

Identifikasi Antosianin Buah Duwet (*Syzygium cumini*) Menggunakan Kromatografi Cair Kinerja Tinggi - *Diode Array Detection*

[Identification of Anthocyanins in Jambolan Fruit (*Syzygium cumini*) by High Performance Liquid Chromatography - Diode Array Detection]

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Abstract

The aim of this study was to determine the content of total monomeric anthocyanins and to identify the anthocyanin composition of jambolan fruit (*Syzygium cumini*) growing in Indonesia. Anthocyanins were extracted with methanol containing 0.1% HCl, removed from non-polar impurities by partition with chloroform and purified in a C₁₈ solid phase cartridge. Anthocyanins were identified by high-performance liquid chromatography with diode array detection (HPLC-DAD), UV-visible spectral analysis, and physico-chemical reactions. Using pH-differential method, it was known that the content of total monomeric anthocyanin in the ripe fruit was 161 mg/100 g fresh fruit (731 mg/100 g skin on wet basis or 3430 mg/100 g skin on dry basis), based on cyanidin-3-glucoside. Furthermore, five anthocyanins without acylating groups were identified as 3,5-diglucoside derivatives of delphinidin (41.29%), petunidin (27.79%), malvidin (25.60%), cyanidin (4.19%), and peonidin (1.13%). These results demonstrate that the skin of jambolan fruit especially the ripe one is rich in anthocyanin, with wide range in anthocyanidin backbone (five aglycons).

Key words: jambolan fruit, *Syzygium cumini*, anthocyanin, HPLC-DAD