

Comparison of Different DNA Extraction Platforms with FFPE tissue

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Abstract : Formalin-fixed paraffin embedded (FFPE) tissue is important in the area of oncological diagnostics. This method of preserving tissues enabling them to be stored easily at ambient temperature for a long time. This decreases the risk of losing the DNA quantity and quality after extraction, reducing sample wastage, and making FFPE more cost effective. However, extracting DNA from FFPE tissue is a challenge as DNA purified is often highly cross-linked, fragmented, and degraded. In addition, this causes problems for many downstream processes. In this study, there will be a comparison of DNA extraction efficiency between One BioMed's Xceler8 automated platform with commercial available extraction kits (Qiagen and Roche). The FFPE tissue slices were subjected to deparaffinization process, pretreatment and then DNA extraction using the three mentioned platforms. The DNA quantity were determined with real-time PCR (BioRad CFX) and gel electrophoresis. The amount of DNA extracted with the One BioMed's X8 platform was found to be comparable with the other two manual extraction kits.

Keywords : DNA extraction, FFPE tissue, qiagen, roche, one biomed X8

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