

**Title** Content of quercetin glycosides and fructooligosaccharides in onion stored in a cold room

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### Abstract

In the paper, the authors present the qualitative and quantitative composition of quercetin glycosides and fructooligosaccharides (FOS) in onions commonly grown in Poland of the varieties: Napoleon, Sprinter and Grabowska from the 2006 and 2007 crops, stored in a cold room under standard conditions from October until February. Quercetin glycosides and FOS have been determined using the HPLC method. It has been demonstrated that the mean content of quercetin glycosides in the three varieties of onions from the 2006 and 2007 seasons is  $1,381.6 \pm 123.1$  and  $1,479.4 \pm 125.5$  mg/100 g d.m., respectively, in the edible part, whereby the proportion of quercetin 3-glucoside and quercetin 4'-glucoside amounts to about 60%. In 2006 in the three onion varieties the FOS content was on average  $7.0 \pm 1.2$  g/100 g d.m., while in 2007 it was  $6.2 \pm 0.9$  g/100 g d.m., of the edible part. The content of quercetin glycosides in outer and middle scales of the onions was  $3,386.3 \pm 190$  and  $1,017.4 \pm 188$  mg/100 g d.m., respectively. In the outer scales the FOS content was lower and amounted to  $3.1 \pm 0.2$  g in 100 g d.m., while in the middle scales it was significantly higher  $6.8 \pm 0.7$  g/100 g d.m. The content of quercetin glycosides in onions is high and remains at a constant level during storage; however, since they are found mainly in outer scales, their total removal with a view to obtaining white and milder culinary products results in a loss of approximately half of polyphenols.

<http://www.springerlink.com/content/58522n771g271t74/fulltext.pdf>