

Novel product using a native breed of sheep (Merino da Beira Baixa): Smoked lamb

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Approximately 12,000 years ago, humanity domesticated sheep (*Ovis aries*), it was during the development of the textile industry that the Merino breed emerged, renowned for their high-quality wool and resilience to the harsh conditions of the Iberian Peninsula (Ceccobelli et al., 2023). The role of these sheep in the "Beira Baixa" region was instrumental in the emergence of the "Merino da Beira Baixa" breed, which play a pivotal role in three protected designations of origin (PDO) in the Castelo Branco area (Ferreira et al., 2009). However, in recent times, the breed has experienced a decline in influence due to plummeting wool prices and an inability to compete with more productive breeds (Rebello de Andrade, 2019). In an effort to preserve this native breed, our work aims to develop a novel food product using this ancestral breed and smoking techniques. In this process there used "Merino da Beira Baixa" breed that have the certification of protected geographical indication (PGI) for "Borrego da Beira". The head was removed, and the carcass eviscerated and divided into appropriate size. For a uniform distribution of meat, the carcass is divided into two segments, one encompassing the neck, chuck, rib, and loin (Saddle), and the other comprising the legs (Leg). A two-day marination in a blend of vinegar and brandy is followed by the application of a spice coating featuring black coriander, black pepper, garlic, and salt. Subsequently, the meat undergoes smoking in a specialized chamber. The resulting product is thoroughly concerning nutritional value and sensory analysis. The outcome is a high protein, a source of fibre and low sugar content product both lamb portions received an overall score exceeding 7 on a scale of 1 to 9. When queried about their willingness to purchase this product in the market, respondents demonstrated a 90% acceptance rate for the Saddle and 77% for the Leg.

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