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A comparison of structure, texture and rheological properties of selected muscles of wild boars and pigs

Summary

Texture, histology, rheological and sensory properties of selected muscles: *m. biceps femoris* (BF), *m. semimembranosus* (SM), *m. quadriceps femoris* (QF), and *m. longissimus* (L) of pigs and wild boars were compared. Muscle texture and rheological properties were determined by the TPA and relaxation test performed with an Instron 1140 device. Structural elements (muscle fibre cross-section area, peri- and endomysium thickness, amount of intramuscular fat) were measured in muscle samples using a computer image analysis programme. The wild boar muscles showed higher values of textural parameters and elasticity moduli as well as a lower viscosity moduli compared to pig muscles. The muscle fibre cross-section area and the amount of intramuscular fat of the wild boar muscles were lower than those in the pig meat, while the peri- and endomysium were thicker. Of the pig and wild boar muscles tested, the highest hardness, springiness, chewiness, and viscosity moduli were found in BF which, at the same time, showed the highest fibre cross-section area, the thickest peri- and endomysium and the lowest amount of intramuscular fat compared to QF, SM and L muscles. The higher texture desirability was found in SM and L muscles of both group of animals, the lower was typical of BF muscle. The most juicy was SM, the lowest juiciness being found in L, a muscle with the most delicate histological structure. The wild boar muscles showed a lower tenderness and juiciness and the same time the highest texture desirability than did the pig muscles.