Biogenic amines variation from refrigerated white and red chicken meat

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Our aim were to determine the initial content of biogenic amines from raw chicken meat (red and white) and their evolution along refrigerated storage for seven days. By red meat we understand the meat from thigh and drumstick and by white meat we refer to breast meat. For biogenic amines determination we used HPLC (high performance liquid chromatography) method and we determined nine biogenic amines from chicken meat: tryptamine, phenylethylamine, putrescine, cadaverine, histamine, serotonin, tyramine, spermidine and spermine. After one day of slaughtering and carcasses cutting for obtaining the breast and legs (thigh and drumstick) we detected high levels of polyamines: spermine and spermidine. Spermine had the highest content of all biogenic amines studied. Also, in the first day we do not detected any amount of cadaverine and putrescin. After the meat was stored at refrigeration temperature at 4ºC, we observed a decrease of spermine and spermidine content. Tryptamine, phenylethylamine, putrescin, cadaverine, histamine, serotonin and tyramine content increased in time in red and white chicken meat. Our study were conducted for seven days of refrigerated chicken cuts storage, and we did a comparison between biogenic amines profiles of red and white meat. Histamine was present in the first day of storage in both types of meat, in small quantities. Putrescin were detected first in red meat. Cadaverine were detected for both types of meat at shelf life and. We also calculated for the red and white chicken meat a biogenic amines index proposed by Mietz and Karmas and it also be as freshness index by researchers from Barcelona University.