

NEW!

LC-MS/MS ANALYSIS OF PATULIN in APPLE JUICE

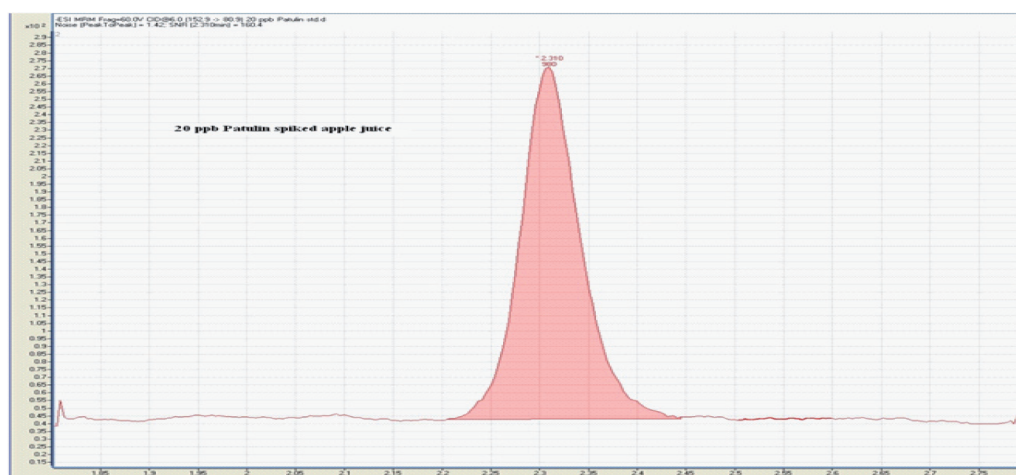
Jasem® Method: Accuracy – High Speed – Simplicity in New Dimensions !

® Patent pending

Patulin is a mycotoxin mainly found in apples and apple products, and has become one of the most important quality criteria for apple juice. Patulin is formed in apples decayed by certain genus of moulds, particularly *Penicillium expansum*, easily transfers into apple juice during processing owing to its solubility in water and carcinogenic, teratogenic and mutagenic effects of patulin have been reported.*

* V. Leuenberger,
R. Gaugh,
E. Baumgartner, (1978),
J. Chromatogr., 161, 303.

Extracted ion chromatogram of 20ppb Patulin spiked apple juice



Features of Jasem® method

- No need for sample preparation
- No need for Liquid-Liquid extraction
- No need for concentration steps
- Short run time
- Preventing source contamination

Benefits & Advantages of Jasem® method

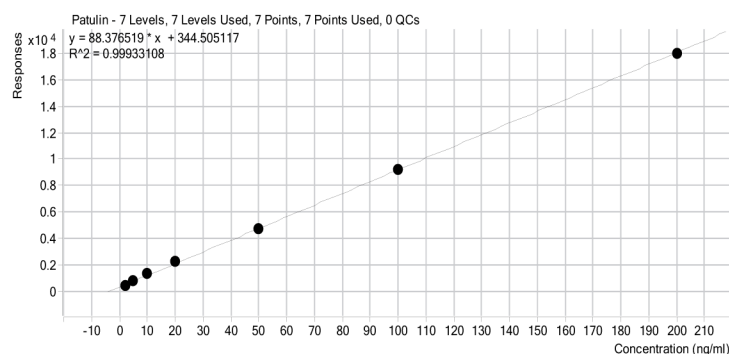
- No any cost of sample preparation step
- Short run time with 5 min
- Very sensitive with 0,6ppb LOQ (ref. method applicable of determination of patulin >25ppb)
- More selective and 40 times sensitive than standard HPLC-UV Method, although not used any concentration and cleaning steps



JASEM LABORATUVAR SİSTEM VE ÇÖZÜMLERİ SANAYİ VE TİCARET A.Ş.

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Patulin calibration curve from 2 ppb to 200 ppb



	R2	LOQ (ppb)	LOD (ppb)
Patulin	0.9993	0.5	0.2



Present Reference Method: AOAC (Association of Official Analytical Chemists) Official Method 2000.02 "Patulin in Clear and Cloudy Apple Juices and Apple Puree". This method is Liquid Chromatographic-UV Method with approximately 1 hour sample preparation time.

Jasem®Method: No need for sample prep and only 5 minutes LC-MS/MS run time!

Why is all over the world medical interest in Patulin so rapidly growing ?



In view of the recognized adverse effects caused by this mycotoxin and the need for regulatory control, monitoring its level in apple juice and other food products made from apples is important to evaluate the risk due to human consumption of these products. Maximum permitted concentration has been set for Patulinat 50µg/L (ppb) in foodstuffs by the World Health Organisation (WHO).