

Using Crude Actinidin Protease Extract of Kiwifruit to Improve Some Quality Attributes of Awassi Rams Meats

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Abstract : The aim of the study was to examine the effect of different concentrations of crude actinidin enzyme extract from kiwifruit juice and distilled water on some quality attributes of Awassi rams meats. Twelve Awassi rams were divided into four groups, After exsanguinations of rams carcasses they were infused (10% body weight) with crude of actinidin enzyme extract of kiwifruit juice with 10 and 15% of extract, and other group was infused with distilled water and were compared with other groups a non infusion treatment which were acted as a control. Thereafter samples from two main muscles, namely longissimus dorsi (LD) and Semimembranosus (SM) of the carcasses was chilled then stored in freezing, until testing time . The results showed a decrease in the rate pH decline on LD and SM muscle which was measured at time (0, 3, 6, 9, 12, 24 hours) postmortem among different treatments, It also reported lower values of the rate pH on the LD and SM muscle during the first of 12 hrs postmortem. No significant differences of the rate internal meat temperature in LD and SM muscle were observed among treatments postmortem except decreased of internal meat temperature during 3 hours postmortem when treated with enzyme extract. The results recorded higher values of glycolysis rate (R-value) in LD and SM muscle when treated with enzyme extract. Treated LD and LM muscle samples with 10 and 15% of crude actinidin enzyme extract of kiwifruit juice led to improve water holding capacity and higher significant differences in total tyrosine/ tryptophan index (T.T/T) in LD and SM muscles comparison with treatment control. It could be concluded that extract of kiwifruit juice infusion is could be used to improve of meat tenderization.

Keywords : extract of kiwifruit, decline of pH and Temperature , R-value, tyrosine / tryptophan index, sheep meat

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