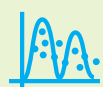


Chiral Oxylipins



Deliverables

This pre-validated panel includes chiral oxylipins (R/S stereoisomers) and allows delivery of **fully quantitative results** (expressed in pmol). In addition, the amount of each sample used is provided (weight or volume). This analysis package allows to measure free oxylipins, total oxylipins (esterified oxylipins and free oxylipins), and a combination of free and total oxylipins.



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>
Cells	3 × 10 ⁶ cells <i>or</i> 500 µg of total protein	<i>Frozen cell pellet, on dry ice</i>
Liquids (e.g., cell supernatant, media)	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

- > Identification of pathway-specific metabolites (CYP450, LOXs, COXs)
- > Differentiation between enzymatic and non-enzymatic lipid oxidation

Covered analytes

ANALYTE	FATTY ACID	LLOQ* [ng]
10(R)-HDHA	DHA	<0.03
10(S)-HDHA	DHA	<0.03
10,11(R,S)-EDP	DHA	<0.03
10,11(S,R)-EDP	DHA	<0.03
11(R)-HDHA	DHA	<0.035
11(R)-HETE	ARA	< 0.05
11(S)-HDHA	DHA	<0.035
11(S)-HETE	ARA	< 0.05
11,12(R,S)-EEQ	EPA	<0.06
11,12(S,R)-EET	ARA	<0.03
11,12(S,R)-EEQ	EPA	<0.06
11,12(R,S)-EET	ARA	<0.03
12(R)-HEPE	EPA	0.25
12(R)-HETE	ARA	<0.05
12(S)-HEPE	EPA	0.10
12(S)-HETE	ARA	< 0.05
12,13(R,S)-EpOME	LA	<0.05
12,13(S,R)-EpOME	LA	<0.05
13(R)-HDHA	DHA	<0.15
13(R)-HODE	LA	<0.03
13(S)-HDHA	DHA	<0.15
13(S)-HODE	LA	<0.03
13,14(R,S)-EDP	DHA	<0.05
13,14(S,R)-EDP	DHA	<0.05
14(R)-HDHA	DHA	<0.03
14(S)-HDHA	DHA	<0.03
14,15(R,S)-EEQ	EPA	<0.05
14,15(R,S)-EET	ARA	0.10
14,15(S,R)-EEQ	EPA	<0.05
14,15(S,R)-EET	ARA	0.10
15(R)-HEPE	EPA	<0.05
15(R)-HETE	ARA	0.25
15(S)-HEPE	EPA	<0.05
15(S)-HETE	ARA	0.25
16(R)-HDHA	DHA	<0.03
16(S)-HDHA	DHA	<0.03
16,17(R,S)-EDP	DHA	0.25
16,17(S,R)-EDP	DHA	0.25
17(R)-HDHA	DHA	<0.05
17(S)-HDHA	DHA	<0.05

ANALYTE	FATTY ACID	LLOQ [ng]
17,18(R,S)-EEQ	EPA	<0.05
17,18(S,R)-EEQ	EPA	<0.05
18(R)-HEPE	EPA	<0.05
18(S)-HEPE	EPA	<0.05
19(R)-HEPE	EPA	<0.09
19(R)-HETE	ARA	0.25
19(S)-HEPE	EPA	<0.09
19(S)-HETE	ARA	0.25
19,20(R,S)-EDP	DHA	0.25
19,20(S,R)-EDP	DHA	0.25
20(R)-HDHA	DHA	<0.04
20(S)-HDHA	DHA	<0.04
4(R)-HDHA	DHA	<0.03
4(S)-HDHA	DHA	<0.03
5(R)-HEPE	EPA	<0.04
5(R)-HETE	ARA	<0.04
5(S)-HEPE	EPA	<0.04
5(S)-HETE	ARA	<0.04
7(R)-HDHA	DHA	<0.05
7(S)-HDHA	DHA	<0.05
7,8(S,R)-EDP	DHA	<0.05
7,8(S,R)-EDP	DHA	<0.05
8(R)-HDHA	DHA	<0.1
8(R)-HEPE	EPA	<0.04
8(R)-HETE	ARA	<0.5
8(S)-HDHA	DHA	<0.1
8(S)-HEPE	EPA	<0.04
8(S)-HETE	ARA	<0.5
8,9(S,R)-EEQ	EPA	0.10
8,9(R,S)-EET	ARA	0.25
8,9(R,S)-EEQ	EPA	0.10
8,9(S,R)-EET	ARA	0.25
9(R)-HEPE	EPA	< 0.05
9(S)-HEPE	EPA	< 0.05
9,10(R,S)-EpOME	LA	< 0.05
9,10(S,R)-EpOME	LA	< 0.05

* lower limit of quantification

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