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## Nutritional Value of Black Mulberry (*Morus nigra* L.) Jam

Habip Tokbas<sup>1\*</sup>, Cemal Kaya<sup>2</sup> and Salih Aksay<sup>1</sup>

<sup>1</sup>Department of Food Engineering, Faculty of Engineering, Mersin University, 33343 Mersin, Turkey.

<sup>2</sup>Department of Food Engineering, Faculty of Natural Sciences and Engineering, Gaziosmanpasa University, 60150 Tokat, Turkey.

Presenter's telephone: +90(324)3610001/4324

Presenter's e-mail: [habiptokbas@mersin.edu.tr](mailto:habiptokbas@mersin.edu.tr)

### Abstract

Usage of food as health promoter beside its nutritional function is a wide issue in recent years. Especially dark-coloured fruits attract great attention due to their high content of bioactive compounds with antioxidant characteristics.

Berry fruits such as mulberry, strawberry, blueberry, raspberry, blackberry are recognized as being healthy. In addition, more recently, there is an increasing interest in mulberry fruits that may improve human health or lower the risk of disease. Mulberry fruits have some important substances such as phenolic compounds and organic acids. They are determined as having antioxidant, antimicrobial and anti-inflammatory properties. *Morus nigra* is a member of *Morus* genus in the *Moraceae* family. Today, due to its nutritive value, black mulberry is consumed both as fresh and in processed forms. Mulberry fruits are mostly eaten fresh but also used in jam, marmalade, jelly, juices, molasses, fruit leather, churchkhela, liquors, pulp, ice-cream, syrup, fruit sauce, vinegar and cake production.

In this study, some nutritional compounds including total phenolics (TP), total monomeric anthocyanin (TMA) and antioxidant activity (TEAC, trolox-equivalent antioxidant capacity), of black mulberry jam were investigated. Raw materials (black mulberry fruit) were harvested from Tokat region of Turkey. Our objective was investigation of influence of processing on the total phenolic content and antioxidant properties of fresh black mulberry fruit and jam.

Total phenolic content were observed in black mulberry jams between 1420-1967  $\mu\text{g}$  gallic acid equivalents /g ( $\mu\text{g}$  GAE/g). Average antioxidant activity of jam samples was found 13,37  $\mu\text{mol}$  trolox equivalent/g ( $\mu\text{mol}$  TE/g). As regards to anthocyanin content, results were obtained 370,92  $\mu\text{g}$  cyanidin-3-glucoside/g fresh weight (cy-3-glu/gfw) on average. These results provide valuable insight for the variation of biochemical composition of black mulberry jam during processing.

Keywords: Antioxidant activity, black mulberry, jam and total phenolics