



## EDITORIAL

During the past six months the work of our analytical section focused on analyses of especially fresh oils for authenticity. Many of these samples are analyzed under auspices of our role as external quality control laboratory for several oil producers/distributors. Please consult our website for more information regarding this aspect of our work. 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 different industries.

#### SUMMARY OF RESULTS

**Table 1** Quality of used frying oils and fats since December 2013. 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*	238	0.0
<b>TOTAL</b>	<b>238</b>	

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.

*\*Some practicing the Steward's Principle*

Please note that it is assumed that the used oil samples have not been cleaned by any means that may lead to colour changes and that the natural progression of oil breakdown has not been tampered with.

**Table 2** Quality of fresh unused oil since December 2013 (based on fatty acid composition).

Oil type:	No. samples analysed	No. of samples not complying with the particular Codex Standards
Palm	32	0
Sunflower	48	0
Soya	5	0
Canola	2	0
HO sunflower	8	0
<b>TOTAL</b>	<b>95</b>	<b>0</b>

### 2 OIL ANALYSES FOR INDUSTRY

Analyses were performed on various products for Foodcorp, Precision Oil Laboratories, Epol, Rossgro Feeds, Quantum Foods, Crown Chickens, Energy Oils and Paradys Vleismark. 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 LIST OF ANALYSES DONE BY SAFOI

The following analyses can be done by SAFOI. Please contact us (see below for details) to enquire about sample sizes and prices.

- Polymerized triglycerides (PTGs)
- Fatty acid profile
- Total lipid percentage (from liquids and solids)
- Peroxide value
- Moisture content
- Insoluble impurities content
- Acid value/Free fatty acid value
- Iodine Value
- Density
- Refractive index
- p-Anisidine value
- TBA (malondialdehyde) content
- Total bacterial count
- Protein percentage
- Rancimat value
- Omega 3 & 6 content
- Soxhlet extraction
- Shelf life

## 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  
Webpage: www.ufs.ac.za/myoilguide