

## **ABUSE DRUGS BY GAS CHROMATOGRAPHY MASS SPECTRUM**

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**Background:** Drugs of abuse are any drug or substance which if taken by any route (oral-snuffing-injection) will lead to mood change, psychological disturbance and can affect brain functions and level of perception. The aim of this work is to evaluate the usefulness of using urine immunoassay kits for detection of some drugs of abuse, and study the correlation between the results obtained by EMIT and GC / MS techniques.

**Materials & Methods:** Drug toxicology tests are most commonly performed on urine, since most drugs and their breakdown products are excreted in the urine at higher concentration. A total number of 449 inhabitant urine samples were collected from patients admitted to emergency hospital, Mansoura University. 449 urine samples were analyzed by EMIT and GC / MS for benzodiazepine, barbiturate, opiate and cannabinoid.

**Results:** Revealed that urine immunoassay kit is useful for rapid preliminary screening of abuse drug. GC / MS results confirm that 245 samples (54.56 %) are positive of the total number of samples. These positive samples by GC / MS were as follows; benzodiazepines; 159 ((clonazepam, oxazepam, temazepam), barbiturates; 58 (thiobarbiturate, butabarbital, seconal) and opiates; 28 (methadone metabolite)).

**Conclusions & Recommendations:** GC / MS analysis must be done for accurate identification and confirmation of EMIT results. In addition, it is recommended as the most suitable technique for obtaining optimum analytical results.

**Keywords;** Urine samples, EMIT, GC/MS.

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