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Methodology

Comparison of three methods of DNA extraction from peripheral blood mononuclear cells and lung fragments of equines

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ABSTRACT. We compared three different protocols for DNA extraction from horse peripheral blood mononuclear cells (PBMC) and lung fragments, determining average final DNA concentration, purity, percentage of PCR amplification using β-actin, and cost. Thirty-four samples from PBMC, and 33 samples from lung fragments were submitted to DNA extraction by three different protocols. Protocol A consisted of a phenol-chloroform and isoamylic alcohol extraction, Protocol B used alkaline extraction with NaOH, and Protocol C used the DNAzol® reagent kit. Protocol A was the best option for DNA extraction from lung fragments, producing high DNA concentrations, with high sensitivity in PCR amplification (100%), followed by Protocols C and B. On the other hand, for PBMC samples, Protocol B gave the highest sensitivity in PCR amplification (100%), followed by Protocols C and

A. We conclude that Protocol A should be used for PCR diagnosis from lung fragment samples, while Protocol B should be used for PBMC.

Key words: Protocol; DNA; Equine; PBMC; Lung

