

This application describes the analysis of furfurals using a High Performance Liquid Chromatography (HPLC) system.

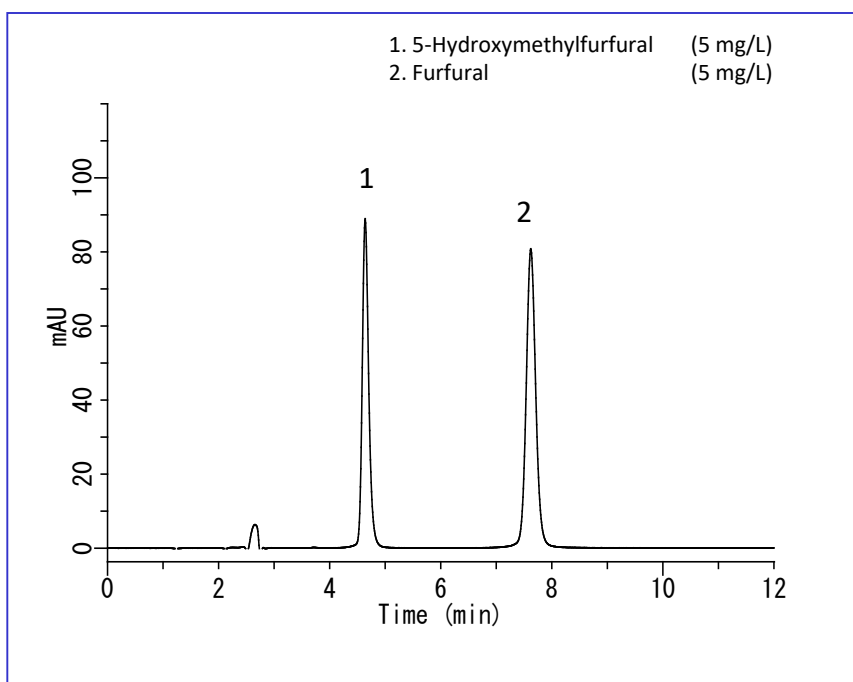
Furfural, is a breakdown product of sugars, and is also produced as a decomposition product of the cellulosic insulating paper used in transformers.

A related compound, 5-hydroxymethylfurfural (HMF), is also known as a breakdown product of sugars, and its formation is believed to develop over time or be accelerated when heated. HMF is considered to be a compound that determines the quality of foods high in sugar, such as honey.

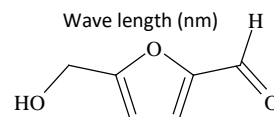
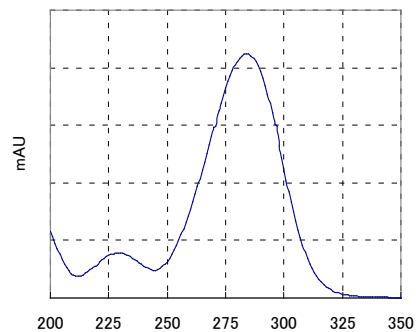
This report describes the analysis of furfural in soft drinks.

(K.Suzuki)

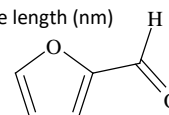
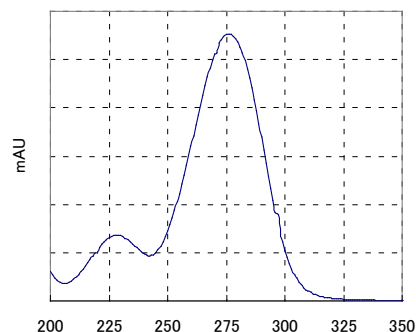
Example: Measurement of standard



Structural formulae and UV spectra



5-Hydroxymethylfurfural



Furfural

Structures are created using Chemistry 4-D Draw which is provided by ChemInnovation Software, Inc.

HPLC conditions

Column : Inertsil ODS-3
(5 μ m, 150 x 3.0 mm I.D.)

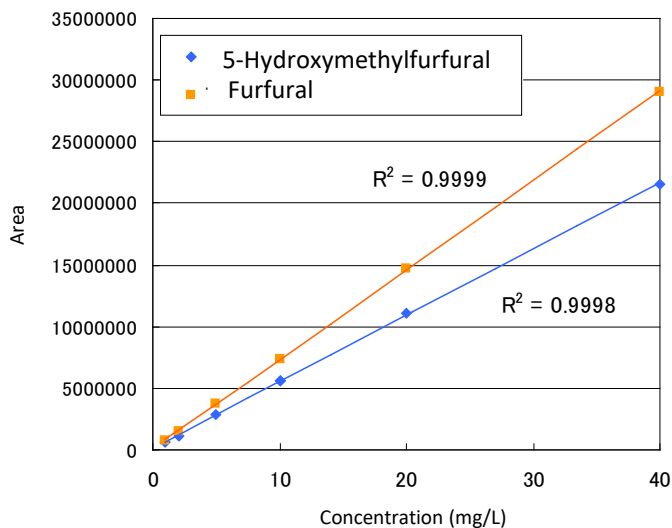
Eluent : A) CH₃CN
B) H₂O
A/B = 10/90, v/v
(Mixed by a gradient mixer)

Flow rate : 0.4 mL/min

Column temperature : 40 °C

Detected : PDA 275 nm

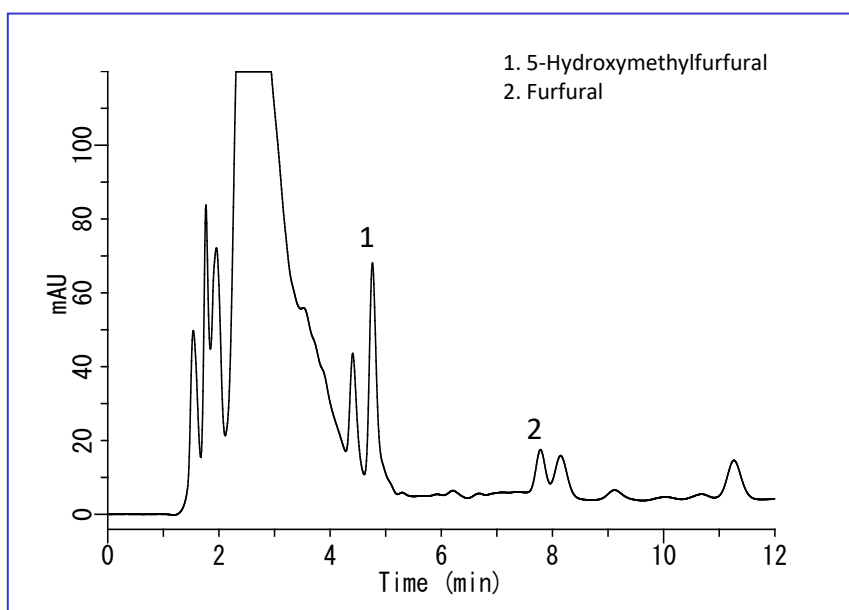
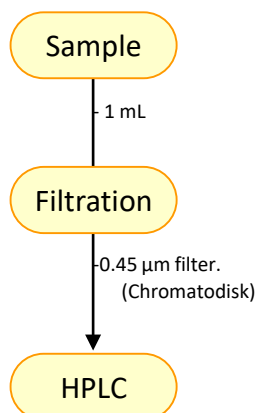
Injection volume : 20 μ L



Calibration curve

Examples: Analysis of peach juice

Example of
pretreatment



HPLC column: Inertsil ODS-3 5 µm, 150 x 3.0 mm I.D.
Cat.No. 5020-01751

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