Czech J. Food Sci.

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Maillard product consumption and nitrogen digestibility in young and adult rats

Czech J. Food Sci., 32 (2014): 164-168

We investigate the effects of consumption of MRPs from the glucose-lysine model system heated 15 ° C-90 min on protein digestibility and its utilisation in young (3-week) and adult (12-week) rats. Nitrogen faecal excretion significantly increased after MRP consumption, especially during the third week. Protein digestibility was lower in both age groups studied, but the utilisation was unaffected. Parallelly, the nitrogen retention and its net utilisation for the entire experimental period did not vary. In young rats the faecal nitrogen exceeded the amount of ingested nitrogen coming from MRPs, suggesting that digestibility of undamaged nitrogen was affected. The same action is suspected in adult animals, but the results

were not quantitatively conclusive, and therefore the effect should be moderate in this period.

Keywords:

protein; net protein utilisation; Maillard reaction products; young rats; adult rats

[fulltext]