

Evaluation of Applying FILSORB® XP20 with a Pressure and Index Filter to Clean Canola Oil Used for Frying Tortilla Chips

Customer X is a producer of tortilla chips. Their tortilla chips are cooked in standard canola oil at 340-380°F. The chips are made in batches, using 340-350 gallons per fryer.

The customer has a pressure and index filter, mix tank, and holding tank already installed. Using this system with FILSORB® XP20 their goal is to conserve their frying oil.



An in-house trial to evaluate the effectiveness of the pressure and index filter system and FILSORB® XP20 on the used canola oil took place at Customer X.

During this trial 340-350 gallons of canola oil were treated with 40lbs (1 bag) of FILSORB® XP20, a 1.5% ratio of powder to oil, at 200 +/- 5°F. The oil had a contact time of about 15 minutes, from when all of the FILSORB® XP20 was added to the mixing tank to the start of the first filter cycle. To complete the filtration of all of the oil took roughly one hour.



Filsorb XP20 In House Trial Details

Oil Used: Standard Canola Oil

Contact Time: 10 minutes +/- 5 minutes after 1 bag Filsorb XP20 added, to start of filtration cycle

Temperature: 200 +/- 5F

Filter: Pressure and Index filter

Filter Media: CFIL80

Filsorb: XP20, LOT #01TFP22-008

Amount Treated: 340-350 gallons (batch treatment)

Amount Filsorb Used: 1 bag (40lbs)

Table 1. Details of the in house trial with the pressure and index filter system and Filsorb XP20 at Customer X's facility.

During this application the free fatty acid (FFA) value of the canola oil was reduced from 0.17% oleic acid to <0.01% oleic acid. Values were analyzed using the CDR FoodLab analyzer. There was also a visual difference in color and crumb in the oil.

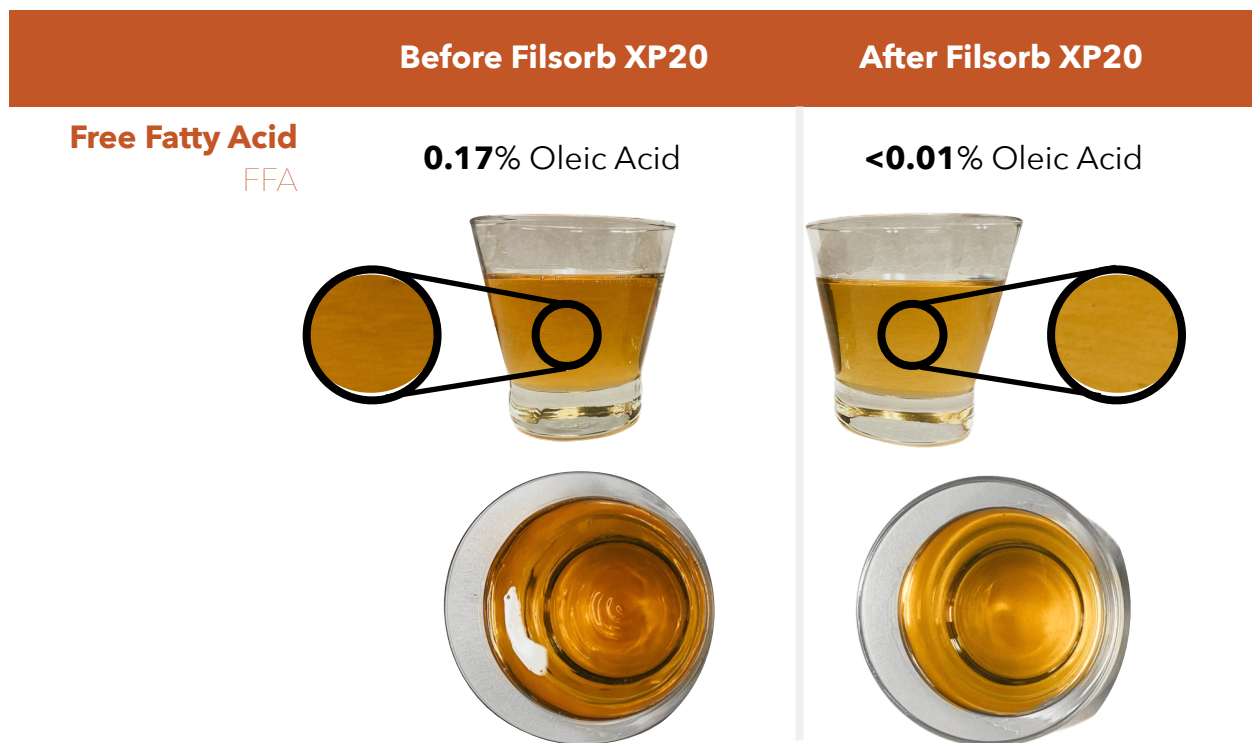


Table 2. Comparison of canola oil used to fry tortilla chips before and after running through the pressure and index filter system with Filsorb XP20.



Team Notes

Dosage Math:

340-350 gallons oil  2,584-2,660lbs oil

standard to treat @ 2% Filsorb by weight


51.7-53.2 lbs Filsorb

Round down to 1 bag (40lbs) to keep process more simplistic for the plant. If FFA reduction is lower than desired dosage can be increased-1 bag (1.5%) worked extremely sufficiently.

Filsorb Treatment Recommendations:

- Get oil temperature down to 300-350°F (ideally 320°F max)
- Add 1 bag of FILSORB slowly to mix tank and let mix for 10 minutes
- Make sure to treat oil that has no higher of an FFA than 0.4% oleic acid

Cost Evaluation

	Before Utilizing FILSORB®	After Filsorb XP20
Cost of Oil USD	\$1.05/lb	\$1.05/lb
Oil Discarded per Month	13,300 lbs	0 lbs
Cost per Month of Discarded Oil USD	\$13,964	\$0

As this trial demonstrated, FILSORB® XP20 coupled with the pressure and index filter filter system will help Customer X conserve oil and save money.

**Interested in how FILSORB® can help you save your cooking oil?
[Contact Us!](#)**

