	Experiment title: Crystal structure determination of metastable and stable trans fatty acids containing triacylglycerols using high	Experiment number: CH-1635
Beamline: BM01B	**Date of experiment**: From: 27-02-2004　　　　　　to: 01-03-2004	**Date of report**: 18-08-2004
Shifts: 6	**Local contact(s)**: Wouter van Beek	*Received at ESRF:*

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Report:

The technical settings at the start of the experiments were $\lambda = 0.79936$ Å, beam width = 2.5 mm, beam heigth = 1.0-1.5 mm

For data collection a general strategy was adopted, consisting of scanning a set of overlapping 2θ intervals (0.53-35, 9-35, 19-35, 26-35 and 31-35 º2θ). All combined scans were binned at 0.005 º2θ

Data collection was carried out trans fatty acid (elaidic acid) containing triglycerides and several other types of triglycerides, with β, β', γ and δ denoting the basic type of polymorph and the subscripts '1' and '2' denoting a lower-melting and higher melting phase, respectively:

1) *trans*-9-monounsaturated triglycerides 1,2-distearoyl-3-elaidoylglycerol (sub-α –SSE, β_2 –SSE),
   1,3-distearoyl-2-elaidoylglycerol (β –SES), 1,2-dipalmitoyl-3-elaidoylglycerol (β –PPE),
   and 1,3-dipalmitoyl-2-elaidoylglycerol (β' –PEP)
2) the *cis*-9-cis-12-unsaturated triglyceride 1,3-distearoyl-2-lineoylglycerol (γ-SlinS)
3) the *cis*-9-monounsaturated triglyceride 1,3-dimyristoyl-2-oleoylglycerol (β –MOM)
4) cocoa butters from Bahia (Brazil) and Ivory Coast, both in the β-VI phase
5) The compounds L11, Imazetapir and synthetic

A preliminary analysis revealed some remarkable results. In case of PPE a novel β phase was observed. For SES the d-spacings do not correspond with those known from literature.
Structure analysis of most compounds is in progress.