

case study

Yucca Chip Processor Uses LAKOS Separator To Prolong Use of Cooking Oil

Ecuador

System:	Yucca Chip Processing Plant
Solids:	Yucca Chip Crumbs and Fines
Liquid:	Cooking Oil
Problem/Challenge:	Crumbs and Fines Decrease Usability of Cooling Oil
Solution:	LAKOS 35 gpm (8 m ³ /hr) Separator with Crumb Box

Problem: Yucca (cassava) is a staple food in many parts of South America. A popular way to eat the starchy root is when it is deep fried as chips. A yucca chip processor in Ecuador was looking for a way to extend the amount of time they could use their cooking oil before it had to be replaced. A buildup of burnt yucca crumbs and fines would cause a drop in chip flavor and appearance, making it necessary to change the oil quite frequently to maintain quality. They needed a way to remove the crumbs without changing the oil or halting production.

Solution: The plant installed a LAKOS 35 gpm (8 m³/hr) Separator with a crumb box on their cooking oil line. Now the hot cooking oil is continuously filtered, and crumbs are removed from the crumb box at the end of each 8-hour shift.

Prior to installing the Separator, the yucca chip plant changed 1400 liters of cooking oil every two days. After

installing the Separator and crumb box, the plant is able to change their oil every three days, a 50% extension of cooking oil life. This is saving 700 liters of oil per change at a savings of \$700 for the oil alone. The plant operates 365 days a year. Reducing oil changes saves the plant more than \$85,000 per year. Refer to the table on the following page.



Photo of crumb box filter

Return On Investment Calculations

	Oil Usage Per Day (liters)	Oil Usage Per Year (liters)	Oil Cost Per Year @ \$1/liter *	Savings Per Year	LAKOS Separator Cost**	Payback Period
Before LAKOS	700	255,500	\$255,500	---	---	---
After LAKOS	467	170,455	\$170,455	\$85,045	\$5,000	3 weeks

* Cooking oil costs will vary by region and type of oil used

** Many variables are used to determine the most efficient LAKOS Separator or Complete System for an application. For cooking oil applications of the size described in this Case Study, the average LAKOS Separator cost is \$ 5,000

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