

**Title** Variation of fructooligosaccharide contents invertase, 1-KHE, 1-SST, 1-FFT and 6G-FFT activities in green asparagus spears stored at 10°C

**Author** Nouredine Benkeblia and Norio Shiomi

**Citation** Abstracts Book, 6<sup>th</sup> International Postharvest symposium, 8-12 April 2009, Antalya, Turkey. 256 pages.

**Keyword** Fructooligosaccharide; 1-KHE, 1-SST, 1-FFT, 6G-FFT

### **Abstract**

Fresh spears of asparagus were stored in the dark at 10 DC for 14 days. During storage contents of glucose, fructose, sucrose, 1-kestose, neokestose and nystose, and activities of invertase, 1-kestose hydrolyzing enzyme (1-KHE), sucrose:sucrose 1-fructosyltransferase (1-SST), fructan:fructan: 1-fructosyltransferase (1-FFT) and fructan:fructan: 6G-fructosyltransferase ( FFT) were determined. Invertase activity decreased sharply after two days and progressively afterwards. 1-KHE activity varied also slightly although the final values were low when compared to those observed at the beginning of storage. 1-SST increased during the first four days, while during the last 10 days, but remained quite stable. 1-FFT varied slightly during storage, and the activity of 6G-FFT was similar to 1-FFT although its level was higher. Glucose was stable during the first week and decreased during the second week. Fructose decreased progressively, while sucrose content decreased progressively. 1-kestose and neokestose showed a slight increase during the first days and then decreased progressively during the ten last days of storage. However, nystose content decreased progressively and the decrease was almost linear during storage. It was concluded that sugars contents of asparagus spears declined rapidly during the first four days of storage. This decline explains well the short shelf-life of the spears and the rapid loss of their quality attributes after few days.