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# SAFOI

n e w s l e t t e r

## EDITORIAL

During the past six months SAFOI has been busy in all aspects of our objectives and has even started considering expansion beyond our borders. Read more about this exciting development in this issue. As always, our objectives are:

## SAFOI OBJECTIVES

To terminate the consumption of unhealthy abused oils and fats especially by our poor communities.

To develop and promote effective oil waste management procedures.

To terminate misrepresentation practices.

To promote the Steward's Principle.

## PROGRESS

The following progress was made in various aspects of our set objectives.

### 1. FRYING OIL & FAT ANALYSIS

Our analytical section steered by Dr. Carlien Pohl and Mrs. Andri Van Wyk has analyzed various frying oil samples from the Department of Health and different industries.

#### SUMMARY OF RESULTS

**Table 1** Quality of used frying oils and fats since December 2009. The percentage of samples above South African regulatory limits based on polymerised triglycerides (PTG) is included.

Drawn by:	No. samples analysed	% Samples above PTG limits
Industry*	161	4
<b>TOTAL</b>	<b>161</b>	

\*Many practicing the Steward's Principle

According to The Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act no. 54 of 1972) published on 16 August 1996 in S.A., oil is deemed to be harmful or injurious to human health, unless they contain less than 16% PTGs and/or 25% PCs.

The worst frying oil analysed over the past three months contained up to 29.8% polymerised triglycerides (PTGs).

**Table 2** Quality of fresh unused palm oil since December 2009 (based on fatty acid composition).

Drawn by:	No. samples analysed	No. of samples not complying with Codex standards for palm oil
Industry	140	0
<b>TOTAL</b>	<b>140</b>	

**Table 3** Quality of fresh unused sunflower oil since December 2009 (based on fatty acid composition).

Drawn by:	No. samples analysed	No. of samples not complying with Codex standards for sunflower oil
Industry	31	0
<b>TOTAL</b>	<b>31</b>	

**Table 4** Quality of fresh unused olive oil since December 2009 (based on fatty acid composition).

Drawn by:	No. samples analysed	No. of samples not complying with Codex standards for olive oil
Industry	1	0
<b>TOTAL</b>	<b>1</b>	

## 2. OIL ANALYSES FOR INDUSTRY

Analyses were performed on various products for Rein Oils, Afgri Animal Feeds, PSS Oils, Epol, Vergezocht Oils, V-Oils, Sunola Oil Mills, PJ&B Boerdery, Willowton, Felda Foods, Meadows Animal Feeds, Shoprite Checkers, C & N Oil Traders and Epko. We would like to urge all members of the oil industry to use our services if there are any questions regarding the quality or authenticity of oil.

## 3. EXPANSION OF SAFOI TO SOUTH AMERICA

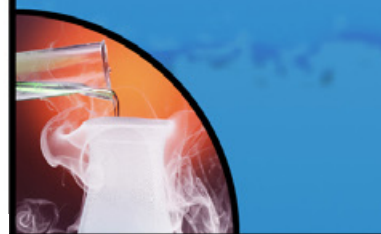
Prof. Lodewyk Kock was invited by Professor F. Muñoz to present a lecture at the National Polytech in Quito, Ecuador on 9 December 2010. Discussions will also be held to discuss possibilities to expand the successful South African Fryer Oil Initiative (SAFOI) to South America.

## 4. PUBLICATION

Prof Kock published an article titled "The Effective Management of Unhealthy Fat Waste in South Africa: A Case Study" in The International Journal of Environmental, Cultural, Economic and Social Sustainability (2010) Vol. 6(1), 177-186. The abstract is given here and copies of this publication can be obtained from SAFOI.

### ABSTRACT:

In South Africa, fried food can be considered a major item in the diet of many people. Consequently, this has resulted in large quantities of frying fats being consumed. Extensive surveys by us since 1994 showed that large quantities of fat are heated repeatedly over extended periods by frying establishments resulting in these fats to become harmful. These practices are mainly aimed at saving costs eventually at the expense of the consumer since overused



fats may cause diseases such as diarrhea, cancer, etc. when consumed. We found that about 1 in 8 frying establishments in South Africa are overusing their fats. Of concern is that many of these unhealthy fat wastes are distributed to the poor for further use. These statistics are based on surveys and thousands of used fat samples drawn from frying establishments and analysed by us. Consequently, we decided to launch an extensive national awareness campaign addressing this issue. This include the presentation of >80 workshops aimed at environmental health officials and fat manufacturers/distributors, >100 national press releases and >100 national broadcasts over radio and TV mainly aimed at the consumer. These activities resulted in the publication of strict regulations, which now makes it a criminal offence to use edible fats that have been overused. Unfortunately the outcomes of these activities were disappointing and malpractices persist. To obtain sustainable control over these malpractices, we implemented the Steward's Principle. Here, fat manufacturers/distributors are responsible for their products from manufacturing to eventual discard from frying establishments as waste. This resulted in a significant decrease in fat overuse at establishments serviced by these companies. The next phase will be to apply this model to the rest of the fat manufacturers/distributors in South Africa. This practice may be used as a blueprint for other developing countries with similar waste management problems. Keywords: Fat Waste Management, Overused Unhealthy Fat, A Solution for South Africa

Also included is an article that appeared in the press:

“Wanpraktyke met kookolie minder.” Elsabe Brits. Die Burger, 5 March 2010.



