Ground Beef Patties Prepared from Brisket, Flank and Plate have Unique Fatty Acid and Sensory Characteristics

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Abstract

Researchers hypothesized that unique ground beef products could be formulated from Brisket, Flank, and Plate Primals. Primals were taken from 4 USDA Select carcasses from conventionally produced cattle, selected at random in a commercial packing plant. Lean and fat trimings were separated, and ground beef was formulated from each primal to contain 10, 20, or 30% total fat. Brisket Patties contained higher proportions of monounsaturated fatty acids and less saturated fatty acids than Flank Patties. There were no differences in n−6 or n−3 fatty acids across primal type or fat level. After cooking, Brisket Patties had higher bloody/serumy and fat-like descriptor values than Flank Patties. Plate Patties generated higher amounts of lipid-derived volatiles than patties from the Brisket or Flank. Brisket Patties generally had higher amounts of pleasant headspace volatiles whereas the Plate relied more heavily on Maillard-derived volatiles than Flank Patties. In conclusion, individual primals can be used to formulate ground beef with unique compositional and flavor characteristics.


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