

Abstract

Plants synthesize a wide variety of compounds called secondary metabolites. These compounds comprise products of the phenylpropanoid pathway (flavonoids, stilbens, anthocyanines and tannins), isoprenoids, and alkaloids. Since plant secondary metabolites seem to affect human health in a positive way, decrease the risk of some diseases such as cancer, diabetes type 2 and disorders of the cardiovascular system, their studies attract a lot of attention.

The mechanism of the effect of individual compounds on human health has not been clarified yet, the positive effect is probably caused by their antioxidant capacity.

In this work 22 extracts from different kinds of fruit and vegetables were prepared. The total content of phenolic compounds and flavonoids, the antioxidant capacity by methods FRAP (ferric ion reducing antioxidant power) and ABTS [2,2'-azino-bis(3-ethylbenzthiazoline-6-sulphonic acid)] were determined.

High content of phenolic compounds was established in the extract from strawberry, cherry and kiwi, the highest antioxidant capacity was found in the extract from strawberry.

Another studied attribute of extracts from fruit and vegetables was their influence on the activity of digestive enzymes pancreatic lipase and α -amylase. The extracts from lemon, red currant, jostaberry, lime and cherry decreased the activity of lipase, while the extracts from red currant, pumpkin, kiwi and nashi pear significantly inhibited the hydrolysis of starch by α -amylase.

Keywords: phenolic compounds, flavonoids, antioxidant capacity, enzyme inhibition