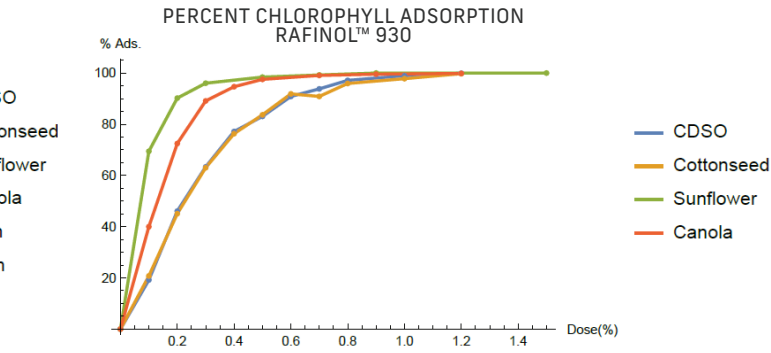
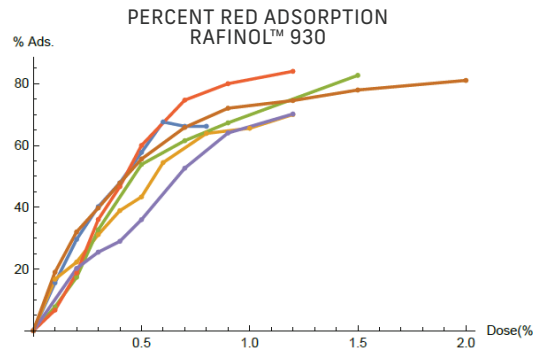
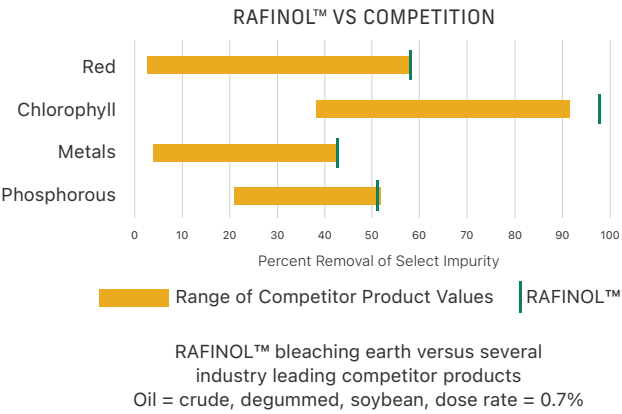


RAFINOL™ bleaching earth is a new generation material that exhibits excellent adsorption of impurities. It is flexible and can maintain consistent and superior performance in various feedstocks.



OPTIMIZE YOUR PROCESS WITH
 RAFINOL™ BLEACHING EARTH



Consistent performance even with feedstock variability to reduce downtime



Best-in-class purification performance



Lower consumption rates, even for hard-to-bleach oils



Improved filtration rates to increase productivity



Just-in-time delivery

To discuss your purification needs, please contact us

mineralstech.com

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RAFINOL™
 A MINERALS TECHNOLOGIES BRAND

SUPERIOR PERFORMANCE IN
 PURIFICATION
 OF FEEDSTOCKS FOR EDIBLE OILS

RAFINOL™ is a trademark of Minerals Technologies Inc. and its subsidiaries.



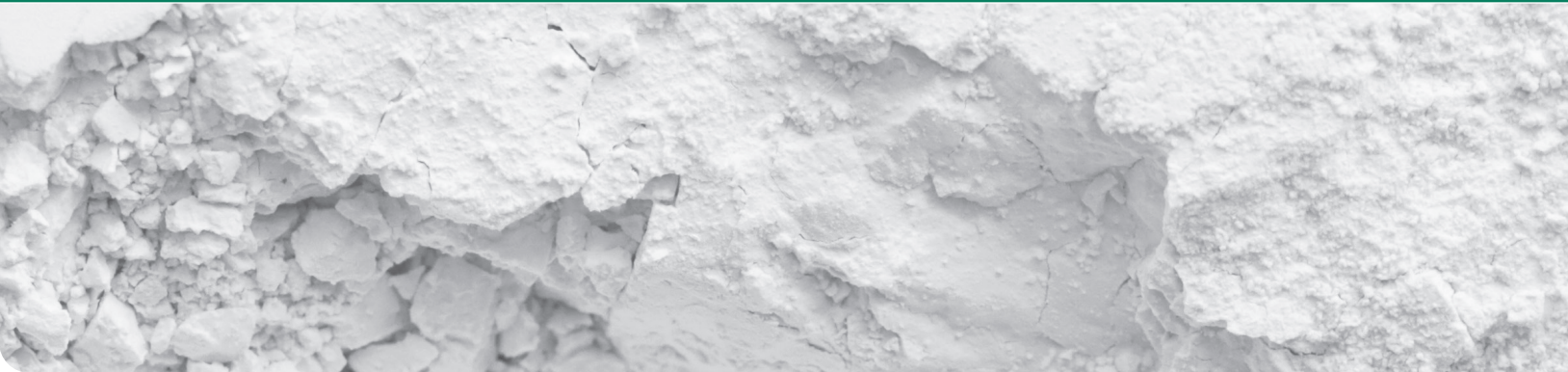
EDIBLE OILS OPERATIONS NEED RAFINOL™ BLEACHING EARTH

Vegetable oils are used as an ingredient or component in many manufactured products or consumed as ingredients in food. Oils are extracted from vegetable seeds, such as canola (rapeseed), corn, cottonseed, linseed, olive, palm, soybean, sunflower, and several regional crops. Global production has experienced steady growth since the beginning of the century, reaching a peak of > 210 million metric tons in 2023.

