

# Flavonols - Antioxidants in bulgarian fruits

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The beneficial health effect of dietary flavonoids has been proven continuously during the last 25 years. In this study, the flavonols myricetin, quercetin and kaempferol in Bulgarian fruits are studied. 15 different fruit samples were subject to a careful sampling plan in order to ensure the representativeness of the samples. The individuals flavonols were determined by HPLC after acid hydrolysis to free aglycone. The analytical method for their determination was validated and control charts for analytical quality control were established.

The results show that Blueberries are the richest dietary source of flavonols among Bulgarian fruits (4.31 mg/100 g for myricetin and 9.92 mg/100 g for quercetin). Furthermore, the results show that quercetin is the most abundant representative of flavonols in fruits and it is not detected only in Peaches. The second highest source of dietary flavonols are black grapes - 0.35 mg, 2.32 mg and 0.11 mg in 100 g fresh weight for myricetin, quercetin and kaempferol, respectively. The results also present data for the typical Bulgarian fruit Cornus, that is relatively rich in quercetin (2.49 mg/100 g). The data contributes to the enrichment of the food composition databank at a national and intentional level.

**Keywords:** Flavonols, myricetin, quercetin, kaempferol, fruits, HPLC analysis.

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