Abstract:

Scald is the most economically serious postharvest disorder of apples. The symptom of scald appears as a diffuse browning of the hypodermis of the fruit, somewhat roughened in severe cases, which becomes more extensive after a few days at room temperature. The lenticels are usually not affected leaving uninjured green spots. The wax ultrastructure of different degrees of scald development (skin with no scald, light browning, medium browning and dark browning) was studied by scanning electron microscopy. Homogenous and granular wax was found on the surface of skin without scald symptoms. When the skin appeared light brown, part of the granular wax disappeared, and most of wax disappeared on skin with severe scald but remained around the lenticels. About 34% of total chloroform-extractable wax decreased after severe scald. The data indicated that the disappearance of the wax was responsible for the loss of apple gloss after scald developed.