Comparison of Biochemical Characteristics of Meat from Healthy and Diseased Pigs

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ABSTRACT

The objective of this study was to compare the biochemical characteristics of longissimus dorsi from the carcass of healthy and diseased pigs stored in different conditions.The results indicated that pH value was no apparent change from healthy or diseased pigs stored at 25℃ or 4℃.The conductivity value of meat from healthy pigs increased with increasing storage time.However, the conductivity values of meat from healthy or diseased pigs stored at 25℃ were greater than these stored at 4℃.The color L-value of meat from healthy pigs was lower than diseased pigs, a-value was greater than that of diseased pigs.The myoglobin of meat from healthy pigs was greater than that of diseased pigs, and the myoglobin decreased with increasing storage time.The putrescine of meat from healthy pigs were lower than diseased pigs,but the final putrescine levels of meat from healthy pigs were similar to the diseased pigs.The cadavarine of meat from healthy pigs were lower than diseased pigs. It can be detected from the meat of the diseased pigs when the level of cadavarine was more than 7 μg/g.The histamine of meat from healthy pigs was not detected after the initial stage of slaughtering, differ from that of diseased pigs.It can be detected in the meat from the diseased pigs while the level of histamine was more than 0.38 μg/g.The tyramine of meat from healthy or diseased pigs was not detected after the initial stage of slaughtering.The tyramine was detected with increasing storage time, and the final level of tyramine was five folds as the level of the initial stage.It can be detected from the meat of the diseased pigs when the level of tyramine was more than 0.23 μg/g.In conclusion, it can be identified as the meat from the diseased pigs when the levels of cadavarine and histamine and tyramine were higher than 7 μg/g and 0.38 μg/g and 0.23 μg/g,respectively.

Keywords : pork, cadavarine, histamine, tyramine

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