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Impact of Pharmaceutical Impurities in Ecstasy Tablets: Gas Chromatography-Mass Spectrometry

In this study, a simple and reliable method by Gas Chromatograph–Mass Spectrometry (GC–MS) was developed for the fast and regular identification of 3, 4-MDMA impurities in ecstasy tablets. In doing so, 8 samples of impurities were extracted by diethyl ether under alkaline condition and then analyzed by GC–MS. The results revealed high MDMA levels ranging from 37.6% to 57.7%. The GC-MS method showed that unambiguous identification can be achieved for MDMA from 3, 4-methylenedioxyamphetamine (MDA), Amphetamine (AM), methamphetamine (MA) and ketamine (Keta) compounds, respectively. The experimental results indicated the acceptable time window without interfering peaks. It is found that GC-MS was provided a suitable and rapid identification approach for MDMA (Ecstacy) tablets, particularly in the Forensic labs. Consequently, the intense MDMA levels would support the police to develop a simple quantification of impurity in Ecstasy tablets.

Biography

He received his PhD degree in Toxicology and Pharmacology from Pharmacology and Toxicology department, Shaheed Beheshti University, Tehran in 2005. He is the Head of Toxicology Research Center and Drug and Poison Information Center located in Jundishapur University. He was Interim Chair of Research and Development Office (R&D), the coordinator and implement of strategic plan of Student Research Committee of Jundishapur University and the Consulant for the Mayor of the city of Ahwaz between 2013 and 2015. He has published more than 65 papers, compiled 3 books and received 8 items of awards.

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