APPLICATION NOTE
E181VPH-001

Quantification of Amino Acids in *Aronia melanocarpa*

Abstract

The cited article investigates differences in the concentrations of bioactive compounds in *Aronia melanocarpa* grown in three different regions of Korea. The present application describes the method used for quantification of amino acids.

Keywords

- Aronia melanocarpa
- amino acids

Compound information

Classification	Compound name
Amino acids	Alanine, Arginine, Aspartic acid, Glutamic acid, Glycine, Histidine, Isoleucine, Leucine, Methionine, Phenylalanine, Serine, Threonine, Tyrosine, Valine
Amino acid derivatives	DL-methionine-S-methylsulfonium chloride

Chromatographic conditions

Column	VDSpher® PUR 100 C18-E
Particle Size, Length × inner diameter	3.5 µm, 150 × 4.6mm
Order number	N1546E181VPH
Separation mode descriptions	analytical, reversed phase
Mobile Phase	A: 40 mM Na_2HPO_3 aqueous solution, pH = 7.8 B: $H_2O/CH_3CN/CH_3OH$, 10:45:45 vol%
Elution conditions	Gradient 0-23 min: 0% B 23-24 min: 0% to 55% B 24-24.5 min: 55% to 80% B 24.5-26 min: 80% B 26-26.5 min: 80% to 0% B 26.5-30 min: 0% B
Flow rate	0.8 ml/min
Injection	0.5 µl
Column temperature	40 °C
HPLC system	Dionex Ultimate 3000, Dionex amino acid analyzer Detection: Fluorescence (excitation wavelength = 340 nm, emission wavelength: 450 nm)
Sample and sample preparation	100 mg powdered sample and 5 ml of 80% ethanol were treated with vortex mixing for 1 min followed by centrifuging. The upper layer was transferred to another vial, the aqueous layer was extracted three times using 80% ethanol. The combined ethanolic fractions were dried and the residue was dissolved in a defined amount of 80% ethanol to obtain a concentration suitable for HPLC.

Chromatograms

Not available

Origin

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References

"Effects of Different Growing Regions on Quality Characteristics, Bioactive Compound Contents, and Antioxidant Activity of Aronia (*Aronia melanocarpa*) in Korea"
Eun-Sun Hwang, Nhuan Do Thi
Prev. Nutr. Food Sci. **2016**, *21*(3), 255-262.

Year of application: 2016

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