

**Title** Effect of preliminary processing and method of preservation on the content of selected antioxidative compounds in kale (*Brassica oleracea* L. var. *acephala*) leaves

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### **Abstract**

Vitamin C and polyphenol content as well as total antioxidative activity were investigated in fresh leaves of kale; in leaves after blanching or cooking; and in frozen and canned leaves. In 100 g fresh matter, kale leaves contained 384.9 mg polyphenols and 112.1 mg vitamin C, with a Trolox equivalent antioxidant capacity (TEAC) level of 1175  $\mu\text{M}$  Trolox. Of the polyphenols identified in kale leaves, ferulic acid occurred in the highest amount (240.44 mg/100 g, constituting 62% of total polyphenols). Freezing was a better method of preserving kale leaves since the loss of nutritive constituents was lower than in the case of canning. Depending on preliminary processing and storage temperature, after one-year storage frozen leaves contained 82.9–171.3 mg polyphenols and 39.3–65.4 mg vitamin C, with TEAC at the level of 501–681  $\mu\text{M}$  Trolox in 100 g. In canned leaves these values were: 91.3–94.1 mg polyphenols, 16.1–19.3 mg vitamin C and 268–293  $\mu\text{M}$  Trolox.