

Title Variation of reducing and total sugars, total phenolics and anthocyanins in ribena (*Syzygium cumini*) during five "On Tree" ripening stages

Author Machel A. Emanuel, Nouredine Benkeblia

Citation Abstracts of 7th International Postharvest Symposium 2012 (IPS2012). 25-29 June, 2012. Putra World Trade Centre (PWTC), Kuala Lumpur, Malaysia. 238 pages.

Keywords *Syzygium cumini*; sugars; phenols; anthocyanins; ripening

Abstract

The changes of total and reducing sugars, total phenolics, and anthocyanins in Ribena (*Syzygium cumini*) fruits during "on tree" ripening were assessed. Five ripening stages were considered. Results showed that degreening was observed during stage 3 and turned to blue-red during the last two stages. Reducing sugars increased more significantly from stage 3, and varied from 40.75 to 68.04 mg/g fresh weight during stage 1 and stage 5, respectively. Total sugars also increased progressively and significantly, were a variation from 48.12 mg/g fresh weight at stage 1 to 73.77 mg/g fresh weight at stage 5. Total phenolics did not vary significantly during the ripening stages, although a slight increase was observed during stage 5. Total phenolics ranged from 61.96 µg/g fresh weight (stage 2) and 69.93 µg/g fresh weight (stage 5). On the other hand, anthocyanin increased progressively but less than total phenolics, and varied from 22.11 µg/g fresh weight (stage 1) to 36.65 µg/g fresh weight (stage 5), although the major increase was observed between stage 4 and stage 5. Results showed that reducing sugars, total sugars, and total phenolics increased more significantly during the last three "on tree" ripening of ribena fruits, while anthocyanins showed an increase during the last ripening stage.