

High Resolution Melting Analysis as a Novel DNA Assay for Meat Speciation

Ellen Podivinsky¹ and John Mackay²

¹ Waikato Institute of Technology, Private Bag 3036, WMC, Hamilton 3240, NZ.
email: ellen.podivinsky@wintec.ac.nz

² dnature, 24 Island Road, Gisborne, 4010, NZ. email: john@dnature.co.nz

Identification testing for meat species is of interest to regulatory bodies and cultural groups with special dietary requirements, e.g. Halal and Kosher foods. Current methodology for testing meat species is based on PCR assays; often followed by digestion with restriction enzymes to identify individual species^[1,2,3]. These assays are time consuming and expensive to use as commercial test methods.

The aim of this study was to determine the feasibility of using a universal PCR primer set and real-time PCR to amplify a single product from meat species DNA; followed by a more recent method for sequence verification – high resolution melting analysis (HRMA) - to identify and distinguish between the different meat species. Results across multiple assays show the methodology can qualitatively identify and distinguish different meat species in both single species and mixed species samples. There is also potential to develop the assay system to quantitatively analyse mixed samples.

References:

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