



SOAP-OFF

THE ADSORBENT POWDER



TECHNOLOGY INNOVATION IN ADSORBENT

Pre-treatment in Edible oil Bio -Diesel

By modifying natural mineral sources with affinity to active compounds. Eliminates water wash in the neutralization section in the chemical process and to adsorb undesired elements in the physical refining process of carbohydrate oils processing refinery.



SCIENCE BEHIND TECHNOLOGY

SOAP-OFF particle becomes active with moisture and forms weak bonds between the polar bodies. Further with the temperature and vacuum the weaker bond becomes stronger and forms a complex crystalline molecule where the polar bodies are already adsorbed as trace metal ions & other impurities as Phospholipids. By adding the Bleaching Earth, most of the impurities are extracted along with Spent Earth(Used Bleaching Earth).

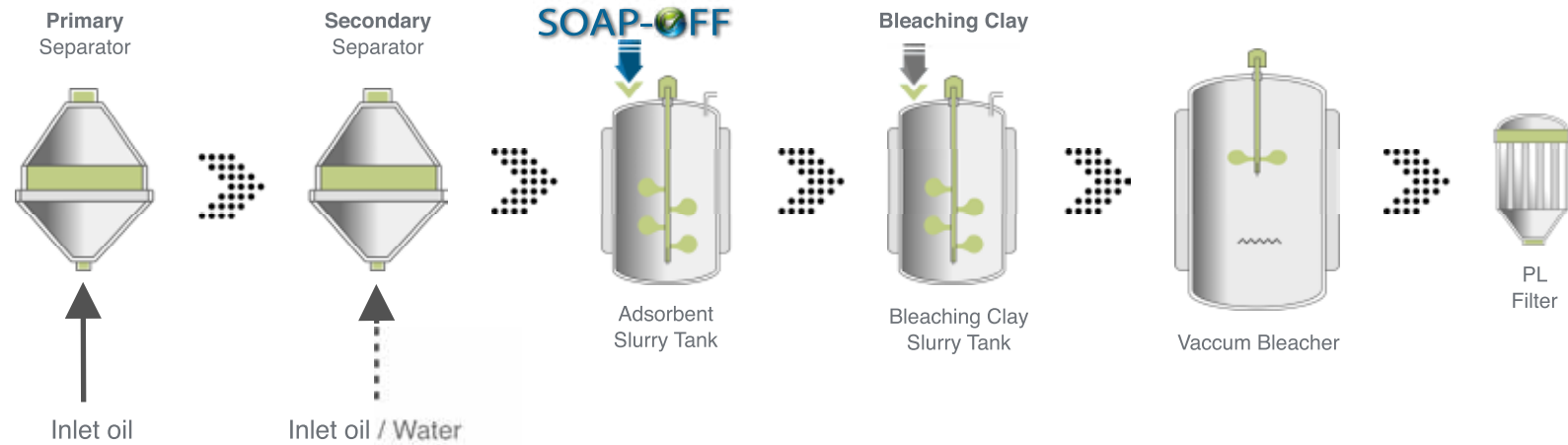
THE ART BEHIND QUALITY



Excellent performance to adsorb undesired impurities present in oil while the process of neutralization to adsorption of phosphatides, polar bodies and trace metal ions impurities. It helps in increasing the oxidative stability of refined oil.

RE-ENGINEERING PROCESS

Water Wash Elimination Flow Diagram



- » In order to eliminate water wash process in neutralization section, omit the Secondary Centrifuge or use both separators in parallel flow as primary centrifuge which will help in improving the production level & quality of the oil
- » Oil should be transferred under recommended parameters directly into the Adsorbent mixing vessel with continuous dosing of SOAP-OFF

