Ageing of Honeys (Part V) - Volatile 5-HMF and Linalool Oxides.

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The influence of some linalool oxides on the 5-hydroxy-methyl-furfural (5-HMF) formation was monitored using five systems from two honeys: 1 - fresh samples; 2 and 3 - samples heated during 3 and 6 months under 35/40 degree Celsius; 4 and 5 - similar to systems 2 and 3, but containing sodium metabisulphite (3 ppm/g of honey). These compounds were isolated by a column extraction technique and analysed by gas chromatography methods. A significant statistical increase ($p < 0.05$) in the 5-HMF contents of both honeys was noted during the storage. In the case of cashew honey, the metabisulphite reduced the 5-HMF formation. This behaviour was not observed in the marmeleiro honey. In this honey, a significant rise ($p < 0.05$) in the trans and cis-linalool oxides contents was noted during the storage. An increase in the trans-linalool oxide concentration was also noted in the cashew honey during this period and the cis-linalool oxide, initially not found, was detected in its systems 2 and 3. The increase in the concentration of these oxides was drastically reduced in the metabisulphite added systems of both honeys. We could conclude that in the marmeleiro honey there was a larger amount of linalool oxides precursors than in the cashew honey, so a bigger amount of metabisulphite was consumed to block the formation of such oxides in the former and the 5-HMF production was not impaired in this matrix.

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