

THE EFFECT OF COBALT-60 IRRADIATION TO PHYSIOCHEMICAL PROPERTIES OF GROUND BEEF AND PORK WITH RESVERATROL

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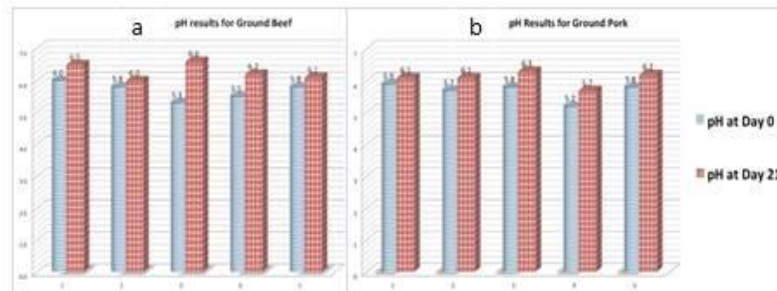


Figure 1. pH results for a) ground beef samples with resveratrol; b) ground pork sample. x-axis represent the ground meat in 5 conditions namely: 1) raw ground meat, 2) irradiated ground meat, 3) cooked ground meat, 4) cooked then irradiated ground meat, 5) irradiation then cooked ground meat.

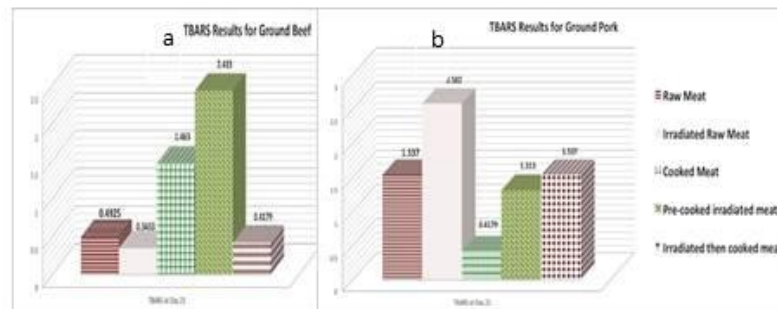


Figure 2. TBARS Assay results for a) ground beef and b) ground pork with resveratrol.

Abstract: Irradiation is one method of preserving meat and that the process itself destroys pathogens or microorganisms which cause meat to spoil. The purpose of this study was to investigate on what will be the effect of Cobalt-60 irradiation to ground beef and ground pork introduced with resveratrol using pH and lipid oxidation, through TBARS method, as factors. Results showed that for ground beef, irradiation lowers the pH after storage and that cooking has no significant effect on pH. Irradiation increased TBARS of cooked ground beef and cooking irradiated ground beef produced higher TBARS. As for ground pork, irradiation had no effect on the pH of raw samples but lowered the pH of cooked ones. Cooking had no effect on the pH. Irradiation also increased TBARS concentration for ground pork. The principal conclusion was that irradiation, cooking and storage period had great impact in decreasing spoilage and prolonging shelf-life for ground beef but needed a longer storage period for ground pork.



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