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Czech J. Food Sci.

**Švec I., Hrušková M.,
Vítová M., Sekerová H.**

Colour evaluation of different pasta samples

Czech J. Food Sci., 26 (2008): 421-427

The colour of the laboratory prepared pasta was evaluated with respect to wheat flour types (M1 bright, M2 semi-bright, and M3 semolina), egg-ratio (0, 1, 2), and non-traditional cereals (archaic wheat species, tritordeum, spring barley, millet, lupin, buckwheat, and soya) supplements. The flour colour measurement confirmed its dependence on the wheat species milled – M3 obtained from durum wheat had a lower whiteness L^* (89.6) and a higher yellowness b^* (22.2) than the flour from common wheat (e.g. 93.6 and 8.1 for M1, respectively). As presumed, with the rising egg-ratio pasta yellowness increased – for M1-pasta, the calculated colour differences ΔE in pairs one-egg/eggless and two-egg/eggless were 1.1 and 4.7, respectively, while for M2- and M3-pasta ΔE values were only 0.8 and 1.5, respectively. The colour impacts of non-traditional cereals as 10%

supplements differed between alternate wheat species, tritordeum, barley, and alternative cereals (millet, lupin, roasted buckwheat). In comparison to the standard, the greatest positive colour gain was brought by the lupin fortification (130% yellowness increase), while the worst appesred roasted buckwheat (10% decrease of whiteness, 210% increase of redness). At 20% non-traditional cereals supplements compared for M2- and M3-pasta, the highest positive increase of the pasta colour sensory perception was caused by corn and lupin additions in both pasta samples. The increase was slightly higher with M1-pasta (175%) than with M3-pasta (170%). In the mean of both pasta samples, yellowness L^* increased from the standard pasta value 13.6 to 24.0 as measured for corn and lupin fortified pasta.

Keywords:

reflectance colorimetry; colour evaluation; pasta; non-traditional cereals

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