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1. Experiment with pears

For investigation 3 pear varieties were used, Kiefer Seedling, Beurre D'Hardenpont, and Passe Crassane.

Treatments (by dipping for 20 seconds) were performed by using ascorbic acid (AA), sodium hexametaphosphate (NaHMP), and calcium chloride (CaCl_2) solutions in different concentrations, AA (1, 2, and 3 %), NaHMP (1 and 2 %) and CaCl_2 (0.2 %), alone and different concentrations.

Texture was determined by using a penetrometer and a Texture analyser TA.XTplus (Stable Micro System, United Kingdom) before treatment and during storage (at 4 °C for 8-12 days) of the samples.

Colour was determined by colorimeter (Minolta CR-300) before and after treatment, and during storage. The chromatic values L^* , a^* , b^* were used to calculate the total colour difference (ΔE^*) on cut surface of the pear wedges.

The highest L values were observed after treatment with 2 % AA + 0.2 % CaCl_2 for the Kiefer Seedling pear variety, 2 % NaHMP, 3 % AA + 1 % NaHMP, and 3 % AA + 2 % NaHMP for the Beurre D'Hardenpont variety, and 3 % AA + 0.2 % CaCl_2 , 3 % AA + 1 % NaHMP, and 1 % NaHMP for the samples of pear Passe Crassane variety.

The best texture had the samples of the Kiefer Seedling pear variety treated with 2 % AA + 1 % NaHMP and 3 % AA + 1 % NaHMP.

The samples of pear variety Beurre D'Hardenpont treated with combinations of 3 % AA + 1 % NaHMP and 1 % NaHMP + 0.2 % CaCl_2 had the best texture.

The pear samples of the Passe Crassane variety, treated with 1 % NaHMP + 0.2 % CaCl_2 and 2 % NaHMP + 0.2 % CaCl_2 had the best texture during storage, and the best texture among all varieties.

Microbiological analysis was performed too. Results will be available soon.

2. Experiment with strawberries

Two strawberry varieties were investigated, Arosa and Miss. The strawberries were treated (by dipping for 20 and 30 seconds) in different solutions: H_2O_2 (2.0 %, and 2.5 %), ascorbic acid – AA (2.5 %, and 3 %), citric acid – CA (1.5 %, and 2.0 %), K-sorbate (1.5 %, 2.0 %, and 2.5 %), CaCl_2 (0.5 %, and 1.0 %) and in different combinations.

The best colour had the strawberry samples of Arosa variety treated with 2.5 % AA, 2.0 % CA, and 2.0 % K sorbate on day 12 of storage at 4 °C.

The best texture had the strawberry samples treated with 2.5 % AA and 2.0 % and 2.5 % K-sorbate on day 12 of storage at 4 °C.

The texture of strawberries (Miss variety) could not be measured after day 8, because of pure quality.