

## **Assessment of human intoxications by measuring plasma or urine levels of several medications.**

### **Applications**

Applications for this technique are needed for hospitals, public instances and general public.

### **Problem addressed**

Acute intoxication, whether due to accidental or deliberate poisoning, is a major public health problem worldwide. In many countries, poisoning is responsible of frequent attendances at emergency medicine departments in hospitals. In 2016, World Health Organization (WHO) recorded 106,683 cases of deaths from unintended poisoning across the world. The Poison Control Centers (PCCs), over the world, operate in emergency and non-emergency cases providing immediate advices on poisonings, specific treatments and toxicological analysis. Moreover, PCC can also perform awareness campaigns to prevent poisoning.

### **Technology**

The PCC and the Laboratory of Toxicology both affiliated to the Faculty of Pharmacy of Saint Joseph University in Lebanon provide medical information for the management of human intoxications. Moreover, we assess human intoxications by measuring plasma or urine levels of several medications (Barbiturates, Benzodiazepine, Tricyclic antidepressants, salicylate, acetaminophen, phenothiazine...), by seeking for drugs of abuse in urine (opioids, cocaine, tetrahydrocannabinol, amphetamines...) and by quantifying blood alcohol level using specific techniques. To have a more accurate evaluation of the drug or the association of drugs responsible of the intoxication, urine specimen can also be evaluated using gas chromatography coupled to mass spectrometry.

### **Advantages**

- Identify specifically the drug (s) responsible of the different intoxications.
- Have a qualitative and a quantitative evaluation to allow an accurate medical care.
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### **Inventors**

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