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# Effect of Myoglobin Concentration on Color Deterioration in Major Porcine Muscles During Cold Storage

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The relationship of myoglobin (Mb) concentration, intramuscular fat content to color deterioration and lipid oxidation in four porcine muscles (LD; *Longissimus dorsi*, PM; *Psoas major*(PM), BF; *Biceps femoris*, SM; *Semimemebranosus*) was investigated. The muscles were obtained from 12 pork carcasses at 24 hours postmortem. Ground pork patty cores (6cm×2cm) were prepared, packed with oxygen permeable wrap film, and stored at 4℃ for 7 days to measure meat color (CIE L*, a*, b*), percentage of DeoxyMb, OxyMb and MetMb, thiobarbituric acid reactive substance (TBARS) value, Mb concentration (mg/g), muscle pH and fat content. Result showed that Mb concentration of PM (2.71mg/g) was significantly ($p<0.05$) higher than those of other muscles (1.72-2.00mg/g), and the Mb concentration was not changed during 7 days of storage. PM samples showed significantly ($p<0.05$) higher CIE a* value and lower CIE L* value compared to other muscles at 7 days of cold storage. No significant differences in muscle pH, fat content and TBARS were found among muscle samples during cold storage. However, MetMb percentage of PM sample was significantly ($p<0.05$) higher than those of LD, BF, SM after 7 days of cold storage. There were no significant difference in MetMb percentage among samples of LD, BF and SM during storage. Results suggested that rapid color deterioration of pork tenderloin during cold storage compared to other pork cuts might be due to higher Mb concentration. Also data suggested that MetMb formation might be not affected by intramuscular fat content of pork during 7 days of cold storage.