Edible oil refining transforms raw vegetable oil into a palatable and stable product by removing impurities, color, and unwanted flavors and odors through various processes. These processes commonly involve degumming, neutralization, bleaching, and deodorizing steps.

The bleaching process helps remove some color from oil, reduces how much chlorophyll and natural pigments oil contains, removes soap, gums, and trace metals, and decomposes oxidation products. RAFINOL™ bleaching earth offers several choices to optimize the bleaching step.

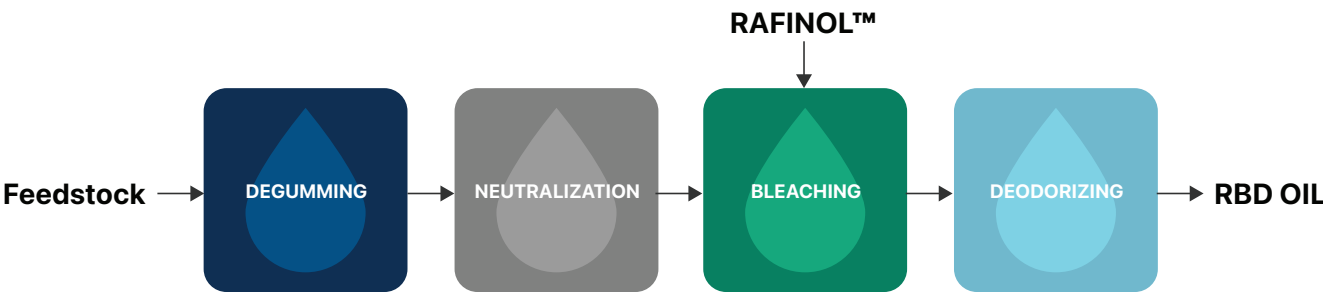
Refinements in our customers’ process and feedstock variability will benefit from the R&D and manufacturing expertise of Minerals Technologies and the superior performance of RAFINOL™ bleaching earth.



GUIDELINES FOR RAFINOL™ BLEACHING EARTH USE

RAFINOL™ bleaching earth is a unique mineral clay adsorbent with a naturally high surface area that is well adapted to adsorb substances that are dissolved in liquids. The porosity and surface activity can be further improved with acid activation of the clay to meet specific applications. Particle sizing and distribution are controlled to maximize filtration throughput.

During bleaching, RAFINOL™ bleaching earth is mixed with oil feedstock to absorb impurities at a defined resonance time. RAFINOL™ bleaching earth and the adsorbed impurities are then removed from oil before deodorization.



Phosphorous and other metal contaminants have to be removed during bleaching to ensure that an oil’s oxidative stability, prevent color reversion, and maintain flavor and quality. RAFINOL™ bleaching earth offers consistent bleaching performance.

Companies strive to minimize the production of Spent Bleaching Earth (SBE), which contains residual oil and adsorbed impurities, as it creates costly disposal challenges. RAFINOL™ bleaching earth offers superior performance at reduced consumption (or dose) rates compared to competing products.



EXPORT GLOBAL SUPPORT

RAFINOL™ BLEACHING EARTH APPLICATION GUIDE

SOURCE	GRADES/BEST RECOMMENDATIONS
Cottonseed Oil	RAFINOL™ 930 FF — efficient on very Heavy Bio-Oil (HBO)
Sunflower Seed Oil	RAFINOL™ 900 FF, RAFINOL™ 910 FF, RAFINOL™ 920 FF
Canola Rapeseed Oil	RAFINOL™ 930 FF — efficient on high chlorophyll and red color content
Soybean Oil	RAFINOL™ 930 FF — efficient on high chlorophyll and red color content
Crude Palm Oil	RAFINOL™ 900 FF — effective on low 3MCPD formation
RBD Palm Oil	RAFINOL™ 920 FF, RAFINOL™ 930 FF — effective on Glycydl Ester (GE) removal
Renewable Feedstock	RAFINOL™ 920 FF, RAFINOL™ 930 FF — effective on impurities removal
BioDiesel Finishing	RAFINOL™ 930 FF — effective on color and impurities removal
Animal Fats	RAFINOL™ 930 FF — effective on color and impurities removal

JUST-IN-TIME DELIVERY

RAFINOL™ bleaching earth is available in kraft bags, bulk sacks, bulk truck, and rail options. Please reach out to your regional sales representative to confirm packaging and custom label availability for your desired product or solution. Minerals Technologies ships thousands of containers annually and we are experts in working with ports, ocean carriers, and in Incoterm standards.

