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## USING GC-MS ANALYZING METHOD TO MONITOR MEDICATIONS IN THE MARKET

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**Abstract:** It has been clear that the pharmaceutical industry is flourishing, and new and new drugs are being made. Because of the highly profitable profile of producing medications more and more businessmen are coming into this field. Frauds are also attracted to this field, unfortunately. That is why there are some cases of fake medications. To fight against these frauds, we planned to monitor the pharmaceutical market in Uzbekistan by using GC-MS analysis spontaneously. It would be a great activity to find fake medications in the pharmaceutical market of Uzbekistan.

**Key words:** Uzbekistan, Pharmaceuticals, market, GC-MS, Law, antibiotics, resistance, State Committee, infections

### Introduction

Gas chromatography-mass spectrometry (GC-MS) is a well-established analytical technique for the identification and quantification of drugs in biological samples. It is widely used in forensic toxicology and clinical pharmacology to monitor medications in the market. In this article, we will discuss the importance and benefits of using GC-MS in analyzing medications.



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GC-MS is a two-step analytical technique that involves the separation of compounds using gas chromatography followed by the detection and characterization of these compounds using mass spectrometry. This technique is particularly useful for the analysis of complex mixtures, such as biological samples, where the identification and quantification of specific components can be challenging.

One of the main advantages of GC-MS is its high specificity and sensitivity. This means that it can detect and quantify drugs at very low concentrations, which is

important for monitoring medications in the market. GC-MS can also provide information on the identity of the drug, its metabolites, and any impurities or contaminants that may be present.

Another benefit of using GC-MS is its versatility. It can be used to analyze a wide range of drug classes, including opioids, benzodiazepines, antidepressants, and antipsychotics. This is important because different drugs have different pharmacological effects and may be associated with different adverse effects or interactions.

GC-MS is also a reliable and reproducible method of analysis. It has been validated for use in both clinical and forensic settings and is widely accepted as a gold standard for drug analysis. This means that results obtained using GC-MS are likely to be accurate and can be used in legal or regulatory proceedings.

**In summary**, GC-MS is an important analytical technique for monitoring medications in the market. It has many benefits, including high specificity and sensitivity, versatility, and reliability. By using GC-MS, we can ensure that medications are safe and effective and that patients receive the best possible care.

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