

## Qualitative and quantitative evaluation of powdered meat using a handheld NIR food scanner

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Determination of the origin and composition of foods is getting more attention. Consumption of certain meats is favored, while that of others might be forbidden based on health, ethical, religious or other considerations, and these practices may differ around the world. The latest horse meat scandal of Europe has drawn the attention to cost effective, rapid, non-destructive testing methodologies that can detect food fraud. On the other hand, there is a need of knowing the amount of some constituents both in food industry and during assorting people's diet. A handheld Enterprise Telspec Food Scanner based on near infrared (NIR) technology was applied successfully in this study to detect spectral differences of freeze dried pork and rabbit meat (n = 90). Pork neck was clearly separated from pork loin and rabbit thigh based on having significantly higher intramuscular fat content. It was possible to classify not only according to fat since pork loin and rabbit thigh, both containing similar ratio of fat, were also recognized by their spectral pattern. Quantitative models predicted fat content of both pork and rabbit with high precision ( $R^2 > 0.93$ ). The used NIR technology is convenient for food testing purposes both in industrial and personal applications.