

Fats, Oils, and Grease

Yellow vs Brown Grease

? FOG is commonly used as a reference for both brown and yellow grease. *What is the difference and why does it matter?*

Yellow Grease



Yellow grease is used cooking oil; fairly clean and easily filtered for alternative reuse. This oil is usually captured from fryers, then stored in a container or barrel for collection.



Yellow grease is no more than 15% free fatty acid (FFA) is currently 23-29 cents per pound - highly valuable.

Common uses include:



Livestock Feed



Soap



Biodiesel

Brown Grease



Brown grease is contaminate polar FOG (more than 15% FFA) and is sourced from grease interceptors or “traps” that prevent it from entering the sewer system.



Brown grease must be treated for reuse. Examples once treated:



Electricity



Compost



Biodiesel

A National Renewable Energy Labs study found about 13 pounds of FOG per person in the United States alone.

Yellow & Brown Grease Management Tips



Properly managing yellow and brown grease protects sewer and wastewater systems, protects public health, complies with FOG regulations, may provide a source of income, and has environmental benefits. Benefits include:

1. Biodiesel produced from FOG results in an 86% reduction in greenhouse gas emissions compared to diesel from petroleum sources.
2. With 14,000 wastewater treatment plants and closing in on 1,000,000 miles of public sewage pipes, the water/wastewater conveyance system is second only to transportation in terms of public infrastructure cost.
3. Microbial digestion of brown grease creates hydrogen sulfide, which can be oxidized to create sulfuric acid. Sulfuric acid not only damages metal and concrete, it makes interceptor water as acidic as 4.5 pH, which is illegal to discharge.

It is always advisable to check with your city utility department or wastewater utility to learn about local FOG ordinance requirements. Most city/county FOG staff are willing and able to provide some level of technical assistance.

That being said, here are some suggestions for you to investigate:

Yellow Grease

- Store in sealed containers under cover to avoid stormwater runoff.
- Many FSEs have an oil provider that delivers fresh oil and removes used oil.
- Many pumpers will pay for yellow grease or pick-up both for free.
- There are systems in some FSEs that plumb lines to the fryers so the draining and refilling process is self-contained.

Brown Grease

- For larger units, have the pumper pressure wash the interceptor to remove FOG.
- For Hydromechanical interceptors, remove and clean the baffles/diffusers.
- Do the above no less than every 30 days.
- Store in sealed containers under cover to avoid stormwater runoff.
- Never put additives in your interceptor.
- Keep a record of your self-cleanings or pump-outs. A time/date stamped photo is an excellent way to show proof of cleaning.

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This fact sheet was made with help from the following links:

1. <https://www.ams.usda.gov/mnreports/lswagenergy.pdf>
2. <https://www.nrel.gov/docs/fy99osti/26141.pdf>
3. <https://www.westernstatesalliance.org>
4. <https://www.eia.gov/todayinenergy/>

