

Fish Oil Reclamation Project

In the past, Glycerin Traders has implemented creative solutions to de-package and repurpose waste jam, expired hand sanitizer, and other products. So, when MBP (Modern By-Products), a Swiss company that handles food waste and feed ingredients around the world, approached Glycerin Traders with a new task, GT was confident they could create a solution.

The task was to reclaim the valuable oil of the smooth-coated pills that you can find in your local supplement aisle or next to your morning cup of coffee: fish oil.

Fish oil pills contain fish oil loaded with valuable omega-3 oils that have proven health benefits to humans. This oil is encapsulated into gel caps made up of gelatin covering and produced by approximately 12 producers in the USA. GT believed that if they could find a solution for one of these producers, then that model could be rolled out to the other eleven US producers.

Photo 1: Squeezed gelcaps (left), blue gelcaps (middle) & fish oil pills before pressing (right)



MBP approached Glycerin Traders with the following questions: What could be done with these nutrient-filled capsules after they expired, besides going to the landfill? Could the fish oil be recovered from the gelatin-coated capsule and a better and more profitable use found?

MBP sent approximately 70,000 pounds of fish oil pills to Glycerin Traders in La Porte, Indiana. With the capsules on the way, Glycerin Traders focused on a solution to MBP's proposal. Following 3 weeks of intensive research and development, with lots of trial and error, a solution to extract the fish oil was determined.

First, the pills were sorted from the trash & gelatin sheets that were mixed in with the totes of fish oil pills. Then, they were dumped into a roller mill previously used for milling corn. The rollers were set to nearly touch each other, so the pressure would "pop" the pills and free the oil inside.

Photo 2: Sorting the trash from the fish oil pills before processing.



The popped pill shells went into totes, leaving the gelatin capsules and extracted fish oil to continue as an oily sludge. This sludge went into a screw press that separated the fish oil from the gelatin capsules.

The oil yield from the fish oil pills was around 62%, providing approximately 42,400 pounds of pressed and filtered fish oil.

Photo 3: Picture of fish oil pills after running through screw press with no free oil left.



The recovered fish oil was ultimately sold to a feed mill, who will use the high omega-3 oil for fish oil feed. This solution was especially desirable due to the unprecedented price hike in the animal fat and vegetable oil market during the summer of 2022.

If you or your company has an off-spec or difficult to process surplus material and wish to dispatch with it responsibly or find some inherent economic value, call Dennis Zeedyk (Glycerin Traders) at 219-369-1066. We are open to many different ideas and industries.