

Technology for detection of chicken giblets (offal/organ meat) in chicken meat and meat products using microRNA- RT-qPCR.

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Brief description about technology

The rising demand for processed poultry products like sausages, burgers, patties, nuggets and keema has led to economically motivated adulteration, where cheaper offal meats are added to replace skeletal meat. This practice violates Quantitative Ingredient Declaration norms and poses a major regulatory concern, as conventional DNA-based methods cannot differentiate tissues from same species due to identical DNA sequences. To address this, we developed a novel RT-qPCR-based molecular method to detect chicken giblets (liver, heart, gizzard) in meat products by evaluating tissue-specific microRNA expression. This is the first such approach in food safety, validated as per international guidelines and successfully tested on real-world samples.

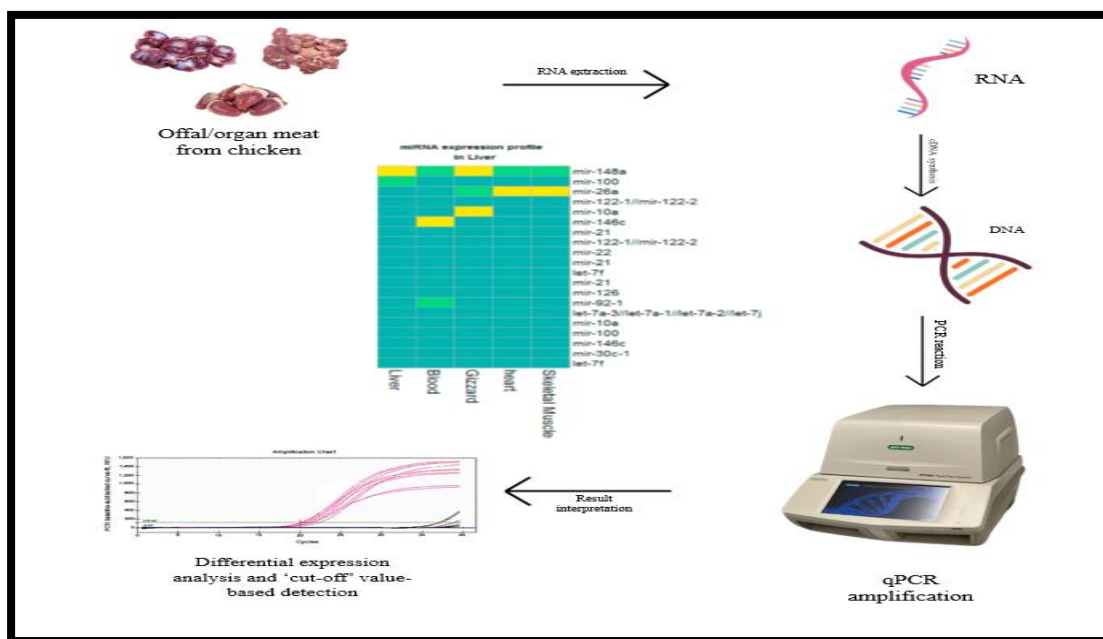


Fig 1. Basic process of developed technology (miRNA-qRT-PCR assay)

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