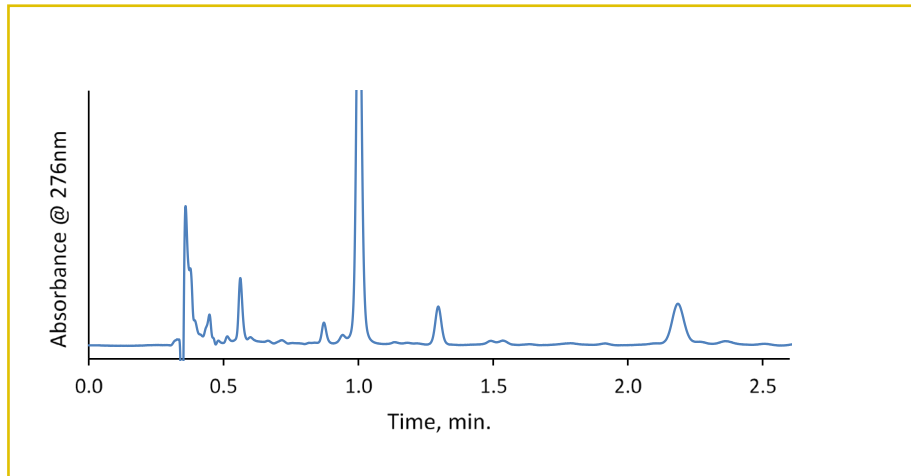




## Separation of Patulin and HMF on HALO 90 Å Biphenyl

Application Note 175-M



### PEAK IDENTITIES:

1. 5-(Hydroxymethyl) furfural
2. Patulin

In the United States, the FDA maintains different limits for mycotoxins in many foods and beverages. Patulin, a mycotoxin that is produced from mold on a variety of fruits has a limit of 50 µg/kg. For analysis, patulin was spiked into apple juice and the sample was cleaned up using solid phase extraction. Interfering analytes such as 5-(Hydroxymethyl) furfural (HMF) can make analysis more challenging. This separation shows the two compounds separated on a HALO<sup>®</sup> Biphenyl column with enough resolution to easily check for sample recovery.

### TEST CONDITIONS:

**Column:** HALO 90 Å Biphenyl, 2.7 µm,  
2.1 x 100 mm

**Part Number:** 92812-611

#### Mobile Phase:

A: Water with 0.1% acetic acid

B: Acetonitrile with 0.1% acetic acid

**Gradient:**

Time (min)	%B
0.0	5
2.6	90

**Flow Rate:** 0.6 mL/min

**Initial Pressure:** 285 bar

**Temperature:** 40 °C

**Detection:** UV 276 nm, PDA

**Injection Volume:** 1.0 µL

**Sample Solvent:** Apple juice spiked with HMF  
and 50 ng/mL Patulin

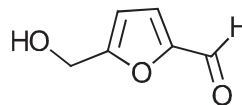
**Response Time:** 0.025 sec

**Data Rate:** 100 Hz

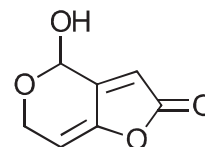
**Flow Cell:** 1.0 µL

**LC System:** Shimadzu Nexera X2

### STRUCTURES:



5-(Hydroxymethyl) furfural



Patulin

