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# **Czech J. Food Sci.**

**Street R., Száková J.,  
Drábek O., Mládková L.**

# **The status of micronutrients (Cu, Fe, Mn, Zn) in tea and tea infusions in selected samples imported to the Czech Republic**

Czech J. Food Sci., 24 (2006): 62-71

A total of 30 tea samples of different origins, thirteen green tea samples, thirteen black tea samples, two semi-fermented tea samples and one white tea, imported to the Czech Republic, were collected and analysed for the total content of copper, iron, manganese, and zinc in tea leaves and tea infusions. The total contents of metals in tea leaves differ according to the type of tea (green or black) and are probably influenced by many other factors, e.g. soil properties. The total contents of Mn were much higher compared to the total contents of Cu, Fe, and Zn, and varied between 511– 2220 mg/kg. To compare easily hot water soluble concentrations of Cu, Fe, Mn and Zn, 5 min, 60 min, and 24 h

infusions were prepared. The extractability of the elements was in the order  $\text{Cu} > \text{Zn} > \text{Mn} > \text{Fe}$ . The proportions of the element contents in the infusion related to the respective total contents in leaves were  $30 \pm 16\%$  Cu,  $26 \pm 10\%$  Zn,  $18 \pm 10\%$  Mn, and  $1.5 \pm 0.8\%$  Fe, respectively. The results confirmed that tea infusion can be an important dietary source of Mn.

### **Keywords:**

tea; tea infusion; copper; iron; manganese; zinc; nutrient status

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