow the safety guidelines below to reduce the fire hazard during preparation:

- When making “crunch,” DO NOT pile the product in a container where the heat can build, such as a metal colander or mesh strainer. Instead, spread out the product on a baking sheet so the heat can readily dissipate.
- DO NOT leave the product to cool unattended.
- Place the product under a wet-chemical fire suppression hood as it cools.

**See attached photos*