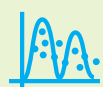


Free Oxylipins + Prostaglandins



Deliverables

This pre-validated panel includes 161 free oxylipins, including prostaglandins, and allows delivery of **fully quantitative results** (expressed in pmol). In addition, the amount of each sample used is provided (weight or volume).



Method

Oxylipins are analysed by **LC/ESI-MS/MS** with an Agilent 1290 HPLC system combined with an Agilent 6495 Triplequad mass spectrometer (Agilent Technologies, Santa Clara, USA). Samples are extracted with organic solvents. For lipid quantification, deuterated internal standards are added prior to sample extraction. Crude extracts are further purified by solid phase extraction (SPE). Clean extracts are loaded on the LC system for LC/ESI-MS/MS analysis. Mass spectrometry analysis is performed with multiple reaction monitoring (MRM) in negative ion mode with at least two mass transitions for each compound. Data analysis is done using Mass Hunter software (Agilent Technologies).



Sample submission guidelines

SAMPLE TYPE	SAMPLE AMOUNT	SHIPMENT CONDITIONS
Whole blood, plasma, serum	500 µl	<i>Frozen, on dry ice</i>
Tissue	40 mg	<i>Frozen pieces of tissues, on dry ice</i>
Feces	20 mg	<i>Frozen, on dry ice</i>
Cells	3 × 10 ⁶ cells or 500 µg of total protein	<i>Frozen cell pellet, on dry ice</i>
Cell supernatant, media, liquids, etc.	0.5–20 ml	<i>Frozen, on dry ice</i>

Minimal sample number: 10

Standard turnaround time: 6 weeks

(for projects with up to 100 samples)

Expedited delivery is possible for an additional fee.

Applications

- > Nutrition (omega-3/6)
- > Inflammation
- > CYP/LOX pathway
- > Lipid hydroperoxide generation & turnover
- > Lipid oxidation
- > Pain
- > Hormone regulation

Covered analytes

ANALYTE	FATTY ACID	CATEGORY	SUBCLASS	LLOQ* [pg]
10,11-DiHDPA	DHA	Docosanoids		5.3
10,11-EDP	DHA	Docosanoids		2.7
10-HDHA	DHA	Docosanoids		2.9
11,12-DHET	ARA	Eicosanoids		2.1
11,12-DiHETE	EPA	Eicosanoids		2.8
11,12-EEQ	EPA	Eicosanoids		6.5
11,12-EET	ARA	Eicosanoids		2.5
11-HDHA	DHA	Docosanoids		3.5
11-HEPE	EPA	Eicosanoids		52.7
11-HETE	ARA	Eicosanoids		5.1
12,13-DiHOME	LA	Octadecanoids		1.2
12,13-EpOME	LA	Octadecanoids		5.1
12-HEPE	EPA	Eicosanoids		4.6
12-HETE	ARA	Eicosanoids		6.7
12-HETrE	DGLA	Eicosanoids		4.9
12-HHTrE	ARA	Eicosanoids		2.3
12-HpEPE	EPA	Eicosanoids		2.3
12-HpETE	ARA	Eicosanoids		2.9
12-oxo-ETE	ARA	Eicosanoids		46.4
12-oxo-LTB4	ARA	Eicosanoids	Leukotriene	12.1
13,14-DiHDPA	DHA	Docosanoids		4
13,14-EDP	DHA	Docosanoids		3.5
13-gamma-HOTrE	GLA	Octadecanoids		3.2
13-HDHA	DHA	Docosanoids		15.6
13-HODE	LA	Octadecanoids		3
13-HOTrE	ALA	Octadecanoids		3.2
13-HpODE	LA	Octadecanoids		5.3
13-HpOTrE	ALA	Octadecanoids		4.9
13-HpOTrE-gamma	GLA	Octadecanoids		24.3
13-oxo-ODE	LA	Octadecanoids		1.9
14,15-DHET	ARA	Eicosanoids		2.6
14,15-DiHETE	EPA	Eicosanoids		3.9
14,15-EEQ	EPA	Eicosanoids		10.3
14,15-EET	ARA	Eicosanoids		2.6
14,15-EpEDE	DGLA	Eicosanoids		3.3
14-HDHA	DHA	Docosanoids		2.8
15(R)epi-LXA4	ARA	Eicosanoids	Lipoxin	6.2
15-HEPE	EPA	Eicosanoids		2.9