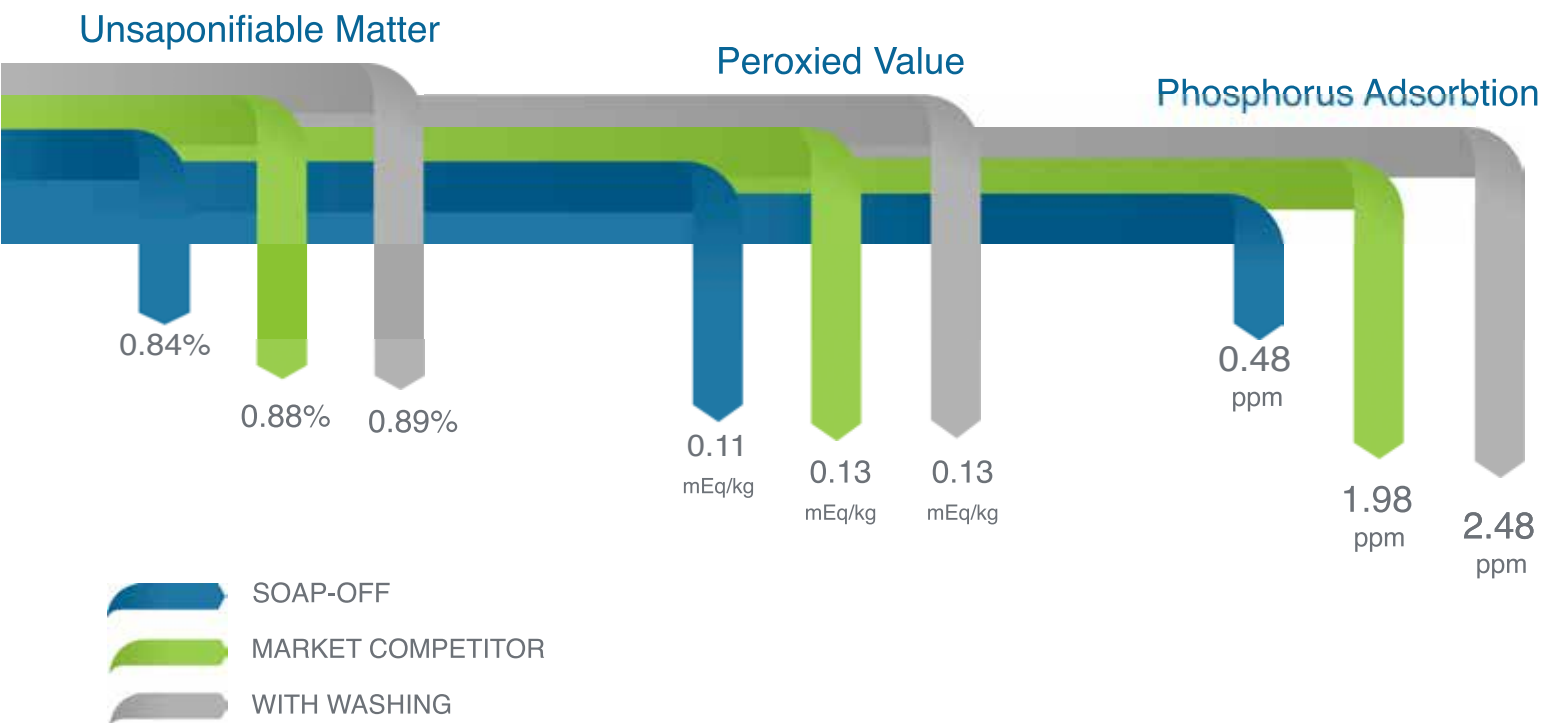
ADVANTAGES

- Process flexibilities
- Significant quality improvement
- Economical way to get more production
- Efficient way for water and energy saving
- Sustainable solution for the edible oil refinery
- Additionally recovers good quality fatty acids from the oil
- Saves energy, time, chemicals, usage of water, equipment and spares

PERFORMANCE OPTIMIZATION

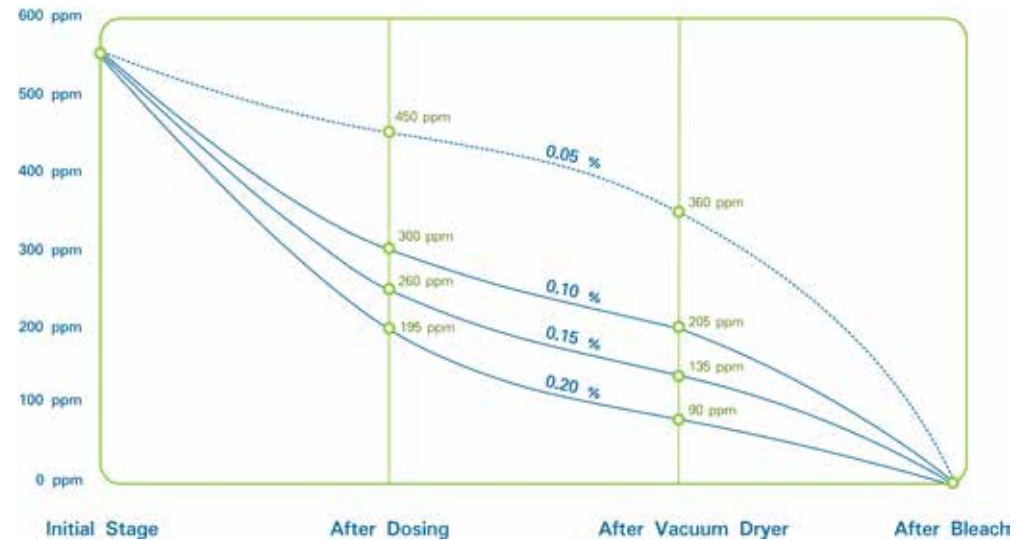
SOAP-OFF is a groundbreaking alternative to secondary water wash separator
 FFA should increase with moderated temperature after dosing of Phosphoric or Citric acid
 SOAP-OFF should be added by dozer as per standard ratio against oil with atmospheric pressure
 SOAP-OFF slurry should be carried to the Vacuum Bleacher with continuous dosing and agitation of bleaching earth followed by filtration in Pressure Leaf Filter/Press Filter

QUALITY ENHANCEMENT



ADSORPTION CAPACITY AND PURIFICATION

Reduction of soap against dosing



- » Highest SOAP ppm adsorption capacity even with low dose.
- » Always use recommended dose for easy and safe processing.

