

## **Abstract**

Poultry meat, especially the broiler meat, is required by Romanian consumers. Therefore it is important to assess the raw broiler meat freshness quickly, without expecting the results of microbiological tests which sometimes can take two or more days. We determined the biogenic amines content for refrigerated raw broiler carcasses and skin in order to calculate the freshness index. Biogenic amines (putrescine, cadaverine, histamine, spermine and spermidine) were analyzed during 20 days of refrigerated storage. In the first day of storage the content of putrescin, cadaverine and histamine were under 4 mg / kg d. w. for broiler carcasses and skin. Also, broiler carcasses had the highest value of spermine, the broiler skin being lower with 27.85 %. Cadaverine and putrescin had an increase of value throughout the carcasses storage period. Both spermine and spermidine show a decrease during the broiler carcasses storage. The freshness index calculated with mathematical formula proposed by Mietz and Karmas [ $(\text{putrescin} + \text{cadaverine} + \text{histamine} / 1 + \text{spermine} + \text{spermidine})$ ] show an initial value for broiler carcass of 0,06 and for broiler skin of 0.41. The highest value for the considered freshness index was with 21.8 % higher for broiler skin than for broiler carcass, at the 20<sup>th</sup> day of refrigerated storage. We used the easily hydrolysable nitrogen for comparing the degree of spoilage made by microorganism for broiler carcass and skin. The initial amount of easily hydrolysable nitrogen for broiler skin were 23 mg / 100 g, being with 10.86 % higher than the amount for broiler carcass. In the last day of storage, the amount of easily hydrolysable nitrogen for broiler skin was two times higher than the value of broiler carcass.

**Key words:** chicken meat, refrigerated storage, freshness index, spoilage, biogenic amines.