APPLICATION LIST #501

Amino acids analysis in Tilapia sperm

Amino acids plays a valuable role in spermatogenesis, fertilization success and impacts on survival of juvenile fish. This application shows amino acids profile in Tilapia sperm tested by LC-MS MetAmino[®] kit. The data give better understanding of adjustment in feeding ration needed to increase reproductive function and population of food fish species.

The sample preparation: Precipitation medium (PM; 80 μ L) was added to 20 μ L of the Tilapia sperm sample and the sample was placed in an ultrasonic bath for 5 minutes at room temperature. The sample was centrifuged at 7000 rpm, 5 min, 4 °C. The supernatant (25 μ L) was added to a new tube for the Metamino derivatization. IS (10 μ L) was added and the sample preparation protocol was continued with the addition of CTS and RDS according to the general protocol scheme [1].

The chromatographic conditions: LC-MS method according to the general protocol scheme [1].

This application was developed by the Biology Centre CAS, České Budějovice, The Czech Republic.



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Standard mixture – LC-MetAmino[®] kit; mass extracted chromatogram; 5 nmol SD1 and SD2 according to the manual [1].



Test mixture Tilapia sperm – LC-MetAmino[®] kit; mass extracted chromatogram; (25 µL of sample)

References:

[1] Chromservis: https://www.chromservis.eu/en/metamino-kit-400139

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