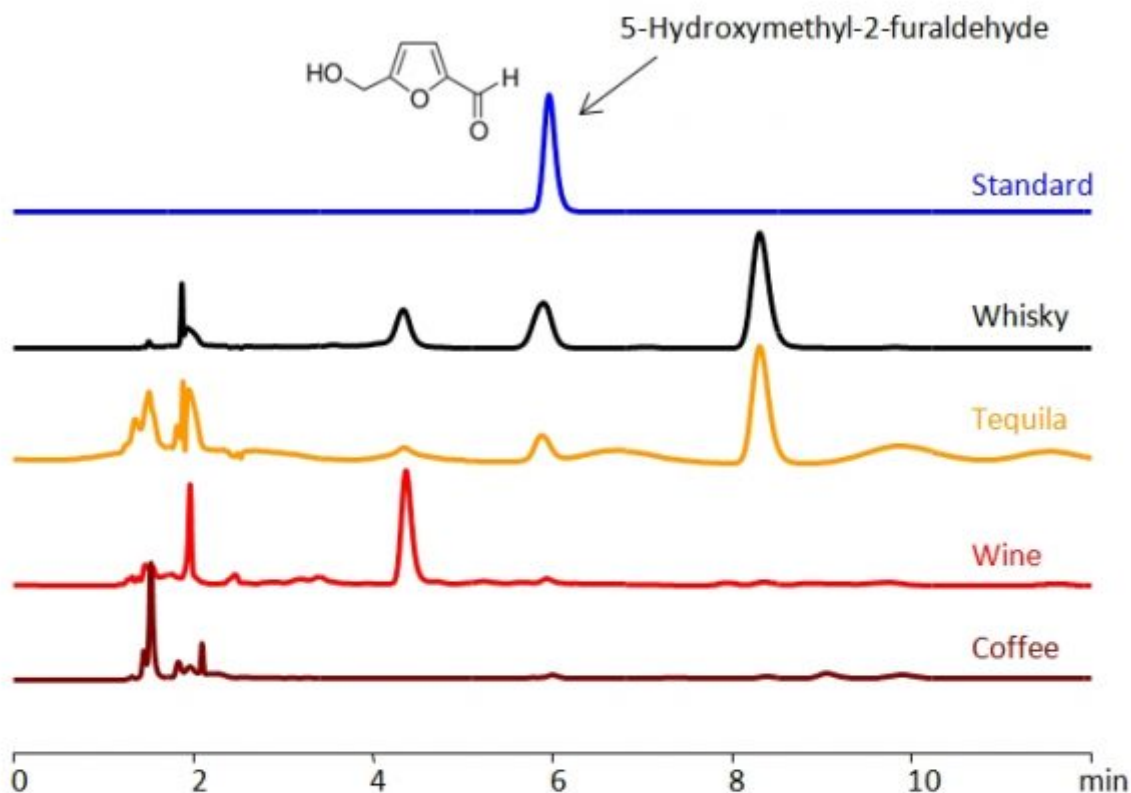


HPLC Determination of 5-Hydroxymethyl-2-furaldehyde (5-HMF) on Newcrom R1 Column by SIELC Technologies

<https://sielc.com/hplc-determination-of-5-hydroxymethyl-2-furaldehyde-5-hmf>

Chromatogram



Column:	Newcrom R1
Column size:	4.6 × 150 mm, 5 µm
Mobile phase:	MeCN/H ₂ O – 5/95%
Buffer:	H ₃ PO ₄ – 0.1%
Flow rate:	1 ml/min
Detection:	UV 284 nm

Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of 5-Hydroxymethyl-2-furaldehyde (5-HMF) .

5-Hydroxymethyl-2-furaldehyde (HMF), also known as 5-(Hydroxymethyl)furfural , is an organic compound derived from sugars and is of interest due to its potential as a platform chemical for biofuels and biochemicals.

HMF plays a notable role in the flavor and aroma development of whisky. Understanding its formation, impact, and concentration can provide insights into the aging process and overall quality of the whisky, contributing to the appreciation and enjoyment of this complex beverage.

Furan is a chemical contaminant that forms in some foods during traditional heat treatment techniques, such as cooking, jarring, and canning.

5-Hydroxymethyl-2-furaldehyde (5-HMF) can be retained and separated in HPLC using Newcrom R1 reverse-phase column. The analytical method's mobile phase consists of a gradient of acetonitrile (ACN) in water with phosphoric acid (H₃PO₄) buffer and using UV detection at 210 and 275 nm.

Method Parameters

Mobile Phase	MeCN/H ₂ O – 5/95%
Buffer	H ₃ PO ₄ – 0.1%
Flow Rate	1.0 ml/min
Detection	284 nm
Class of Compounds	Hydrophilic
Analyzing Compounds	5-Hydroxymethyl-2-furaldehyde (5-HMF)

HPLC Column Used

Newcrom R1, 4.6 x 150 mm, 5 µm, 100 Å, dual ended

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