



## Eicosanoids

### Service Code: EIC

**Summary:** Profile of 28 Eicosanoids in plasma or tissue. Eicosanoids are extracted and concentrated using solid phase extraction. The eluant is dried and re-suspended for LCMS separation by RPLC and measurements by ESI<sup>-</sup> QQQ MRM methods. Analytes are reported as uM or ug/mg (tissue), and CV's are generally <20%.

**Container:** Eppendorf tube or equivalent

**Normal Volume:** 200 uL plasma, 20 mg tissue, 1e7 cells

**Minimal Volume:** 50uL, 5 mg tissue, 6 e6 cells

**Special Handling:** If human or primate, note any known presence of infectious agents

**Sample Collection:** : Please see our detailed sample collection protocol on the Michigan Regional Comprehensive Metabolomics Resource Core (MRC<sup>2</sup>) website before preparing samples for analysis or contact the core director at the number below for details.

**Table I: Analytes reported. Others on special request:**

Analyte	Abbr.	Molecular Formula	MRM	LOD (nM)
11(S)-Hydroxy-5Z,8Z,12E,14Z-eicosatetraenoic acid	11(S)-HETE	C <sub>20</sub> H <sub>32</sub> O <sub>3</sub>	319.2->167.1	200
12(S)-Hydroxy-5Z,8Z,10E,14Z-eicosatetraenoic acid	12(S)-HETE	C <sub>20</sub> H <sub>32</sub> O <sub>3</sub>	319.2->179.1	200
12-oxo-6E,8Z,10E,14Z-eicosatetraenoic acid	12OxoETE	C <sub>20</sub> H <sub>30</sub> O <sub>3</sub>	317.2->153.1	20
13S-hydroxy-9Z,11E-octadecadienoic acid	13S-HODE	C <sub>18</sub> H <sub>32</sub> O <sub>3</sub>	295.2->195.1	200
15(S)-Hydroxy-6Z,8Z,11Z,13E-eicosatetraenoic acid	15(S)-HETE	C <sub>20</sub> H <sub>32</sub> O <sub>3</sub>	319.2->219.1	200
20-Hydroxy-5Z,8Z,11Z,14Z-eicosatetraenoic acid	20-HETE	C <sub>20</sub> H <sub>32</sub> O <sub>3</sub>	319.2->59	200
5(S)-Hydroxy-6E,8Z,11Z,14Z-eicosatetraenoic acid	5(S)-HETE	C <sub>20</sub> H <sub>32</sub> O <sub>3</sub>	319.2->115.1	200
5-oxo-6E,8Z,11Z,14Z-eicosatetraenoic acid***	5-OxoETE	C <sub>20</sub> H <sub>30</sub> O <sub>3</sub>	317.2->59	20
6-keto Prostaglandin F1-alpha	6-ketoPSGF1a	C <sub>20</sub> H <sub>34</sub> O <sub>6</sub>	369.2->163.1	10



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8(S)-Hydroxy-5Z,9E,11Z,14Z-eicosatetraenoic acid	8(S)-HETE	C <sub>20</sub> H <sub>32</sub> O <sub>3</sub>	319.2->155.1	200
9(S)-Hydroxy-5Z,7E,11Z,14Z-eicosatetraenoic acid	9(S)-HETE	C <sub>20</sub> H <sub>32</sub> O <sub>3</sub>	319.2->69.1	200
9S-hydroxy-10E,12Z-octadecadienoic acid	9S-HODE	C <sub>18</sub> H <sub>32</sub> O <sub>3</sub>	295.2->171.1	200
Leukotriene B <sub>4</sub> ***	Leukotriene B <sub>4</sub>	C <sub>20</sub> H <sub>32</sub> O <sub>4</sub>	335.2->195.1	20
Prostaglandin F <sub>2a</sub> (PGF <sub>2</sub> alpha)	Prostaglandin F <sub>2a</sub>	C <sub>20</sub> H <sub>34</sub> O <sub>5</sub>	353.1->309.1	20
Prostaglandin A <sub>2</sub>	Prostaglandin A <sub>2</sub>	C <sub>20</sub> H <sub>30</sub> O <sub>4</sub>	333.2->271.1	20
Prostaglandin B <sub>2</sub>	Prostaglandin B <sub>2</sub>	C <sub>20</sub> H <sub>30</sub> O <sub>4</sub>	333.2->235.1	20
Prostaglandin D <sub>2</sub>	Prostaglandin D <sub>2</sub>	C <sub>20</sub> H <sub>32</sub> O <sub>5</sub>	351.2->315.1	20
Prostaglandin E <sub>2</sub>	Prostaglandin E <sub>2</sub>	C <sub>20</sub> H <sub>32</sub> O <sub>5</sub>	351.2->271.1	20
7S,8R,17S-trihydroxy-4Z,9E,11E,13Z,15E,19Z-docosahexaenoic acid***	Resolvin D <sub>1</sub>	C <sub>22</sub> H <sub>32</sub> O <sub>5</sub>	375.3->175.1	20
7S,16R,17S-trihydroxy-4Z,8E,10Z,12E,14E,19Z-docosahexaenoic acid***	Resolvin D <sub>2</sub>	C <sub>22</sub> H <sub>32</sub> O <sub>5</sub>	375.3->141.1	20
(5S,6Z,8E,10E,14Z,16E)-5,12,18-trihydroxyicosa-6,8,10,14,16-pentaenoic acid***	Resolvin E <sub>1</sub>	C <sub>20</sub> H <sub>30</sub> O <sub>5</sub>	349.2->107.1	20
Thromboxane B <sub>2</sub> ***	Thromboxane B <sub>2</sub>	C <sub>20</sub> H <sub>34</sub> O <sub>6</sub>	369.2->169.1	20

\*\*Below limit of detection in some samples, especially plasma