ANIMAL TISSUES

DNA EXTRACTION FROM OYSTER LARVAE *CRASSOSTREA GIGAS* AND *CRASSOSTREA ANGULATA*

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CONTEXT

This laboratory is working on the genetic diversity of cupped oysters at different scales. This study is focusing on hybridization and introgressive hybridization between the species *C. gigas* and *C. angulata*. Both, coming from Asia, are present in South Portugal in Europe. To characterize their relationship, F2 experimental crosses of biparental families were performed in our experimental hatchery.

A panel of specific SNP will be used on each individual larvae. Therefore a grinding method is necessary to extract DNA. Our study was designed to see if the Precellys kit lysis permits to grind efficiently larvae to obtain homogenous lysis and good quality and quantity of DNA materials, with reproducibility, in order to perform PCR amplification.

MATERIALS

Instrument: Precellys 24

Precellys Lysing kit: Soil Grinding SK38, Cat n° KT03961-1-006.2: mix of glass and ceramic beads

Sample: whole oyester larvae, 250 µm, ethanol fixed and conserved at -20°C.

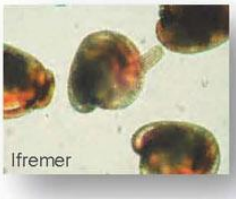
Buffer: Lysis buffer, 520µL

PROTOCOL

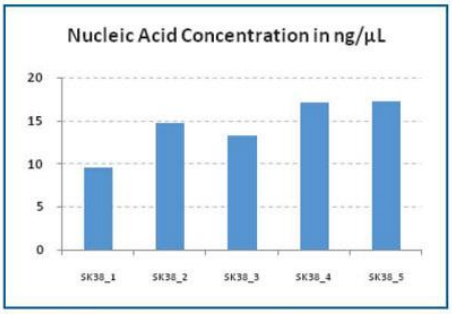
Grinding protocol:
Speed: 6000 rpm
Cycle: 3 x 20 sec
Break: 5 sec at RT

Analysis:
Extraction with Nucleospin Tissu XS Macherey® adapted
Amplification PCR 16S and further with SNP panel.

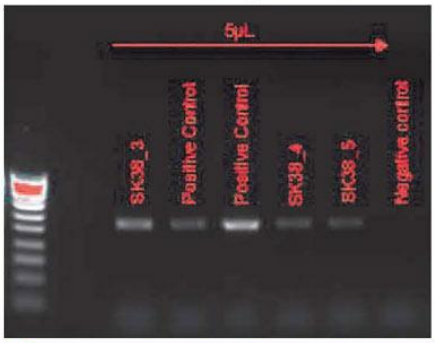
RESULTS



DNA extraction and quantification performed on 5 larvae.



Test with 16 S PCR amplification



CUSTOMER

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CONCLUSION

The combination of the Precellys 24 and the specific SK38 lysing kit permits to obtain homogeneous lysis of small whole fixed oyster larvae.
The extracted DNA which presented a high quality and yield was amplified with success.
The Precellys associated with the lysing kit, offers a good alternative to standard method in order to perform genetic analysis on oyster larvae.

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