

**ID1469**

**Meat Species Discrimination Using NMR-based Metabolomic for *Halal* Authentication.**

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**ABSTRACT**

Proton Nuclear Magnetic Resonance (NMR) is shown to be a potentially very promising method for the analysis of meat species discrimination of four types of commonly consume meats in Malaysia namely, mutton, beef, chicken meat and pork. This study reports the combination of proton NMR metabolites profile from the spectra and pattern recognition method are able to distinguish the meats and classified it into their own groups. These grouping models allowed identifying molecular markers that useful for detection of adulterant indicator of meat and meat based products for *Halal* authentication.

**Keywords:** *Proton Nuclear Magnetic Resonance (NMR), mutton, beef, chicken meat, pork, molecular marker*