# 中国水产科学研究院东海水产研究所动物实验伦理审查表

Animal Experimental Ethical Inspection of Chinese Academy of Fishery Sciences

East China Sea Fisheries Research Institute

编号（No）：2026-08

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| 申请信息 Related information | 申请人 Applicant | 刘京涛 Jingtao Liu | 联系电话 Telephone | 15996200428 |
| | 项目名称 Project title | 通州湾示范区绿色化工拓展区达标尾水排海工程施工期悬浮物对文蛤的影响实验 Experimental Study on the Effects of Suspended Solids on *Meretrix meretrix* during the Construction Period of the Tongzhou Bay Green Chemical Expansion Zone Tailwater Discharge Pipeline Project | | |
| | 申请日期 Application date | **2026.1.25** | 预计实验日期 Estimated Experiment date | **2026.5.12** |
| | 动物种类 Animal Species | 文蛤 *Meretrix meretrix* | | |
| | 是否需要特定资质 Needs Specific qualifications? | 否 No | | |
| | 实验目的 Aim of Experiment<br>评估悬浮物对文蛤的生理和分子水平影响，为工程施工对近岸滩涂贝类资源的生态影响评估提供科学依据<br>Assessing the physiological and molecular impacts of suspended particles on Manila clams provides a scientific basis for evaluating the ecological effects of construction activities on nearshore tidal flat bivalve resources. | | | |
| | 实验方法 Experimental Methods<br>设置 6 个悬浮物浓度处理组（276、286、296、326、376、426 mg/L）和 1 个对照组，每组 3 个平行，每个平行 40 只文蛤。每日造浪悬浮 13 h，静息 11 h，模拟潮汐周期，持续暴露 33 天。于第 30 天取鳃和肝胰腺组织进行转录组测序，并选取 12 个差异表达基因进行 qRT-PCR 验证。<br>Six SSC treatment groups (276, 286, 296, 326, 376, and 426 mg/L) and one control group were established, each with three replicates of 40 clams.Sediment suspension was generated using wave pumps for 13 h per day followed by 11 h of quiescence to simulate the tidal cycle, with exposure lasting 33 days.At day 30, gill and hepatopancreas tissues were collected for transcriptome sequencing, and DEGs were selected for qRT- PCR validation. | | | |

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| | 观测指标<br>Observational Index<br>死亡率；壳长、壳宽、壳高、体重；鳃和肝胰腺组织的转录组表达谱（RNA-seq）；差异表达基因的 qRT-PCR 相对表达量。<br>Mortality; shell length, shell width, shell height, body weight;transcriptomic profiles of gill and hepatopancreas tissues (RNA-seq); qRT-PCR relative expression of selected DEGs. |
| | 处死动物的方法<br>Executing Animal Method<br>不适用。本实验仅采集文蛤斧足肌和鳃组织进行离体核酸提取与测序分析，无需处死实验动物<br>Not applicable. This study involved only the collection of foot muscle and gill tissues from Meretrix meretrix for in vitro nucleic acid extraction and sequencing analysis; no execution of experimental animals was required. |
| | 其他事项<br>Other Matters<br>无<br>None |

申请者声明 Announcement of applicant

本研究及所有实验方案均未涉及濒危或受保护物种。本人将自觉遵守实验动物福利伦理原则，随时接受实验动物伦理委员会的监督与检查，如违反规定，自愿接受处罚。

There was no endangered or protected species involved in this study and all experimental protocols. I will abide by the rules of animal experimental ethics, accept the supervision and inspection of the animal experimental ethics committee, and accept the punishment in case of any infringement.

申请者签名 Applicant's signature：刘京涛

2026 年 01 月 25 日

团队首席/部门负责人意见 Team Leader/Department opinion

同意

签名 Signature：

2026 年 01 月 25 日

实验动物伦理委员会委员意见 Attitude of the Animal Care Welfare Committee

同意

科技伦理审查专用章

2026年1月25日

注：本表一式两份，除联系电话、日期和签名以外均需以中英文填写。