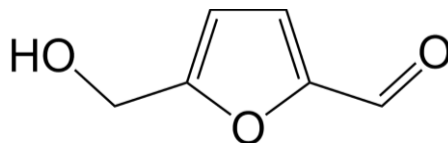


Application Note: Determination of 5- hydroxymethylfurfural in honey

Hydroxymethylfurfural (HMF), also 5-(hydroxymethyl)furfural, is an organic compound formed by the dehydration of reducing sugars. It is a white low-melting solid (although commercial samples are often yellow) which is highly soluble in both water and organic solvents. The molecule consists of a furan ring, containing both aldehyde and alcohol functional groups.

The main components in honey are various sugars, of which fructose and glucose together account for about 70%. During the degradation of these sugars, 5-hydroxymethylfurfural (HMF) is produced, and the latest Chinese Pharmacopoeia stipulates that its content should not exceed 0.004%.

Due to the polar character of this compound, significant tailing occurs when tested with many C18 columns. However the Horizon AQUA C18 column provides excellent peak shape and column effect far higher than the pharmacopoeia requirements.



mV

