

# ILPS & ELMA: Harmonization of Lecithin Analytical Methods | Project #Pt01

Even though there are official methods for lecithin analyses, the laboratory results of the various laboratories are often quite different.

In order to harmonize the Lecithin Analytical Methods, this project was initiated.

## **Name of the project:**

ILPS & ELMA: Harmonization of Lecithin Analytical Methods  
Round Robin test on Lecithins (ILPS-ELMA)

**Status:** ongoing

Stage 1 was initiated in 2020.

## **Synopsis**

### **Stage 1**

Even though there are official methods for lecithin analyses, the laboratory results of the various laboratories are often quite different. In the past, each laboratory has adapted the degree of freedom within an official method to its own method. In addition, the technology does not stand still, and improved equipment is available for the various methods (for example, automatic titrations, a colour meter or a viscosity measurement, in addition to possible differences in chemicals used).

These variables can all lead to a difference in analysis and analysis results that gives cause for discussion. That is why this harmonization is now being made. This project is also supported by ELMA (Home – Elma ([elma-eu.org](http://elma-eu.org))).

Note: Sampling has been kept outside the scope of this project.

In May 2020 a working group started on the harmonization of the “typical” lecithin analysis. Third party Commercial Laboratories that do regular lecithin analysis were contacted. Samples of liquid Soy lecithin, Sunflower lecithin and Rapeseed lecithin were sent. Together with a questionnaire for method-, reagent-, equipment and other details.

The analysed laboratory results, the questions and comments from the questionnaires have been categorized and shared anonymously with the laboratories as a starting point for the harmonization discussion.

As per June 2021, all lecithin analysis methods, as shown below (see Tab. 1) have been discussed and as far as possible harmonized.

**Tab. 1:** Standardized Methods for Lecithin Analysis in Stage 1

	<b>DGF</b>	<b>AOCS</b>
Acetone Insoluble	F-I 5	Ja 4-46
Toluene Insoluble *	F-I 4b	Ja 3-87
Hexane Insoluble	F-I 4b	Ja 3-87
Moisture KF	F-I 4	Ja 2b-87
Acid Value	F-I 3	Ja 6-55
Peroxide Value	F-I 3b	Ja 8-87
Gardner Color	C-IV 4a	Ja 9-87
Viscosity	F-I 2	Ja 10-87

\*Toluene insoluble see also ISO 28198

The harmonization comments and suggestions will be incorporated in the analysis methods that will be re-written as “ILPS Official Method”. Where applicable the current AOCS, DGF or ISO method is used as a basis for this.

Ultimately, a new ‘harmonised’ ILPS Official method will be drawn up, that allows less individual interpretation/freedom per analysis and gives more guidance to the laboratory. Between April and May 2021, ILPS & ELMA members were invited to identify whether the intercompany laboratories are interested in participating in a second round to verify whether the harmonization has led to the desired result.

Nearly 30 laboratories active in lecithin analysis have now registered. From in total 12 countries spreading from Europe to Asia and South America.

The laboratories will clearly be asked to perform the analysis according to the new - harmonized- ILPS method and report these results. It will be stated clearly that it is not the intention to use the current analysis method within the laboratory.

It is the aim to initiate Stage 2 and therefore send the sample and methods, during August 2021.