

Case Study: Treatment of Used Frying Oil with DALSORB to Maintain Oil Quality

BACKGROUND:

- The commercial chicken frying operation used for this study fries fully cooked, bone-in, battered and breaded chicken parts in partially hydrogenated soybean oil
- The frying oil is treated with DALSORB (at 2% by weight of the oil) on a daily basis
- The treated oil is used to fill up the fryer each day. Virgin oil is added throughout the day to replace oil removed with the fried product.

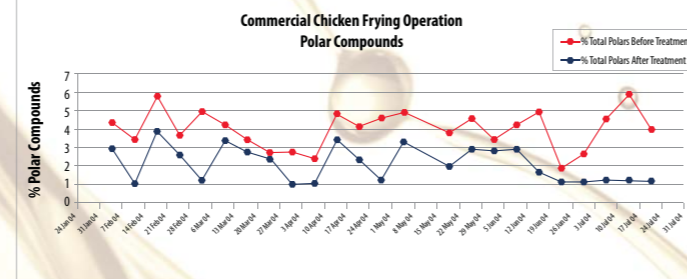
BEFORE THE USE OF DALSORB:

- Oil was discarded every 2-3 days due to high FFAs (>2%)
- Polymers built up on all oil contact surfaces
- Fried product was inconsistent in flavour and colour, depending on age of oil
- Frying room was filled with smoke

AFTER THE USE OF DALSORB:

- The oil treatment at this operation started in January 2003 and continued to date, with no oil discard
- Oil samples were collected daily for a period of six months (January – July 2004)
- Continued frying operation with **NO OIL DISCARD** and **NO SMOKE IN THE FRY ROOM**

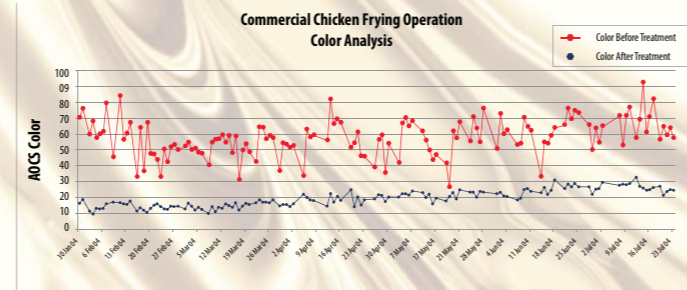
47% Reduction



91% Reduction



70% Reduction



Maximize the life of your frying oil with

DALSORB

BENEFITS:

- No Waste Oil eliminates oil discard
- Lowers frying costs
- Consistent finished product taste and appearance
- Product is the same day-in and day-out
- Consistent fresh oil quality
- Improves shelf stability

DON'T WASTE ANOTHER DROP



CONTACT A FRYING OIL EXPERT TODAY!

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Scan to learn more about Dalsorb

MAXIMIZE THE LIFE OF YOUR FRYING OIL WITH

DALSORB

YOUR PARTNER FOR CLEAN FRYING OIL.

We offer our customers more than adsorbent purifiers to clean their frying oil. We offer a fully integrated program that includes product, training, delivery, performance, and support.

Our experts work with you to optimize your frying operation and oil quality. The addition of DALSORB® oil purifier will extend the life of your frying oil and improve product quality.

DALSORB® keeps your food wholesome by removing undesirable compounds. This means protecting your food against:

- Off-odours
- Off-flavours
- Off-colours
- Free fatty acids
- Polar compound formation



OPTIMIZE YOUR FRYING OPERATION AND OIL QUALITY WITH A DALSORB OIL MANAGEMENT PROGRAM



DEGRADATION COMPOUNDS: EFFECTS ON FRYING OIL AND FRIED PRODUCT QUALITY (Polar Contaminants)

- **Free Fatty Acids (FFAs)**
 - Decrease smoke point of frying oil
 - Further catalyze oil degradation
 - Decrease shelf life stability of finished fried product
- **Flavours**
 - Scorched oil causes negative flavour characteristics
 - Carryover can occur from one fried product to another
- **Soap (surfactants)**
 - Rapidly speed oil degradation
 - Causes oil foaming
- **Polymers**
 - Cause oil to foam
 - Buildup causes decrease in heat exchanger efficiency
 - Increase oil absorption into food
- **Colour Bodies**
 - Affect fried product colour
 - Produces dark, unappealing fried products

SIGNS OF OIL DEGRADATION

- Taste
- Smoking
- Smell
- Colour
- Foaming
- Acid Value

WHAT IS DALSORB?

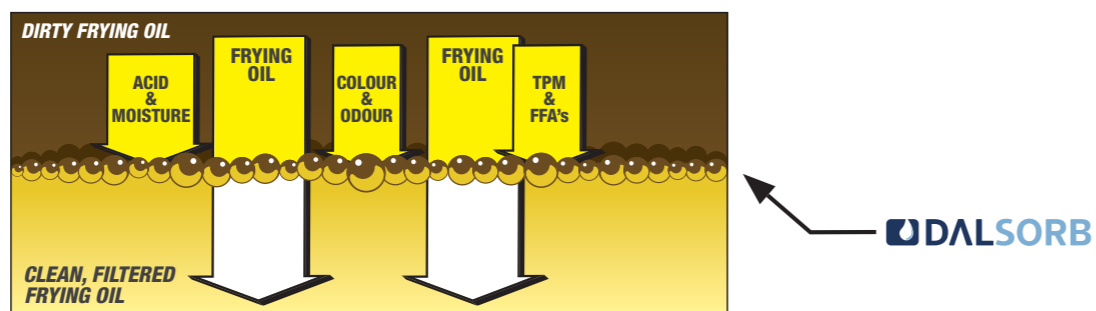
- DALSORB is a safe, pure white compound that meets the food grade specifications of the FDA, NSF, JECFA of WHO.

