

# Changes in phenolic compounds profile and glutathione status in raspberry fruit during storage in ozone-enriched atmosphere

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## Abstract

The aim of this study was to investigate the effect of ozone treatment on the phenolic compounds profile and glutathione metabolism in raspberry fruit. Raspberry fruit was stored at room temperature for 72 h and ozonated daily with gaseous ozone at the concentration of 8–10 mg L<sup>-1</sup> for 30 min, every 12 h of storage. Research showed that ozonation process significantly affects the level of phenolic compounds and glutathione (GSH) in raspberry fruit during storage at room temperature. Ozone treatment inhibited the enzymes involved in phenolic compounds degradation i.e. tannin acyl hydrolase, gallate decarboxylase and polyphenol oxidase leading to reduce the loss of polyphenols during storage. Moreover, ozone treatment increased the activity of glutathione reductase and glutathione peroxidase which contributed to reduce the loss of glutathione (GSH) and higher ability of ozonated fruit to scavenging the hydrogen peroxide.