

**Title** Applications of thermal imaging in food quality and safety assessment  
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#### **Abstract**

Thermal imaging (TI) is an emerging, non-invasive process analytical technique suitable for the food industry. While TI was originally developed for military applications, it has recently emerged as a powerful non-destructive measurement technique in other industries. This paper provides an overview of TI theory, equipment, and image processing. Recent advances and potential applications of TI for food safety and quality assessment such as temperature validation, bruise and foreign body detection and grain quality evaluation are reviewed.