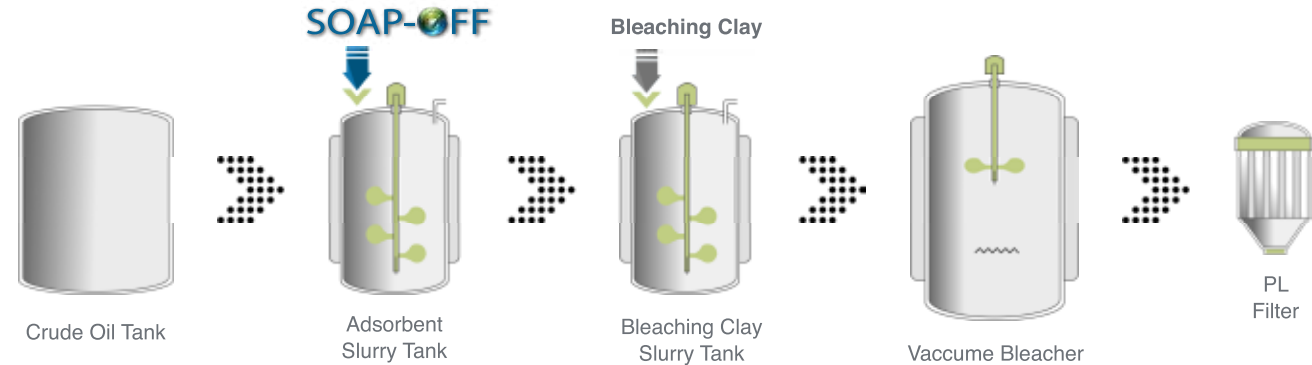
SOAP-OFF compare with Washing



* Results based on plant records under the recommended conditions

RE-ENGINEERING PHYSICAL REFINING

System Flow Diagram



In order to rule out the entire or partially alkali refinement under neutralization process, the acid treated or untreated crude oil should be transferred under recommended parameters to the Adsorbent mixing vessel along with continuous dosing of SOAP-OFF & at the same time proposed parameters should be maintained

Usage of citric acid over phosphoric acid is ideal. The intensive mixing is carried out with crude oil for precipitation of gums which makes filtration process faster and smoother.

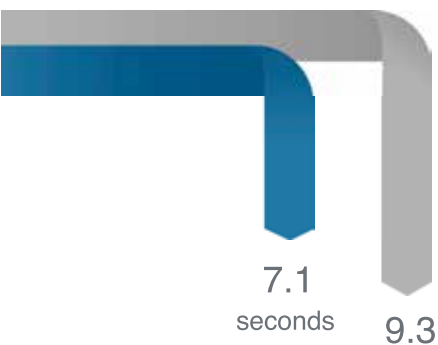
ADVANTAGES

- Reduce acid dosage
- Increase oxidative stability
- Adsorb undesired dissolved impurity from the oil
- Reduce phosphatides and heavy metal content significantly
- Helps cutting down bad odors in final oil after deodorization
- Support quality performance in post bleaching process (After interesterification and hydrogenation)



PERFORMANCE OPTIMIZATION

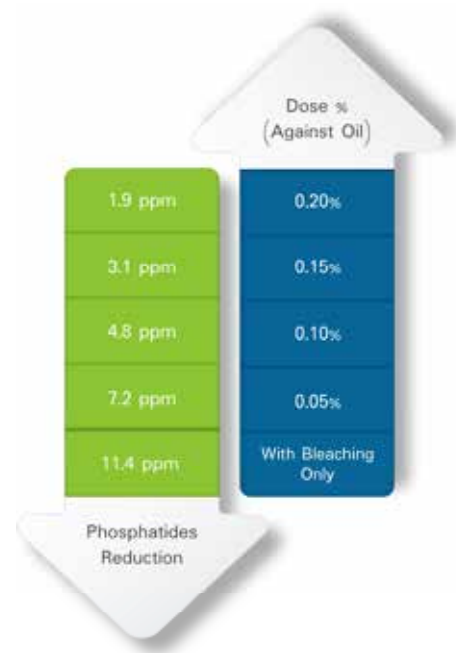
- Excellent filtration properties
- SOAP-OFF helps in removing unwanted components from the oil
- In the final stage after reduction of red color, the result oil has better shining
- SOAP-OFF acts as a catalyst in the process which helps in reducing phospholipids from the oil

QUALITY ENHANCEMENT



»» Filtration rate for first 10 drops in lab bleaching of the palm oil

 With SOAP-OFF
 STANDARD BLEACHING



»» Initial Phosphorus 18 ppm
»» Phosphatides reduction after bleacher with bleaching earth in plant





PRODUCT SPECIFICATIONS

SOAP-OFF	pH (5% suspension) 4.5	Moisture (Wt. % @ 110°C) <15
Bulk density (gm/ml) 0.7	Fineness (Less than 90 microns) 90%	Phosphorus Reduction (Respect to 15 ppm) 60%

HAPPY TO ASSIST...

Technical Assistance

Process Optimization

On-demand process support

Connect with experts for a discussion

On-demand related machinery supply

Plant review and product commissioning

Email: team@aksharminechem.com





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