

Total iron and heme iron content and their distribution in beef meat and viscera

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To determine the content of total iron (TFe) and heme iron (HeFe) in major cuts of meat and principal viscera of bovine origin. ^{55}Fe (30 mCi) was injected into two 4-month-old calves. Triplicate samples of the 12 basic American cuts of meat and major viscera were obtained from each specimen. Samples were acid digested and their iron content was read by atomic absorption spectrophotometry. Duplicate samples of the basic cuts of meat and major viscera were analyzed to determine the concentration of ^{55}Fe using a double isotopic technique. The mean and standard deviation of TFe for all cuts was 1.4 ± 0.3 mg/100 g of meat. The mean TFe for organs was (per mg/100 g): 0.9 ± 0.1 brain, 3.0 ± 0.05 kidney, 3.2 ± 0.04 heart, 5.7 ± 0.2 lung, 6.0 ± 0.1 liver, and 31.2 ± 0.4 spleen. HeFe was 64% of TFe in meat and 72.8% in spleen, 53.8% in lung, 35.7% in brain, 35.0% in kidney, 27.3% in heart, and only 13.6% in liver. Blood contained 85.5% of the radioisotope and only 1.4% was found in muscle and 1.6% was found i