ANALYTE	FATTY ACID	CATEGORY	SUBCLASS	LLOQ [pg]
15-HETE	ARA	Eicosanoids		5.1
15-HETrE	DGLA	Eicosanoids		5.1
15-HpEPE	EPA	Eicosanoids		4.6
15-HpETE	ARA	Eicosanoids		4.6
15-oxo-ETE	ARA	Eicosanoids		6.9
16,17-DiHDPA	DHA	Docosanoids		4.7
16,17-EDP	DHA	Docosanoids		34.9
16-HDHA	DHA	Docosanoids		2.9
16-HETE	ARA	Eicosanoids		2.8
17(R)RvD1	DHA	Docosanoids	Resolvin	6.3
17(R,S)-RvD4	DHA	Docosanoids	Resolvin	5.9
17,18-DiHETE	EPA	Eicosanoids		6
17,18-EEQ	EPA	Eicosanoids		7.8
17-HDHA	DHA	Docosanoids		9.4
17-HETE	ARA	Eicosanoids		2.2
17-HpDHA	DHA	Docosanoids		3.3
18-COOH-dinor-LTB4	ARA	Eicosanoids	Leukotriene	8.9
18-HEPE	EPA	Eicosanoids		5.2
18-HETE	ARA	Eicosanoids		2.8
19,20-DiHDPA	DHA	Docosanoids		6.3
19,20-EDP	DHA	Docosanoids		5.8
19-HEPE	EPA	Eicosanoids		9
19-HETE	ARA	Eicosanoids		7.3
20-COOH-ARA	ARA	Eicosanoids		26.2
20-COOH-LTB4	ARA	Eicosanoids	Leukotriene	8.9
20-HDHA	DHA	Docosanoids		4.4
20-HEPE	EPA	Eicosanoids		31.4
20-HETE	ARA	Eicosanoids		25.4
22-HDHA	DHA	Docosanoids		8.7
4-HDHA	DHA	Docosanoids		3.3
4-oxo-DHA	DHA	Docosanoids		32.3
5(S),15(S)-DiHETE	ARA	Eicosanoids		12.8
5(S),12(S)-DiHETE	EPA	Eicosanoids		4
5,6-DHET	ARA	Eicosanoids		2
5,6-DiHETE	EPA	Eicosanoids		3.2
5,6-EEQ	EPA	Eicosanoids		250
5,6-EET	ARA	Eicosanoids		19.6
5-HEPE	EPA	Eicosanoids		4.1
5-HETE	ARA	Eicosanoids		4.1
5-HETrE	DGLA	Eicosanoids		2.1

ANALYTE	FATTY ACID	CATEGORY	SUBCLASS	LLOQ [pg]
5-HpEPE	EPA	<i>Eicosanoids</i>		5
5-HpETE	ARA	<i>Eicosanoids</i>		5
5-oxo-ETE	ARA	<i>Eicosanoids</i>		9.5
6(S)-LXA4	ARA	<i>Eicosanoids</i>	<i>Lipoxin</i>	6.3
6-trans-epi-LTB4	ARA	<i>Eicosanoids</i>	<i>Leukotriene</i>	4.2
6-trans-LTB4	ARA	<i>Eicosanoids</i>	<i>Leukotriene</i>	4.2
7,8-DiHDPA	DHA	<i>Docosanoids</i>		2.8
7,8-EDP	DHA	<i>Docosanoids</i>		3.9
7-epi-Mar1	DHA	<i>Docosanoids</i>	<i>Maresin</i>	5.8
7-HDHA	DHA	<i>Docosanoids</i>		5.5
8(S),15(S)-DiHETE	ARA	<i>Eicosanoids</i>		17.7
8,9-DHET	ARA	<i>Eicosanoids</i>		5.2
8,9-DiHETE	EPA	<i>Eicosanoids</i>		3.6
8,9-EEQ	EPA	<i>Eicosanoids</i>		10.4
8,9-EET	ARA	<i>Eicosanoids</i>		57.2
8-HDHA	DHA	<i>Docosanoids</i>		10.7
8-HEPE	EPA	<i>Eicosanoids</i>		4.3
8-HETE	ARA	<i>Eicosanoids</i>		49.2
8-HETrE	DGLA	<i>Eicosanoids</i>		9.2
9,10-DiHOME	LA	<i>Octadecanoids</i>		1.1
9,10-EpOME	LA	<i>Octadecanoids</i>		5.4
9-HEPE	EPA	<i>Eicosanoids</i>		9.1
9-HETE	ARA	<i>Eicosanoids</i>		46.9
9-HODE	LA	<i>Octadecanoids</i>		5.9
9-HOTrE	ALA	<i>Octadecanoids</i>		8.6
9-HpODE	LA	<i>Octadecanoids</i>		6.4
9-HpOTrE	ALA	<i>Octadecanoids</i>		6.4
9-oxo-ODE	LA	<i>Octadecanoids</i>		11.1
9-oxo-OTrE	ALA	<i>Octadecanoids</i>		5.1
LTB3	ETA	<i>Eicosanoids</i>	<i>Leukotriene</i>	7.1
LTB4	ARA	<i>Eicosanoids</i>	<i>Leukotriene</i>	2.8
LTB5	EPA	<i>Eicosanoids</i>	<i>Leukotriene</i>	3
LXA4	ARA	<i>Eicosanoids</i>	<i>Lipoxin</i>	5.9
LXA5	EPA	<i>Eicosanoids</i>	<i>Lipoxin</i>	5.2
LXB4	ARA	<i>Eicosanoids</i>	<i>Lipoxin</i>	6.3
Mar 1	DHA	<i>Docosanoids</i>	<i>Maresin</i>	5.8
Mar 2	DHA	<i>Docosanoids</i>	<i>Maresin</i>	5.8
NPD1	DHA	<i>Docosanoids</i>		3.6
NPDx	DHA	<i>Docosanoids</i>		3.6

