

Lipotype Shotgun Lipidomics

Get lipidomes with ultra-broad coverage and utmost quality in full high-throughput mode with Lipotype. We offer comprehensive, quantitative lipid analysis services of clinical and biological samples to a wide range of customers and applications including pharmaceutical and biotechnology companies, food industry, as well as academic researchers.

Customers and applications



Biotech and pharma industry, clinical research:

Clinical screening, biomarker identification (pharmacodynamic, pharmacokinetic, CDx), mode-of-action studies



Food industry:

Intervention studies for development of functional food/nutraceuticals



Cosmetics and Dermatology:

Cosmetic claim support, topical drug development, development of personalized cosmetics



Academic research:

Lipid analysis of various model organisms

Ultra-broad coverage

The Lipotype Shotgun Lipidomics platform provides a broad coverage of membrane lipids, but also of storage lipids. Our analysis routinely covers 30 different lipid classes (e.g. TAG or PC) on the level of lipid species (e.g. TAG 54:0) or subspecies (e.g. PC 18:0/16:0, including the fatty acid information) – in total more than 2300 individual lipids. Moreover our platform allows for the analysis of various sample types – from organelles, microorganisms, cultured cells and blood plasma to tissues and organs: muscles, liver, brain, and many others.

Lipid classes covered by Lipotype services

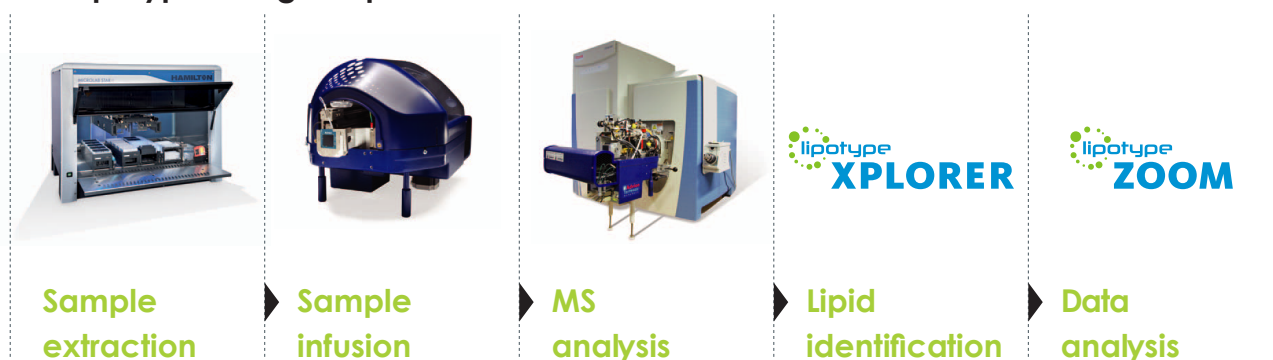
PA – phosphatidate	CE – cholesteryl ester*	PC O- – ether-linked PC*
PC – phosphatidylcholine	EE – ergosteryl ester**	PE O- – ether-linked PE*
PE – phosphatidylethanolamine	LPA – lyso-phosphatidate	LPC O- – ether-linked LPC*
PG – phosphatidylglycerol	LPC – lyso-phosphatidylcholine	LPE O- – ether-linked LPE*
PI – phosphatidylinositol	LPE – lyso-phosphatidylethanolamine	CER – ceramide
PS – phosphatidylserine	LPG – lyso-phosphatidylglycerol	HEXCER – hexosylceramide*
DAG – diacylglycerol	LPI – lyso-phosphatidylinositol	IPC – inositolphosphorylceramide**
TAG – triacylglycerol	LPS – lyso-phosphatidylserine	MIPC – mannosyl-inositol
SM – sphingomyelin*	CL – cardiolipin	phosphorylceramide**
Cholesterol*	CDP-DAG – CDP-diacylglycerol**	M(IP) ₂ C – mannosyl-di-
Ergosterol**		(inositolphosphoryl) ceramide**

* – animal samples; ** – yeast samples

Full high-throughput

Lipotype uses Shotgun Lipidomics Technology without time consuming chromatographic separation of lipids before analysis. We utilize the advantages of cutting-edge mass spectrometry, combined with automated sample extraction, processing and data analysis. In this way our exquisitely standardized platform allows the analysis of 200 plasma samples per day, offering unprecedented delivery time (weeks, instead of months) for complete results and associated reports.

The Lipotype Shotgun Lipidomics workflow



Absolute quantification

The quantification is achieved using lipid class-specific internal standards allowing unbiased and direct quantitation of individual lipids directly from their mass spectra intensities. Therefore, we deliver results expressed in absolute and not in relative values, which provides the basis for a direct comparison of different samples and experiments.

Highest quality

Lipotype's Shotgun Lipidomics Technology is highly robust and reproducible¹. This performance is ensured by a rigorous quality control system. The high standards of Lipotype operations are based on years of research experience on the role of lipids in cellular processes and on the development of lipidomics technology according to industry requirements.

Innovative lipid identification: LipotypeXplorer

Lipotype uses proprietary software for lipid identification: LipotypeXplorer. With the molecular fragmentation query language it identifies lipids with high precision and without bias. LipotypeXplorer does not rely on predefined databases, which have to be curated and maintained and which might not be complete.

New level of data analysis: LipotypeZoom

LipotypeZoom empowers you to interpret your data. Lipidomes have an inherent structure (e.g. lipid classes and fatty acid saturation) that is accessed by multiple layers of dynamic aggregation. Your data can be viewed and downloaded in graphs, heat maps and principle component analysis plots.

Personal approach

We are scientists too, and we know that with each experiment queries pop up. And as we are experts in membrane and lipid biology and chemistry, mass spectrometry, and bioinformatics originating from the world-renowned Max Planck Institute of Molecular Cell Biology and Genetics in Dresden, Germany, you can benefit from our experience in lipidomics and cell biology as well as bioinformatics as Lipotype offers personal consultations together with analyses.

¹ Michal A. Surma, Ronny Herzog, Andrej Vasilj, Christian Klose, Nicolas Christinat, Delphine Morin-Rivron, Kai Simons, Mojgan Masoodi, and Julio L Sampaio: "An Automated Shotgun Lipidomics Platform for High Throughput, Comprehensive, and Quantitative Analysis of Blood Plasma Intact Lipids." 2015, *European Journal of Lipid Science and Technology* (doi:10.1002/ejlt.201500145)

Reasonable prices

Lipotype Shotgun Lipidomics is a high-throughput lipid analysis. The decreased processing time and increased sample numbers together with less material used turn into a cost advantage for you. We want you to profit from our innovation by offering reasonable prices that makes lipidomics an affordable tool in your research repertoire.

Contact:

Dr. Oliver Uecke
T: +49 (0) 351 79653-45
sales@lipotype.com

Lipotype GmbH
Tatzberg 47, 01307 Dresden, Germany
www.lipotype.com
