

## Raw meat quality may not predict cooked meat quality: study

By [Rita Jane Gabbett](#) on 9/23/2014

In a [research paper](#) titled, “A structural approach to understanding the interactions between colour, water-holding capacity and tenderness,” researchers assert that quality traits of raw meat do not necessarily relate to variations in cooked meat.

The research was presented at the 60th International Congress of Meat Science and Technology in Punta Del Este, Uruguay, last month and published in the journal *Meat Science*.

The researchers concluded that although there are many factors which influence meat color, water-holding capacity and tenderness, the end results of their influence is often through key changes to the structure of muscle proteins and their spatial arrangement. Water acts as a plasticizer of muscle proteins and water is lost from the myofibrillar lattice structure as a result of protein denaturation and consequent reductions in the muscle fiber volume with increasing cooking temperature.

Changes in the myofilament lattice arrangement also impact the light scattering properties and the perceived paleness of the meat. Therefore, causes of variation in the quality traits of raw meat do not generally correspond to variations in cooked meat.

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