

**Title** Storage hazelnuts: effect on aromatic profile and sensory attributes  
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#### **Abstract**

The hazelnuts quality was studied during and after the storage in selected maintenance conditions. Hazelnuts of 'Tonda Gentile Romana' cultivar and Turkish provenance were stored with and without oxygen presence (air, vacuum with or without nitrogen saturation packaging) at two different temperatures (4-20°C). During storage, the quality was monitored by assessment of the peroxides value, acidity level, sensory analysis, total phenolic compounds content and hexanal content. It was observed that after nine months storage period, the trials without oxygen were in better condition to preserve the hazelnuts from oxidative decline. The best analytical parameter to identify the oxidative state of hazelnuts was the hexanal content conducted through the SPME/GC method, and the decrease in amount of polyphenolic compounds.