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P81. OPTIMIZATION and VALIDATION of A GC-MS METHOD FOR ANALYSIS of AMPHETAMINES in SYNTHETIC TABLES

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Amphetamine is a synthetic stimulant of the central nervous system. It was first synthesized in 1887 by German chemist L. Edeleano, however the stimulant effects were not noticed. In early 1930s, stimulant properties of amphetamine were discovered. Thus, it was marketed as an inhaller for nasal congestion. During World War II, the military in the United States, Great Britain, Germany, and Japan used amphetamines to increase alertness and endurance and to improve mood. The origin of the amphetamine sold as Captagon is unknown. Conventionally, the substance was believed to have been manufactured illicitly in South-East Europe, notably Bulgaria, and trafficked to the region, often transiting Turkey by air or sea. Amphetamine causes hypertension and tachycardia with feelings of increased confidence, sociability and energy. After oral administration, the effects usually start in 30 minutes and last for many hours. This study intended to develop and optimize GC-MS method for analysis of amphetamines in synthetic tables which were seized in 15 different places and times and sent to the Ankara Police Forensic Laboratory, Gölbaşı, Turkey. The GC-MS system equipped with an Agilent Technologies (CA, USA) 6890, a gas chromatograph and an Agilent 7683B auto injector coupled with a 5973 inert Agilent electron impact (EI) mass spectrometer was utilized for the identification of amphetamines in synthetic tables. In order to validate the method in terms of precision and recovery; certified reference standard of d-amphetamin. HCL and paracetamol were analyzed for ten times. A secondary standard of amphetamine prepared at the concentration of 0.30 mg/ mL was analyzed for ten times. Mean amphetamine concentration was found 0.30±8.44x10-3 where percent relative standard deviation was calculated as 2.84%. Successful percent recovery values were ranged between 94.64% and 100.49 while GC-MS method for amphetamine analysis provided LOD and LOQ values equal to 0.0117 mg/mL and 0.0391 mg/mL, respectively.

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