

Student	Miss Sumaiya Shamas Chaudhry
Student ID	6205915
Student	Miss Phakjira Tancharoen
Student ID	6304218
Degree	Bachelor of Science
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Research Advisor	Assist. Prof. Dr. Sutarnthip Ruengprapavut
Research Co-Advisor	Napapan Pongpoungphet
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ABSTRACT

The research aims to determine amino acid composition of two cattle breeds, American Brahman, and Charolais cattle obtained from the cattle farm and compare with unknown meat sample which was obtained from the fresh market in Pathum Thani province. The amino acids were determined by high performance liquid chromatography (HPLC) with pre-column derivatization based on OPA method with Fluorescence detector. Round rump meat which is located at the hip of the cattle was used to determine amino acid composition. The results showed that two cattle breeds had different amino acid contents and composition. Nine amino acids, four amino acids and five amino acids were found in the American Brahman meat, Charolais cattle meat and market meat, respectively. American Brahman cattle had the most amino acids composition especially essential amino acids because the cattle were fed with high vitamins and proteins for 3 months before being dispatched whereas Charolais cattle was fed with normal food. Tyrosine, Serine, Valine, and Isoleucine showed high concentration in American Brahman cattle by 0.12, 0.10, 0.06, and 0.06 %

(w/w), respectively. The results from this research indicates that American Brahman cattle meat is one of a good source of dietary protein for humans.