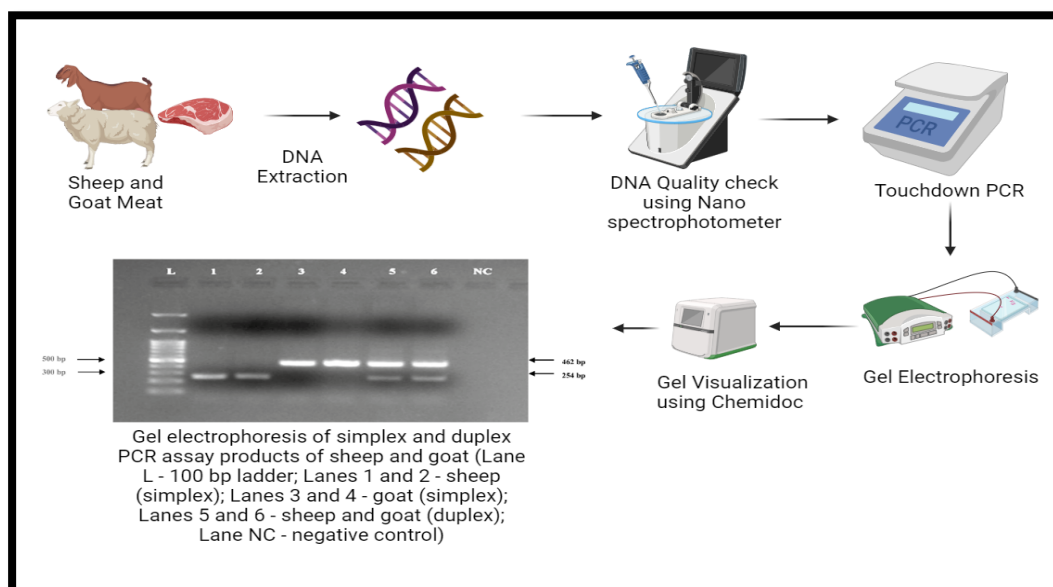


Touchdown PCR technology for differentiation of sheep and goat meat in meat products

Inventor: Dr. Vishnuraj M.R.

Brief description about the technology

Verifying the origin of meat in animal-based foods presents a significant challenge, especially in cases of adulteration where morphological identification is unreliable. Differentiating closely related species such as sheep and goat typically requires laborious and time-consuming optimization of primer annealing temperatures and specificity. To address this, a duplex PCR assay incorporating a touchdown approach was developed to enable simultaneous and reliable detection of both species. The touchdown PCR protocol streamlines the process by eliminating the need for extensive temperature optimization, while enhancing the specificity and sensitivity of mutton and chevon differentiation. This assay demonstrated high species specificity, accuracy, and the ability to detect low levels of target DNA without false positives. The developed technology holds strong potential for widespread use in food testing laboratories for the authentication and detection of adulteration in sheep and goat meat.



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