

# Impurities in Illicit Drug Preparations: 3,4-(Methylenedioxy)amphetamine and 3,4-(Methylenedioxy)methylamphetamine

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**REFERENCE:** Verweij AMA: Impurities in illicit drug preparations: 3,4-(methylenedioxy)amphetamine and 3,4-(methylenedioxy)methylamphetamine; *Forensic Sci Rev* 4:137; 1992.

**ABSTRACT:** Attention is given here to the mass spectral data of impurities present in illicit drug preparations of 3,4-(methylenedioxy)amphetamine and 3,4-(methylenedioxy)methylamphetamine. These “designer” drugs, having emphatic properties, were synthesized following well-known procedures such as the reductive amination route, the Leuckart reaction, and the nitropropene and the bromopropane routes. Based on the structure elucidation of impurities — especially those so-called “route specific” ones — present in these illicit drug preparations conclusions can be drawn about the method of preparation of a drug sample. Furthermore, on the basis of this kind of information methods can be developed for the comparison of drug samples, by which questions about the origin of drug samples can be solved (commonly known as the signature method).

**KEY WORDS:** Designer drugs, dioxyamphetamine, synthesis, impurities, mass spectrometry.

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