

Six Enemies of Frying Oil

Great tasting fried food requires superior ingredients, clean and well-maintained equipment, proper frying procedures and a consistent maintenance protocol of the cooking oil. Taking proper care of cooking oil is a fundamental part of assuring high-quality fried food while maximizing the life of the cooking oil and reducing cost. Recognizing and understanding the reasons cooking oil breaks down is the first step in providing for proper cooking oil maintenance.

Six reasons why cooking oil breaks down and needs to be changed are as follows:

Air



Air contains oxygen and oxygen reacts with cooking oil causing it to get dark in color, creating off-flavors and odors. Cooking oil breakdown due to reaction with air is impossible to prevent but there are some things that can be done to minimize the effect.

- Cover the fryers at night – this restricts air movement and reduces breakdown.
- Take care when filtering - try to avoid splashing and burping air through the pump.

Heat



Heat accelerates cooking oil breakdown. Cooking oil at room temperature will last well over a year; heat it to frying temperatures and it could breakdown within a week. You must maintain the appropriate frying temperature of 350°F, but there are some things that can be done to minimize heat's effect.

- Turn off fryers when not in use.
- Calibrate fryers regularly and set them to recommended temperatures.

Moisture



Moisture or water reacts with oil producing off-flavors and odors. All food contains moisture, and when it is fried some of the moisture comes out in the form of bubbles. We cannot keep all moisture out of the cooking oil, but we can minimize it by taking the following actions:

- Make sure that baskets and utensils are completely dry before using.
- Cover whenever cleaning above or adjacent to fryers. This will prevent moisture from accidentally getting into the oil.
- Make certain that the fryer is dry after cleaning or boil out.
- Maintain reach-in freezer so that it is defrosting properly and at correct times/temperature, minimizing the chance for ice crystals to form on products.
- Do not use products with excessive ice crystals (i.e. severe freezer burn and frost residue).



Salt

Salt in oil acts as a catalyst and speeds up oil breakdown. Salt can come from the frying equipment, the food and the batter, and several other sources. Some tips to minimize salt problems are as follows:

- Never salt directly over fry vats.
- Do not re-fry products.



Carbon

During the frying process, particles of food or breading fall off. If not removed from the fryers they will burn, producing off-flavors, odors, and black specs on the finished product. Correction of this problem can be accomplished by:

- Skimming food particles from the cooking oil surface regularly.
- Filter the cooking oil at least twice daily.



Soap

Soap will react with cooking oil and cause off-flavors, odors, darkened oil, and foaming. Care should be taken to avoid adding soap to the oil while cleaning the fryers and hoods. This can be accomplished by:

- Covering the fry vats at night to avoid accidental contamination of the cooking oil with chemicals during clean up.
- Rinsing fry vats, baskets, and utensils with clean water. Wipe fry vats completely dry and allow other items to air dry before using them after a boil out.