

Analytical characterization of freeze-dried blueberry powder

Characterization of freeze-dried blueberry powder obtained from Wild Blueberry Association of North America (WBANA) was carried out by Dr. Mario Ferruzzi, Professor in the Department of Food, Bioprocessing and Nutrition Sciences at the Plants for Human Health Institute, North Carolina State University. The composition of anthocyanins and other major constituents are listed in Table 1 and 2.

Table 1. Anthocyanins in freeze-dried blueberry powder as quantified by LC-MS method

<i>Anthocyanins in Freeze-dried Wild Blueberry Powder (mg/100 g powder)</i>					
	Cyanidin	Peonidin	Petunidin	Malvidin	Delphinidin
Galactoside	20.08 ± 3.25	14.67 ± 0.84	20.35 ± 0.58	14.33 ± 0.27	127.01 ± 1.36
Glucoside	27.09 ± 1.57	10.66 ± 0.50	18.16 ± 0.37	20.55 ± 0.28	56.61 ± 2.08
Arabinoside	26.01 ± 2.45	11.56 ± 0.15	14.33 ± 0.27	16.72 ± 0.29	33.73 ± 0.70
Other	11.63 ± 0.08	9.46 ± 1.07	7.52 ± 0.04	9.59 ± 0.07	80.74 ± 1.26
Total	84.81	46.35	60.36	61.19	298.09

Table 2. Other major constituents in freeze-dried blueberry as quantified by LC-MS method

<i>Other constituents in Freeze-dried Wild Blueberry Powder (mg/100 g powder)</i>					
Chlorogenic Acid	Ferulic Acid	Epicatechin	Myricetin	Quercetin-3-Glucoside	Syringetin-3-Glucoside
248 ± 2.70	4.71 ± 0.11	2.87 ± 0.35	0.68 ± 0.04	31.19 ± 0.59	6.88 ± 0.34



CERTIFICATE OF ANALYSIS

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Table with COA No: CHG-41895675-0, Supersedes: None, COA Date: 12/18/18, Page 1 of 1

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Table with Received From: Salt Lake City, UT, Received Date: 12/7/18

Table with Location of Test: (except where noted) Crete, IL

Analytical Results

Desc. 1: FD-BB Laboratory ID: 383435165
Desc. 2: Freeze dired blueberry powder Condition Rec'd: NORMAL
Temp Rec'd (°C): 20

Main analytical results table with columns: Analyte, Result, Units, Method Reference, Test Date, Loc. Includes rows for Ash, Carbohydrates, Protein, Sugars, etc.

Handwritten signature of Jeff Wilson, Division Vice President

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