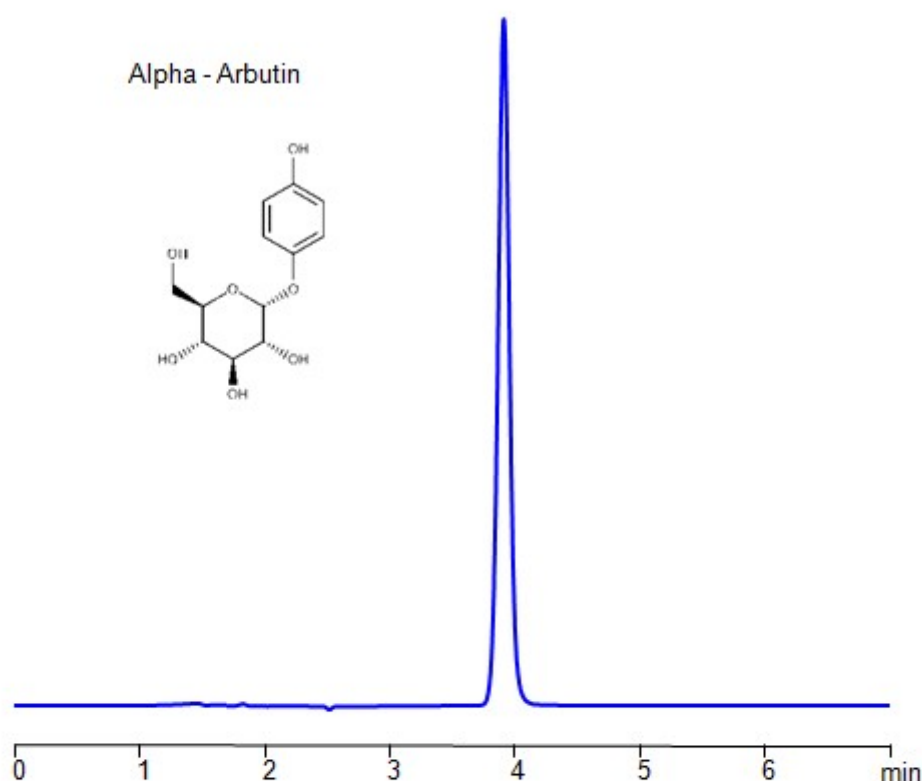


HPLC Method for Analysis of Alpha – Arbutin on Primesep N Column

<https://sielc.com/hplc-ms-method-for-analysis-alpha-arbutin>

Chromatogram



Column:	Primesep N
Column size:	4.6 × 150 mm, 5 µm
Column part number:	N-46.150.0510
Mobile phase:	MeCN - 95%
Flow rate:	1.0 ml/min
Detection:	UV 225 nm
Injection Volume:	1 µL
Sample:	1.0 mg/ml
Diluent:	MeCN – 50%
LOD:	11 ppb

Description

· HPLC Method for Analysis of alpha-Arbutin on Primesep N Column by SIELC Technologies

Alpha-arbutin is a naturally occurring compound with the chemical formula $C_{12}H_{16}O_7$. It is found in certain plants, particularly in the bearberry (*Arctostaphylos uva-ursi*) plant, cranberries, blueberries, and pears. It is a glycoside derivative of hydroquinone, which means it has a glucose molecule attached to a hydroquinone molecule. Alpha-arbutin is known for its skin-lightening properties. It is often used in skincare products to reduce the appearance of hyperpigmentation, such as dark spots and age spots. Alpha-arbutin works by inhibiting the activity of the enzyme tyrosinase, which is involved in the production of melanin (the pigment responsible for skin color). By inhibiting tyrosinase, alpha-arbutin helps to reduce melanin production and, consequently, lighten the skin. Alpha-arbutin is commonly used as an ingredient in various skincare and cosmetic products, such as creams, serums, and lotions, aimed at promoting even skin tone and reducing the appearance of dark spots.

It's essential to note that while alpha-arbutin is generally considered safe for topical use, individuals with sensitive skin or those undergoing specific skincare treatments should consult with a dermatologist or healthcare professional before using products containing this ingredient.

You can find detailed UV spectra of alpha-Arbutin and information about its various lambda maxima by visiting the following link.

alpha-Arbutin can be retained and analyzed using a Primesep N mixed-mode stationary phase column. The analysis employs an isocratic method with a simple mobile phase comprising water, acetonitrile (MeCN). This method allows for detection using UV at 225 nm.

Method Parameters

Mobile Phase	MeCN 95%
Buffer	None
Flow Rate	0.2 ml/min
Detection	UV 225nm
Samples	1 mg/ml
Injection volume	1 µl
LOD*	11 ppb
Class of Compounds	Antiarrhythmic agent, Amide
Analyzing Compounds	alpha-Arbutin

HPLC Column Used

Primesep N, 4.6 x 150 mm, 5 µm, 100 Å, dual ended

[Order this column at hplc-shop.de →](https://www.hplc-shop.de)