## who to contact?

If you need more information on any topic presented in this newsletter please use the following contact address:

Professor J.L.F. Kock and Dr. C.H. Pohl: S.A. Fryer Oil Initiative,  
Department of Microbial, Biochemical & Food Biotechnology,  
University of the Free State, P.O. Box 339, BLOEMFONTEIN, 9300.

Tel. (051) 401 2772

Fax. (051) 444 3219

E-mail. [KockJL@ufs.ac.za](mailto:KockJL@ufs.ac.za)

Webpage: [www.ufs.ac.za/myoilguide](http://www.ufs.ac.za/myoilguide)



**SAFOI - SAKI**

**2010**



# Wanpraktyke met kookolie nou minder

## Kosbedryf waak deesdae self teen gevaarlike afbraakvlakke

ELSABÉ BRITS  
Kaapstad

**D**ie gevaarlike gebruik van ou kookolie deur sekere bekende kitskos- en braaierestourante in die land het aansienlik afgeneem vandat die bedryf self daarvoor verantwoordelikheid begin neem het.

Dié optrede het gevolg nadat skokkende navorsing oor die gebruik van kookolie vol afbraakprodukte – soveel as 50% en in een geval tot 75% – 'n paar jaar gelede aan die lig gekom het.

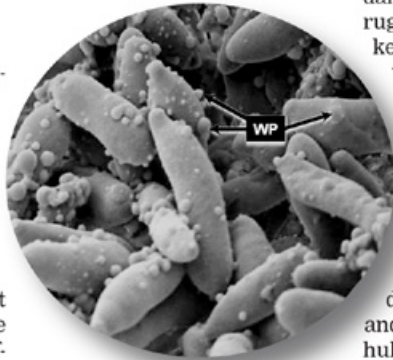
Prof. Lodewyk Kock en dr. Carlien Pohl-Albertyn van die Universiteit van die Vrystaat se Suid-Afrikaanse Kookolie Inisiatief (SAKI) het tussen 1994 en 2005 sowat 10 000 kitskos- en braaierestourante se gebruikte kookolie in 'n landwye ondersoek getoets.

Hul navorsing het getoon een uit agt sulke eetplekke se olie was bo die wettige perk van 16% afbraakprodukte.

Kock het gesê hoe ouer die

olie is, hoe meer absorbeer die voedsel die olie en hoe skadeliker is dit vir die verbruiker.

Hulle het in 2006 'n groot deel van die bedryf (van vervaardigers tot die oliekollekteerders) byeengebring om die probleem self aan te spreek omdat die be-



Giste (knoetsagtige groeisels) in herbruikte kookolie uit die doktorsstudie van mnr. Ntsoaki Leeuw, soos voorgelê vir publikasie in die *Kanadese Joernaal vir Mikrobiologie*. Foto: UVS

Hoe ouer die olie, hoe meer absorbeer die voedsel dit en hoe skadeliker is dit vir die verbruiker.



Indien ou olie (met meer as 16% afbraakprodukte) gebruik is om dié standaardporsie skyfies te braai, sal die olie wat deur die aartappels geabsorbeer word die hoeveelheid in die beker regs verteenwoordig. Hoe ouer die olie, hoe groter die absorpsie en hoe skadeliker is dit vir die verbruiker.

Foto: UVS

staande wetgewing onvoldoende was.

As 'n eerste stap is ooreengekom dat vervaardigers monstersonne van elke produksie-oplaag na die universiteit sou stuur om die egtheid daarvan te toets. Kock en sy span stuur dan die uitslag binne 24 uur terug, waarna 'n seël van goedkeuring aangebring en die olie versprei mag word.

Alle klante word gelys sodat Agri-Inspec dieselfde produksie-oplaag wat na die universiteit gestuur is sonder die betrokke vervaardigers se medewete kan toets.

Baie van die instellings dring nou aan op die seël of ander gehaltetoetse voordat hulle olie koop en dus het die mark nou self eienaarskap geneem van die misdrywe. Van die vervaardigers is nou self verantwoordelik en help met die insameling van die ou olie. Hulle verskaf ook opleiding oor die behoorlike gebruik van olie aan die restaurante.

Omdat hulle weet hoeveel olie hulle verkoop, weet hulle hoeveel herwin moet word. Dit help om die herverkoop van ou olie, wat veral teen halfprys aan arm mense verskaf word, stop te sit.

Kock het gesê hoewel hulle nog nie weer 'n landwye peiling gedoen het nie, blyk dit dat net een uit 20 eetplekke nou oortree, vergeleke met die vorige syfer van een uit agt.

Hierdie statistieke het net betrekking op eetplekke wat deel is van die inisiatief. Dit wil ook glad nie sê dat ander olie-vervaardigers en kitskos- en braaierestourante nie na hul olies omsien nie.

Die verbruiker het egter die reg om by 'n braaierestaurant of kitskos-eetplek waar hy sy geld bestee te vra om die houder met die seël van die universiteit of of enige ander bewyse van gehaltebeheer deur ander laboratoria te sien. Bewyse moet ook gelewer word dat die kitskos- en braaierestourante deurlopend na die kwaliteit van hul olie kyk en betyds daarvan ontslae raak voordat dit ongesonde afbraakvlakke bereik.



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