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Opinion Article

A Brief Note on Drug Analysis and its Importance

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DESCRIPTION

Drug analysis involves identifying novel drugs, evaluating their association and specificity, classifying their molecular structures, and testing their efficacy *in vitro* and *in vivo*. Pharmaceutical analysis can be divided into two types: qualitative methods: These methods are commonly used to confirm the presence or detection of component and\or impurities (predictable). Quantitative methods: Determine the amount of known drugs in bulk form or formulation. Drug Discovery and the development process can be divided into two main stages: Drug Discovery, which involves the separation, refining and standardization of the active ingredient. The second major phase, drug development, begins with solitary confinement, during which it progresses through various studies intended to support its approval as a new drug. The new drug is formulated in the form of an appropriate drug dose.

IMPORTANCE OF DRUG ANALYSIS

Pharmaceutical product is a drug intended for human or veterinary use in curing, relieving, preventing or diagnosing disease. Use of useless, harmful or substandard drugs can be detrimental to health and waste funds. The problem is exacerbated by adverse weather conditions and a weak drug supply system (including storage and transportation). These can lead to deterioration of the drug quality, loss of activity and formation of harmful degradation products any pharmaceutical product must undergo various analytical procedures to ensure its effectiveness and safety. Therefore, an effective drug quality assurance and evaluation system must be developed and maintained.

Drug diagnoses can be useful in a variety of areas. When evaluating the pharmacokinetic properties of a drug, drug concentrations and drug diagnoses need to be made over time. Through these decisions, for example the analysis can find out the absorption and elimination and bioavailability. Evaluation of adherence to drug analysis is another goal. Poor adherence can lead to sub-optimal drug levels, increasing the risk of developing resistance to a drug that controls parasites, viruses or bacteria. If the drug is present, without patient recovery, it may be indicative of resistance. Dosage versus response means that drug diagnoses can also be used to study what dosage is required for recovery. In addition, this approach is important when medications have narrow treatment windows. Due to individual variation, due to the large size of some medications, dose adjustment may be required. Most drugs are antiemetics, that is, molecular mirror images. Although the same drug, antioxidants may behave differently in terms of efficacy, toxicity, and bioavailability in others. Diagnosis of individual antiemetics may help to understand the possible causes of drug side effects.

Drug diagnosis starts with the model and for clinical studies conducted in low-income countries, it is conducted in rural settings and/or with limited equipment available. The use of capillary blood on sample paper is a frequently desired matrix for Dry Blood Spots (DBS). When determining the pharmacokinetic properties of a drug, plasma is usually selected as the matrix. Quantitative analysis determines the concentration of a specific analysis in a matrix containing other compounds. Several analytical methods are used to determine the separation of substances from each other by the use of differences in chemical properties. Because biological fluids contain many substances, in most cases some purification is required prior to analysis with Liquid Chromatography (LC), rather than analysis of interest. Solid Phase Extraction (SPE) is an appropriately selected prototype technology when analyzed in a complex matrix. Through SPE, interfering compounds can be removed. After that, the LC is used to separate the drug from the rest of the interfering substances. To accurately determine the densities of unknown patterns, the setting pattern 10 should be selected.

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