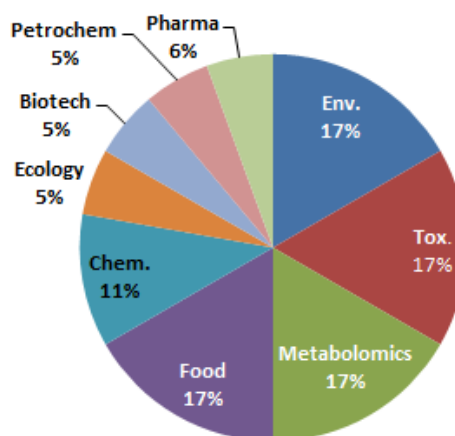


Přehled aplikací GC-MS

Typ MS	Časové období	Celkem	Aplikace	Publikace	Ostatní
Celkem		671	118	513	40
QTOF	2011-2013	33	5	13	15
TQ	2008-2013	172	37	128	7
MSD	Aplikace: 2005-14 Publikace: 2013/14	466	76	372	18

* Zdroj: Google Scholar, e-Library

GC-QTOF 7200 Typy aplikací



Forenzní aplikace - GC-QTOF 7200

- Convenient syntheses of halo-dibenz[b,f]azepines and carbamazepine analogues via N-arylindoles

Authors: Elliott E.C., Maggs J.L., Park B.K., O'Neill P.M., Stachulski A.V.

Abstract: The dibenz[b,f]azepine heterocyclic system and related molecules with a single 10,11-bond are important templates for well-prescribed drug molecules, notably carbamazepine (anticonvulsant), clomipramine and imipramine (antidepressants). We synthesised a range of halogenated carbamazepine analogues, in connection with metabolic and immunological studies, as probes for structure-metabolism and hypersensitive effects and have published on their metabolic behaviour. While a number of synthetic routes to such analogues are possible, we naturally sought short and efficient methods for our target compounds. In the following report we present an

effective two-step synthesis of a range of dibenz[b,f]azepines from appropriate indoles via N-arylation, then acid-catalysed rearrangement, with a critical analysis of other approaches. We showed earlier that this route was effective for fluoro analogues and here present a broader review of its scope. The 5-(carboxamido) side chain of carbamazepine may be added in various ways, affording overall a convenient access to drug molecules.

- **Expanding sports drug testing assays: Mass spectrometric characterization of the selective androgen receptor modulator drug candidates RAD140 and ACP-105**

Authors: Thevis M., Piper T., Beuck S., Geyer H., Schänzer W.

Abstract: The analytical characterization of substances with misuse potential is of great importance. In the present study, the SARM drug candidates RAD140 (comprising a 5-phenyloxadiazole nucleus) and ACP-105 (bearing an N-substituted tropanol pharmacophore) were studied regarding their mass spectrometric behavior under ESI-MS(/MS) and EI-MS(/MS) conditions. Reference material was synthesized according to established protocols and dissociation pathways of RAD140 and ACP-105 were elucidated with liquid chromatography/electrospray ionization quadrupole/time-of-flight or iontrap/orbitrap and gas chromatography/electron ionization quadrupole/time-of-flight high resolution/high accuracy mass spectrometry.

- **Hydrogen isotope ratio mass spectrometry and high-resolution/high-accuracy mass spectrometry in metabolite identification studies: Detecting target compounds for sports drug testing**

Authors: Thevis M., Piper T., Horning S., Juchelka D., Schänze W.

Abstract: Combining IRMS with high-resolution mass spectrometry considerably facilitates and accelerates metabolite identification of deuterium-labeled compounds in urine. Of particular relevance in doping control, the principle is applicable also to other arenas of drug research, allowing the preparation and administration of e.g. radioactively labeled substances to be omitted

- **Analytical characterization of some synthetic cannabinoids, derivatives of indole-3-carboxylic acid**

Authors: Shevyrin V., Melkozerov V., Nevero A., Eltsov O., Shafran Y.

- Abstract: By means of gas chromatography with high resolution mass spectrometry (GC–HRMS), ultra-high performance liquid chromatography in combination with high resolution tandem mass spectrometry (UHPLC–HRMS), nuclear magnetic resonance spectroscopy (NMR) and Fourier transform infrared spectroscopy (FT-IR), structure of a series from a novel synthetic cannabinoids, derivatives of indole-3-carboxylic acid, was established. Methods for determination of the compounds in mixtures, involving chromatographic separation with mass-spectroscopic determination, were elaborated. Analytical data obtained in the paper will make reliable identification of synthetic cannabinoids of the new type during forensic examination possible.

- **Characterization and Classification of Heroin from Illicit Heroin Seizures**

Authors: Koluntaev D., Aronova S., Syromyatnikov S., Sarychev I.

Abstract: GC/QTOF method for comparison of heroin samples and determination of possible distribution linkages between samples from different seizures by impurity profiling.