

Comparison of Nucleic Acid Extraction Platforms On Tissue Samples

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Abstract : Tissue samples are precious supply for molecular studies or disease identification diagnosed using molecular assays, namely real-time PCR (qPCR). It is critical to establish the most favorable nucleic acid extraction that gives the PCR-amplifiable genomic DNA. Furthermore, automated nucleic acid extraction is an appealing alternative to labor-intensive manual methods. Operational complexity, defined as the number of steps required to obtain an extracted sample, is one of the criteria in the comparison. Here we are comparing the One BioMed's automated X8 platform with the commercially available manual-operated kits from QIAGEN Mini Kit and Roche. We extracted DNA from rat fresh-frozen tissue (from different type of organs) in the matrices. After tissue pre-treatment, it is added to the One BioMed's X8 pre-filled cartridge, and the QIAGEN QIAmp column respectively. We found that the results after subjecting the eluates to the Real Time PCR using BIORAD CFX are comparable.

Keywords : DNA extraction, frozen tissue, PCR, qPCR, rat

Conference Title : ICBBB 2023 : International Conference on Biotechnology and Biomedical Devices

Conference Location : Singapore, Singapore

Conference Dates : January 09-10, 2023