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J. Hughes, Sofia Oiseth, P. Purslow, R.D. Warner

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J. Hughes[a], Sofia Oiseth[b], P. Purslow[c], R. D. Warner, [d*]

[a] CSIRO Animal Food And Health Sciences, 39 Kessels Rd, Coopers Plains, Qld, 4108, Australia.

[b] CSIRO Animal Food and Health Sciences, 671 Sneydes Rd Werribee, Vic, 3030, Australia.

[c] Departamento de Technologia de los Alimentos, Facultad de Ciencias Veterinarias, Universidad Nacional Del Centro de La Província de Buenos Aires, Tandil, B7000, Bs.As. , Argentina

[d] Department of Veterinary and Agricultural Science, The University of Melbourne, Parkville, Vic, 3010, Australia.

[*] Corresponding author: robyn.warner@unimelb.edu.au

Key words

Meat quality, color, texture, cooking, ageing, temperature, water loss, muscle protein

Highlights

- Causes of variation in water-holding, colour and tenderness of raw meat do not correspond to variations in properties of cooked meat.
- The water loss experienced during cooking can impact the juiciness of the meat, with less cook loss being associated with a juicier product and higher sensory tenderness.
- Water acts as a plasticiser of muscle proteins and is largely stabilized within the myofilament lattice.
- Reductions in the muscle fibre volume with increasing cooking temperature can be related to the denaturation of different myofibrillar and cytoskeletal proteins.
- Changes in the myofilament lattice arrangement are believed to impact the light scattering properties and the perceived paleness of the meat.

ABSTRACT

The colour, water-holding capacity (WHC) and tenderness of meat are primary determinants of visual and sensory appeal. Although there are many factors which influence these quality traits and their development post-mortem, the end-results of their influence is often through key