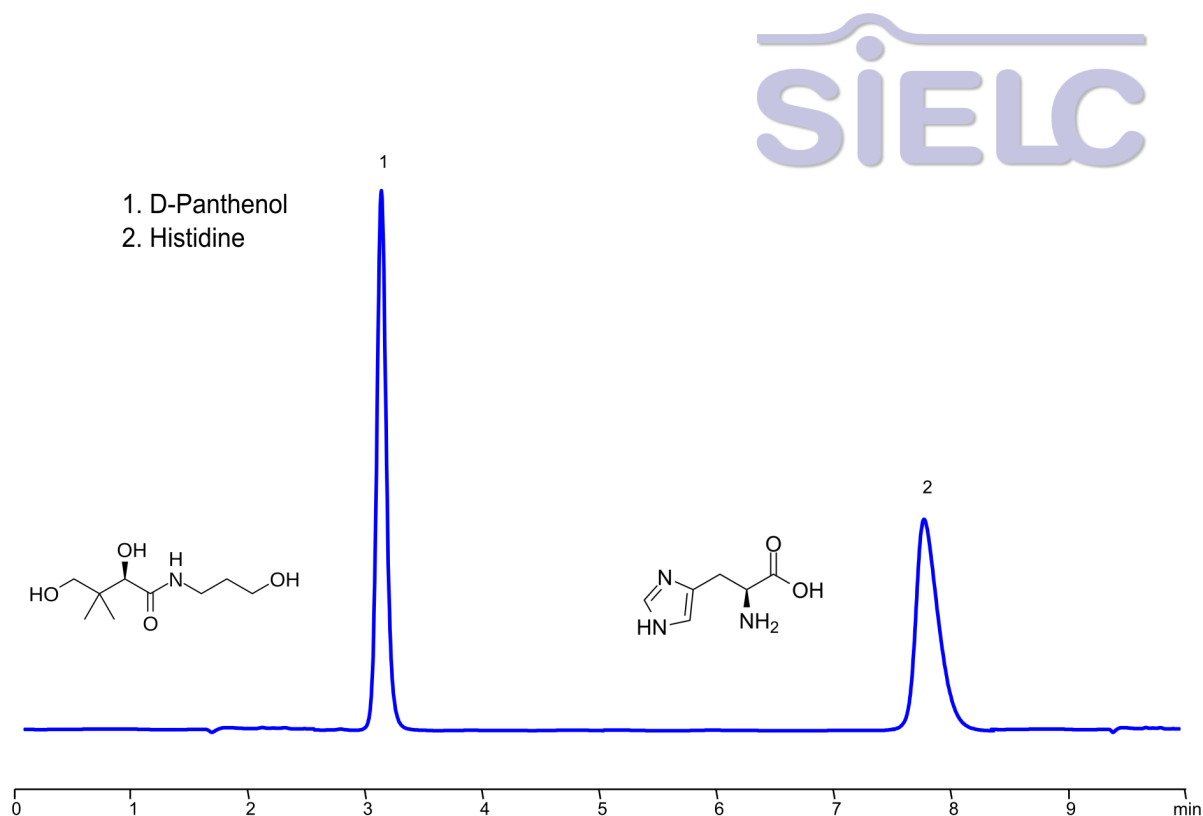


# HPLC Method for Analysis of D-Panthenol and Histidine on Primesep 100 Column

<https://sielc.com/hplc-method-d-panthenol-histidine>

## Chromatogram



|                            |                                       |
|----------------------------|---------------------------------------|
| <b>Column:</b>             | Primesep 100                          |
| <b>Column size:</b>        | 4.6× 150 mm, 5 µm                     |
| <b>Column part number:</b> | 100-46.150.0510                       |
| <b>Mobile phase:</b>       | MeCN/H <sub>2</sub> O - 5/95%         |
| <b>Buffer:</b>             | H <sub>2</sub> SO <sub>4</sub> - 0.4% |
| <b>Flow rate</b>           | 1.0 ml/min                            |
| <b>Detection:</b>          | UV 200 nm                             |
| <b>Sample:</b>             | 0.5 mg/ml                             |
| <b>Diluent:</b>            | H <sub>2</sub> O - 100%               |

## Description

· Separation type: Liquid Chromatography Mixed-mode SIELC Technologies · HPLC Method for Analysis of Panthenol , Histidine on Primesep 100 Column

D-Panthenol and Histidine are two different compounds that are commonly used in skincare, hair care, and other health-related products due to their beneficial properties.

**D-Panthenol (Provitamin B5)** Chemical structure: D-Panthenol is the alcohol form of pantothenic acid (Vitamin B5). Uses: It is widely used in cosmetics and personal care products for its moisturizing and skin-soothing properties. Benefits: Hydration: D-Panthenol is known to improve skin and hair moisture retention. Skin barrier support: It helps in repairing and strengthening the skin's barrier function, which is essential for maintaining skin health. Soothing: It has anti-inflammatory properties, making it beneficial for soothing irritation or minor skin damage. Healing: D-Panthenol supports wound healing and reduces redness or discomfort associated with sunburn, minor wounds, or rashes. Hair health: It also coats the hair, improving shine, softness, and strength while reducing the appearance of split ends.

**Histidine** Chemical structure: Histidine is an essential amino acid involved in several metabolic processes and is a building block for proteins. Uses: In the skincare and health sectors, histidine is used for its antioxidant and soothing properties. Benefits: Anti-inflammatory: Histidine can help reduce inflammation in the skin, which can be helpful in conditions like eczema or acne. Antioxidant: It helps protect the skin from oxidative stress caused by free radicals, which can lead to premature aging and damage. pH regulation: Histidine can help balance the skin's pH levels, promoting a healthy skin environment. Skin hydration: By supporting the skin's natural processes, histidine aids in moisture retention and overall skin smoothness. Barrier function: It supports the repair and maintenance of the skin's protective barrier, helping it defend against external irritants. Both D-Panthenol and Histidine are valuable ingredients in formulations aimed at improving skin hydration, soothing irritation, and maintaining a healthy barrier.

Panthenol, Histidine can be retained, separated and analyzed using a Primesep 100 mixed-mode stationary phase column. The analysis employs an isocratic method with a simple mobile phase comprising water, acetonitrile (MeCN), and sulfuric acid as a buffer. This method allows for detection using UV 200 nm.

#### Method Parameters

|                            |                      |
|----------------------------|----------------------|
| <b>Mobile Phase</b>        | MeCN – 5%            |
| <b>Buffer</b>              | H2SO4 – 0.4%         |
| <b>Flow Rate</b>           | 1.0 ml/min           |
| <b>Detection</b>           | UV 200               |
| <b>Sample</b>              | 0.5 mg/mL            |
| <b>Diluent</b>             | H2O- 100%            |
| <b>Class of Compounds</b>  | Amino acid, Vitamine |
| <b>Analyzing Compounds</b> | Panthenol,Histidine  |

#### HPLC Column Used

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

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