ANALYTE	FATTY ACID	CATEGORY	SUBCLASS	LLOQ [pg]
RvD1	DHA	<i>Docosanoids</i>	<i>Resolvin</i>	6.5
RvD2	DHA	<i>Docosanoids</i>	<i>Resolvin</i>	5.6
RvD3	DHA	<i>Docosanoids</i>	<i>Resolvin</i>	5.3
RvD4	DHA	<i>Docosanoids</i>	<i>Resolvin</i>	4
RvD5	DHA	<i>Docosanoids</i>	<i>Resolvin</i>	3.9
RvE1	EPA	<i>Eicosanoids</i>	<i>Resolvin</i>	3.7
RvE2	EPA	<i>Eicosanoids</i>	<i>Resolvin</i>	2
RvE4	EPA	<i>Eicosanoids</i>	<i>Resolvin</i>	2
tetranor-12-HETE	ARA	<i>Eicosanoids</i>		2.2

Prostaglandins:

ANALYTE	FATTY ACID	CATEGORY	SUBCLASS	LLOQ [pg]
11-dehydro TXB2	20:4;O4	Eicosanoids	Thromboxane	4
11β-PGF2a	20:3;O3	Eicosanoids		2
1a,1b-dihomo-PGF2a	22:3;O4	Eicosanoids		5
6-keto-PGF1a	20:3;O4	Eicosanoids		30
8-iso-PGF1a		Eicosanoids	Isoprostane	5
8-iso-PGF2a		Eicosanoids	Isoprostane	5
PGB2	20:5;O2	Eicosanoids		16
PGD2	20:4;O3	Eicosanoids		2
PGD2-13,14-dihydro-15-keto	20:4;O3	Eicosanoids		3
PGE1	20:3;O3	Eicosanoids		2
PGE1-13,14-dihydro 15-keto	20:3;O3	Eicosanoids		3
PGE1-15-keto	20:4;O3	Eicosanoids		3
PGE1a-13,14-dihydro 15-keto	no info	Eicosanoids		3
PGE2	20:4;O3	Eicosanoids		2
PGE2-13,14-dihydro-15-keto	20:4;O3	Eicosanoids		3
PGE2-15-keto	20:5;O3	Eicosanoids		3
PGF1a	20:2;O3	Eicosanoids		2
PGF2a	20:3;O3	Eicosanoids		5
PGF2a-13,14dihydro-15keto	20:3;O3	Eicosanoids		3
PGF2a-15-keto	20:4;O3	Eicosanoids		3
PGJ2	20:5;O2	Eicosanoids		7
PGJ2-15-deoxy-delta 12,14	20:6;O	Eicosanoids		7
PGJ2-delta12	20:5;O2	Eicosanoids		7
Tetranor PGDM	16:4;O5	Eicosanoids		25
Tetranor PGEM	16:4;O5	Eicosanoids		25
Tetranor PGFM	20:4;O3	Eicosanoids		25
TXB2	20:3;O4	Eicosanoids	Thromboxane	5
8-iso-PGF3a		Eicosanoids	Isoprostane	5
d17-6-keto-PGF1a	20:4;O4	Eicosanoids		30
PGB3	20:3;O2	Eicosanoids		20
PGE3	20:5;O3	Eicosanoids		5
PGF3a	20:4;O3	Eicosanoids		10
11-dehydro TXB3	20:5;O4	Eicosanoids	Thromboxane	5
TXB3	20:4;O4	Eicosanoids	Thromboxane	4

* lower limit of quantification

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