Wes E Steiner, J Anal Bioanal Tech 2016, 7:5(Suppl)
http://dx.doi.org/10.4172/2155-9872.C1.025

Current trends in gas chromatography and mass spectrometry instrumentation: A hyphenated technology for analytical and bioanalytical techniques

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The advancement of hyphenated instrumentation from a variety of scientists working in the public and private sectors of research and development in the form of gas chromatography (GC) being coupled to mass spectrometry (MS) has continued to develop into a powerful multi-dimensional hyphenated instrumental technology for the use in a wide assortment of analytical and bioanalytical techniques. Examples of this development can be seen in the analysis of drugs, metabolites, pesticides, chemical warfare agents, food ingredients, medications, fuels and etc, and/or in the main category of volatile and semi-volatile organic compound analysis in fields such as forensic, toxicology, environment, defense, food and beverage, pharmaceutical, petrochemical and etc. This advancement in hyphenated GC-MS instrumentation was initially and still is driven by the need for a more comprehensive analytical and bioanalytical technique that can accurately and precisely discriminate targeted and untargeted analytes from higher complexity sample mixtures in a sensitive and selective way from within a concise window of time. With this in mind, this presentation which is based upon a recent editorial, briefly attempts to highlight some of the current trends in hyphenated GC-MS instrumentation available today and their respective contributions to the field of analytical and bioanalytical techniques.

Biography

Wes E Steiner has earned his PhD in Analytical Chemistry with focus on the development and use of analytical instrumentation to explore a variety of topics involving health, environment, agriculture and defense. Presently his research group is interested in applications that are focused on the qualitative discovery and quantitative directed analysis of bio-markers that can be correlated to a specific disease trait, state and/or rate. He has more than 30 publications to his credit.

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