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## Effect of various SO<sub>2</sub> concentrations on sugars and amino acids in sulfured dried apricots

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Effect of various SO<sub>2</sub> concentrations (451, 832, 1594, 2112 and 3241 mg/kg) on the profiles and contents of sugars and amino acids in sulfured dried apricots was investigated. The apricots were sulfured by SO<sub>2</sub> gas from liquified SO<sub>2</sub> tank in the same sulfur house and the sulfured apricots were then sun-dried. Sun-dried apricots containing no SO<sub>2</sub> were evaluated as control group. The profiles and contents of sugars and amino acids in the samples were analyzed by HPLC. In the samples, sucrose (115-275 g/kg), glucose (207-315 g/kg), fructose (134-192 g/kg) and sorbitol (238-249 g/kg) were determined. As SO<sub>2</sub> concentration increased, glucose (r=0.774) and fructose (r=0.765) contents increased but sucrose (r=-0.812) content decreased. Sorbitol content did not change depending on SO<sub>2</sub> concentration. Aspartic acid (2872-5692 mg/kg) was determined as the major amino acid, following by glutamic acid (694-989 mg/kg), glisin (89-143 mg/kg), alanin (16-34 mg/kg) and valin (17-28 mg/kg), respectively. The lowest content of total amino acid (3964 mg/kgd.m) was determined in control group, while the highest content (6872 mg/kgd.m) was determined in sun-dried apricots containing SO<sub>2</sub> at the highest concentration. Strong correlations were found between SO<sub>2</sub> concentration with valin (r=0.804) and glisin (r=0.864). Similarly, there were strong correlations between aspartic acid with sucrose (r=-0.743), glucose (r=0.805) and fructose (r=0.702). Moreover, increase in SO<sub>2</sub> concentration led to reduction in browning values of sulfured dried apricots. The results of the study showed that aspartic acid may react with glucose and fructose to form brown colour in sulfured dried apricots.

### Biography

Fatmagul Hamzaoglu was graduated from Department of Food Engineering at Ankara University and started her master degree in 2013. Currently, she has been working as a research assistant in the Department of Food Engineering at Ankara University since 2014.

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