

# PHOSPHOLIPIDS

Research and analytical services.



**LIPID ANALYTICAL  
LABORATORIES INC.**

# ABOUT LIPID ANALYTICAL LABS INC.

Lipid Analytical Laboratories was established in 1991 on the work of Dr. Bruce Holub (Human Health and Nutritional Sciences, University of Guelph, Professor Emeritus) with a focus on the advancement Omega-3 Fatty Acids and their associated health benefits.

Lipid Analytical Laboratories is the only commercial laboratory in Canada specializing exclusively in the analyses of lipids (including different lipid forms including but not limited to individual neutral lipids, phospholipids, sterols, amongst others) and their Fatty Acid components.

Our particular specialty is the analyses and quantitation of various food products and nutritional supplements for their Omega-3 Fatty Acid content.

Lipid Analytical Laboratories routinely provides lipid/fatty acid/omega-3 analyses in support of various academic, governmental, and commercial trials.

As such, Lipid Analytical Laboratories along with its analytical team members have been named as co-authors and officially acknowledged in a number of peer-reviewed papers which have been published in leading academic journals.



# METHOD SUMMARY

Phospholipids (PL) are extracted from samples according to published methods for efficient lipid extractions in the presence of internal standards. Lipid extracts are applied to thin-layer plates coated with silica gel. Bands are identified using long-wave UV by RF comparison to appropriate standards based on authentic standardized fat mixtures. Bands of interest are removed and subjected to transmethylation to produce the fatty acid methyl esters. The resulting fatty acid methyl esters are then analyzed on an Agilent 7890B gas-liquid chromatograph. The resulting data for each fatty acid or lipid is reported in ug/g and/or % by weight or as requested.

LAL can also provide analyses on the amounts of individual phospholipid types (and their fatty acid profiles).

**Reference:** In-House Method

**Analysis Platform:** GC-FID

**Common individual phospholipid types include:**

- Phosphatidylcholine (PC)
- Phosphatidylethanolamine (PE)
- Phosphatidylinositol (PI)
- Phosphatidylserine (PS)
- Phosphatidic Acid (PA)
- Sphingomyelin (SM)

**Data Reported:** The total amount of phospholipid in  $\mu\text{g/g}$  or % by weight.

**Analytical Targets:** Total Phospholipids or Individual Phospholipids



## WHY WORK WITH US?

- Over 30 years of experience.
- Fast Sample turn-around-time.
- Accreditation for ISO17025 in progress with Standards Council of Canada (SCC) as of 2021.
- Assisted with numerous Commercial/Academic/Governmental Trials.



# CONTACT US



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