

**Title** Comparison of the level of selected antioxidative compounds in frozen broccoli produced using traditional and modified methods

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#### **Abstract**

The investigation concerned frozen broccoli produced using a traditional method, i.e. from the raw material blanched before freezing, and a modified method of freezing cooked broccoli. In comparison with blanched broccoli the material cooked before freezing contained more dry matter, carotenoids and beta-carotene and less vitamin C and polyphenols; its antioxidative activity was also poorer. In frozen products stored for 0, 4, 8 and 12 months at - 20 or - 30 °C and then cooked, a steady decrease was observed in the content of all the constituents. Compared with the raw material cooked broccoli stored for 12 months contained 29–33% of vitamin C, 54–66% of polyphenols, 80–97% of carotenoids, 69–80% of beta-carotene and showed a 29–35% decrease in the antioxidative activity. A higher or similar level of the above properties was found in samples cooked before freezing as compared with blanched goods; a higher level was ascertained in samples stored at - 30 °C compared with those stored at - 20 °C. The same sensory quality was found for frozen goods obtained with both methods. Frozen products and ready-to-eat frozen products stored at - 30 °C had higher sensory quality.