Dalsorb removes both solid and dissolved impurities from used oil to provide extended oil life. The oil stays fresh, clear and clean so that you can provide the customer with consistent, crisp and golden delicious fried foods.

HOW DOES DALSORB WORK?

- DALSORB is activated!

It is different than any other purifier on the market. Filtering with DALSORB not only removes food debris from oil but also extracts soluble liquid impurities that contribute to off flavours and odours of used oil. Unlike ordinary filter powders, DALSORB particles act like a magnet to attract and remove the dissolved tastes and odours that can spoil fried foods.

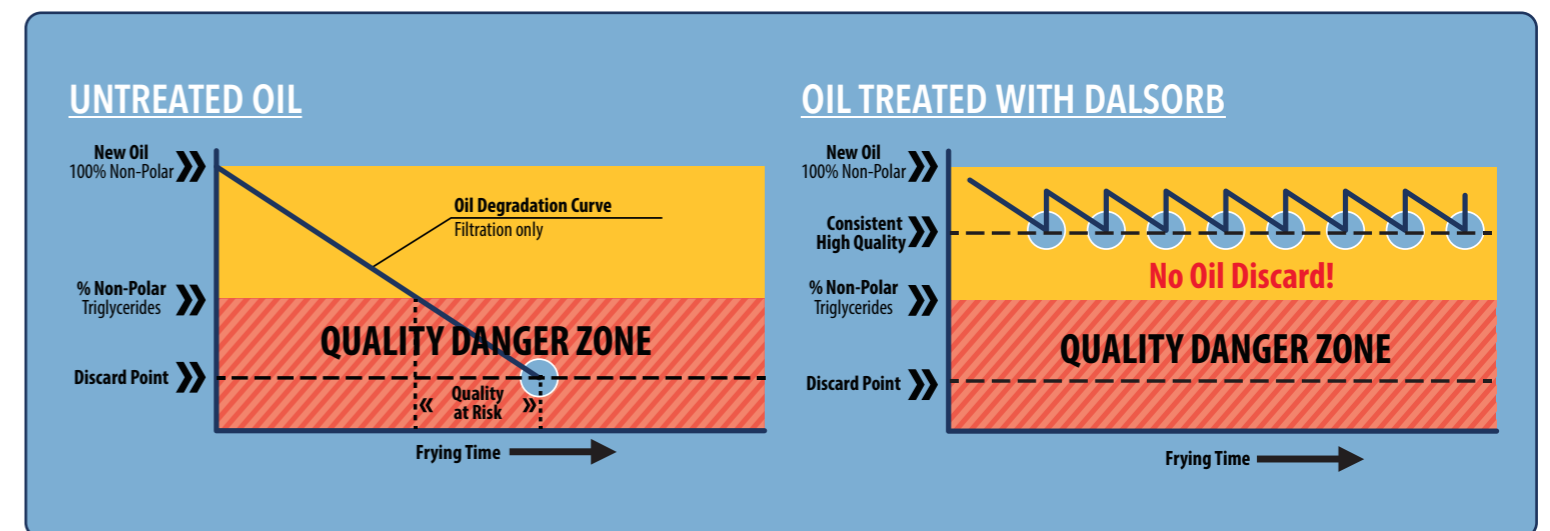


WHY CLEAN YOUR OIL WITH AN ADSORBENT PRODUCT?

- Frying oil undergoes tremendous stress during the frying process. Fried food processors are presented with the challenge of balancing the health demands of consumers with the frying process efficiency and finished product stability. The DALSORB Oil Management Program keeps frying oil fresh, fried product light & crisp, while never discarding a drop.



DALSORB treatment maintains oil like NEW!



MAINTAINING FRYING OIL QUALITY WITH DALSORB

- Filter paper, screens, or cartridges can only remove crumbs and debris. In order to best maintain high quality frying oil, it is necessary to remove not only the debris, but also the soluble degradation products that cause off-flavours, odours, and colour in frying oil and the finished product you fry.

DALSORB forms a filter cake that removes the debris and adsorbs the soluble degradation products that are formed during the frying process. DALSORB has been proven to maintain frying oil and finished product quality for over 20 years and is the global benchmark for oil management.



OUR VALUE

WE'RE THERE WHEN YOU NEED US!

- Our goal is to become a member of your team and provide you with the tools to manage your frying process and oil quality. Not only do we provide the products to attain this goal, we also offer the talent, comprehensive solutions, and a best-in-class knowledge base. This allows you to produce the highest quality foods, process efficiency, and profitability.



WE OFFER

- Full Service Laboratory & On-Site Technical Service
 - Regular frying oil quality surveys and analysis
 - On-site start-up technical support
 - Periodic process proficiency surveys and analysis
 - Process optimization by our expert staff
- Continued Education, Training and Preventative Care
 - Provide ongoing training and in-plant oil quality surveys
 - Optimized treatment procedures
 - Ongoing oil analysis & reporting of treatment results
 - Best practices customized to your operation