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## Impact of pharmaceutical impurities in ecstasy tablets: Gas chromatography-mass spectrometry

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In this study, a simple and reliable method by gas chromatography–mass spectrometry (GC–MS) was developed for the fast and regular identification of 3, 4-MDMA impurities in ecstasy tablets. In doing so, eight 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 (Ecstasy) 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.

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