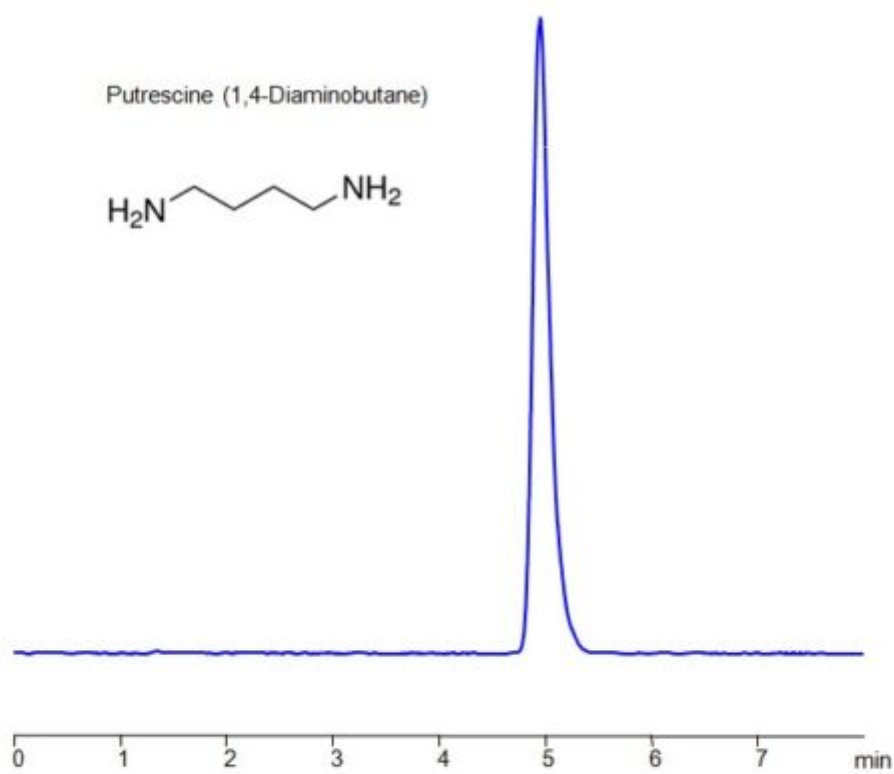


HPLC ELSD Method for Analysis Putrescine on Obelisc R Column

<https://sielc.com/hplc-method-for-analysis-putrescine>

Chromatogram



Column:	Obelisc R
Column size:	2.1 × 100 mm, 5 µm
Column part number:	OR-21.100.0510
Mobile phase:	MeCN/H ₂ O – 50/50%
Buffer:	Ammonium acetate pH 5.0 – 20 mM
Flow rate:	0.2 mL/min
Sample:	0.1 mg/ml
Injection volume:	5 µl
LOD:	200 ppb
Detection:	ELSD, the nebulizer and evaporator temperatures 50°C, with a gas flow rate of 1.6 Standard Liters per Minute (SLM)

Description

· HPLC Method for Analysis of 1,4-Diaminobutane (Putrescine) on Obelisc R Column by SIELC Technologies

1,4-Diaminobutane, or Putrescine, is a biogenic amine with the chemical formula C₄H₁₂N₂. It is one of the main sources of the foul odor of rotting flesh. It is a polyamine, which means it contains multiple amino groups. Putrescine is one of the naturally occurring polyamines found in living organisms and is involved in various biological processes. Putrescine is involved in cell growth, proliferation, and differentiation. It plays a role in the synthesis of other important molecules, including certain alkaloids and polyamine derivatives. It is produced by the decarboxylation of ornithine, an amino acid.

On the industrial scale, it is produced by the hydrogenation of succinonitrile as it has found use as a building block of Nylon 46. It has been proposed to be used as a biochemical marker for determination of how long a corpse has been decomposing.

Putrescine is part of a family of polyamines, which also includes spermidine and spermine. Polyamines are essential for cell growth, and their levels are tightly regulated in living cells. They have been studied for their roles in cancer, neurodegenerative diseases, and other health-related conditions.

You can find detailed UV spectra of 1,4-Diaminobutane (Putrescine) and information about its various lambda maxima by visiting the following link

1,4-Diaminobutane (Putrescine) can be retained and analyzed using an Obelisc R mixed-mode stationary phase column. The analysis employs an isocratic method with a simple mobile phase consisting of water, acetonitrile (MeCN), and ammonium formate as a buffer. Detection is achieved using ELSD

Method Parameters

Mobile Phase	MeCN/H ₂ O – 50/50%
Buffer	Ammonium formate pH 3.0 – 20 mM
Flow Rate	0.2 ml/min
Detection	ELSD, the nebulizer and evaporator temperatures 50°C, with a gas flow rate of 1.6 Standard Liters per Minute (SLM)
Samples	0.1 mg/ml
Injection volume	5 µl
LOD*	200 ppb
Class of Compounds	Polyamines
Analyzing Compounds	1,4-Diaminobutane (Putrescine)

HPLC Column Used

Obelisc R, 2.1 x 100 mm, 5 µm, 100 Å, dual ended

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