

A study of the effect of TBA (Thiobarbituric acid) on the microbiological and sensory qualities of some foods

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TBA(Thiobarbituric acid) is an indicator of lipid per-oxidation in foods and increase in lipid per-oxidation and TBA concentration is a sign of food deterioration. Moreover, it reduces the sensory properties of food. In most studies performed in different foods, the increase of TBA did not affect sensory qualities and even increased in sensory quality. Likewise it has also increased in microbial quality. Thus, the foods can be said that through storage, presence of TBA may inhibit bacterial growth and contamination. This research is concerned with the changing characteristics of TBA in different foods.

Keywords TBA (Thiobarbituric acid); food; the microbiological quality; sensory quality

References

- [1] Campo, M.M., Nute, G.R., Hughes, S.I., Enser, M., Wood, J.D., Richardson, R.I., 2006. Flavour Perception of Oxidation in Beef. *Meat Science*, 72 (2) : 303–311.
- [2] McMillin, K. W., 2008. Where is MAP going? A Review and Future Potential of Modified Atmosphere Packaging for Meat. *Meat Science*, 80 (1) : 43-65.
- [3] Faustman, C., Sun, Q., Mancini, R., Suman, S. P., 2010. Myoglobin and Lipid Oxidation Interactions: Mechanistic Bases and Control. *Meat Science*, 86 (1) : 86-94.
- [4] Yılmaz, I., Demirci, M., 2010. Effect of Different Packaging Methods and Storage Temperature on Microbiological and Physicochemical Quality Characteristics of Meatball. *Food Science and Technology International*.
- [5] Jayasingh, P., Cornforth, D.P., Brennand, C.P., Carpenter, C.E., Whittier, D.R., 2002. Sensory Evaluation of Ground Beef Stored in High-oxygen Modified Atmosphere Packaging. *Journal of Food Science*, 67(9) : 3493-3496.
- [6] Soldatou, N., Nerantzaki, A., Kontominas, M.G., Savvaidis, I.N., 2009. Physicochemical and Microbiological Changes of “Souvlaki”– A Greek Delicacy Lamb Meat Product: Evaluation of Shelf-Life Using Microbial, Colour and Lipid Oxidation Parameters. *Food Chemistry*, 113 (1) : 36-42.