

ECASA indicator

<b>Name</b>	<b><u>MonoUnsaturated Fatty Acid Biomarker</u></b>
<b>DPSIR class</b>	Response
<b>ECASA sub-group</b>	Sediment
<b>ECASA code</b>	MUFAB
<b>Proposed by participant</b>	12 - IFREMER
<b>Definition, computation,</b>	Lipid analyses on sediment samples are conducted to extract Fatty acids using latroscan and GC-FID
<b>Data required</b>	
<b>Summary, scientific meaning, implementation</b>	Among lipids present in fish feces, free fatty acids are well represented. Saturated and long chain monounsaturated fatty acid are found at higher levels in the feces than in the diet. Henderson et al. (1997) also found a relationship between the later and distance from salmon farms
<b>Range of validity</b>	Needs o be established
<b>Species concerned (fishes/molluscs)</b>	All
<b>Related type of aquaculture</b>	Fish culture
<b>Relevant environments for this indicator</b>	Sheltered envirments
<b>Geographic scale</b>	Less then 100m
<b>Direct relevance to objectives</b>	A
<b>Clarity in design.</b>	B
<b>Realistic collection or development costs</b>	C
<b>High quality and reliability</b>	B specific of fish feces, but should be tested in different conditions
<b>Appropriate spatial and temporal scale</b>	B : correspond to a spatially limited impact. Not tested for temporal extent
<b>Obvious significance</b>	A: correspond to a biomarker of finfish aquaculture
<b>advantages</b>	Specific of finfish aquaculture
<b>disadvantages</b>	Costs and duration of analyses
<b>references</b>	Biesen, G. V. and C. C. Parrish (2005). "Long-chain monounsaturated faty acids as biomarkers for the dispersal of organic waste from a fish enclosure." <u>Marine environmental Research</u> <b>60</b> : 375-388. Henderson, R.J., Forrest, D.A.M., Black, K.D. & park, M.T.(1997). The lipid composition of sealoch sediments underlying salmon cages. <u>Aquaculture</u> , 158, 69-83.
<b>State of validation</b>	Not validated
<b>recommendations</b>	Interesting to test in one or more Ecasa test sites