

ASSESSMENT OF DNA PURITY AND QUANTITY IN TELEORMAN BLACK HEAD, SUFFOLK AND ÎLE DE FRANCE SHEEP BREEDS

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Abstract

The increasing demand for sheep meat requires modern methods to improve production, and genetic selection through genetic markers plays an important role in this process. The analysis of genetic markers depends on the quality of the extracted DNA, and assessing its purity through spectrophotometry is essential for the validity of genetic studies. In this study, blood samples were collected from three sheep breeds –Teleorman Black Head, Suffolk, and Ile de France. DNA was manually extracted using the Wizard Genomic DNA Purification kit (Promega), and purity was determined using the Nanodrop ASP-3700 spectrophotometer, ensuring precise evaluation of the A260/A280 ratio and DNA concentration. The DNA purity analysis of blood samples from the three sheep breeds demonstrates satisfactory results for the majority of samples. Out of 34 samples analyzed, 16 exhibited A260/A280 ratios within the ideal range of 1.7 to 2.0, indicating high-quality DNA suitable for further genetic analysis.. These results highlight the overall effectiveness of the DNA extraction process and support the reliability of subsequent genetic studies.

Key words: DNA purity, spectrophotometry, sheep breeds, Teleorman Black Head