CBS 113
CAMAG BIBLIOGRAPHY SERVICE
SEPTEMBER 2014

Remarks about abstracts newly added to the CCBS database with this CBS issue

From this CBS the abstracts of 128 papers have been added to the CCBS database. Several of these deal with digital evaluation of chromatograms, either focused on office scanners or digital image analysis. Comparable results were reported for image analysis, when compared to conventional evaluation by a TLC scanner. However, for the latter, the LOD/LOQ was better, as it allowed measurements at the maximal absorption wavelength. On goingly more validation data are being reported for the HPTLC methods being used, which underlines the increasing use of quantitative HPTLC. In several abstracts LOD/LOQ could have been improved by using more sensitive reagents, *e.g.* immersion into orcinol solution for sugar analysis is not as sensitive as dipping into aniline diphenylamine *o*-phosphoric acid reagent or ß-naphthol reagent or *p*-aminobenzoic acid reagent. Also, exposure to iodine vapors for derivatization and quantitation might not be the best combination.

Despite this positive trend towards reporting of reliable HPTLC methods, still many TLC/HPTLC abstracts on TCM analyses report the use of TLC/HPTLC followed by quantification of the active compound by HPLC. There is no need for an extra method if quantitative HPTLC is used, with or without selective derivatization. Many standards subjected to the extra HPLC method have already been quantitatively detected in other HPTLC studies. So it seems that skilled training in HPTLC is required to break off a traditional, unnecessary and ineffective workflow. If there is the feeling that resolution is insufficient or you feel uncomfortable with optimization, feel free to contact the CAMAG laboratory.

Dear friends

Following the tendency to "Green Office" and online search, we have decided to no longer distribute the abstracts with information on TLC/HPTLC literature in printed form (Yellow Pages) and to make online access via internet more comfortable. From now on, the Cumulative CAMAG Bibliography Service (CCBS) will be available online for direct search within more than 11'000 abstracts of TLC/HPTLC publications. Via keyword search, you can generate your tailor-made research file, and only when necessary, print this selection. For example, if you search for CBS 113, you will find all the 128 abstracts added newly to the CCBS database with this CBS edition. This way, you do not miss the electronic yellow pages which were some of the most downloaded files on the CAMAG homepage. The handling of the new online database is described in detail on yellow page 3.

The recently held International Symposium on High-Performance Thin-Layer Chromatography, 2–4th July 2014, in Lyon, France, was a great success. A summary is presented on the last yellow page. We are already looking forward to the next Symposium, which is scheduled for beginning of July 2017 in Berlin, Germany.

Kind regards

Gertrud Morlock
cbs@camag.com

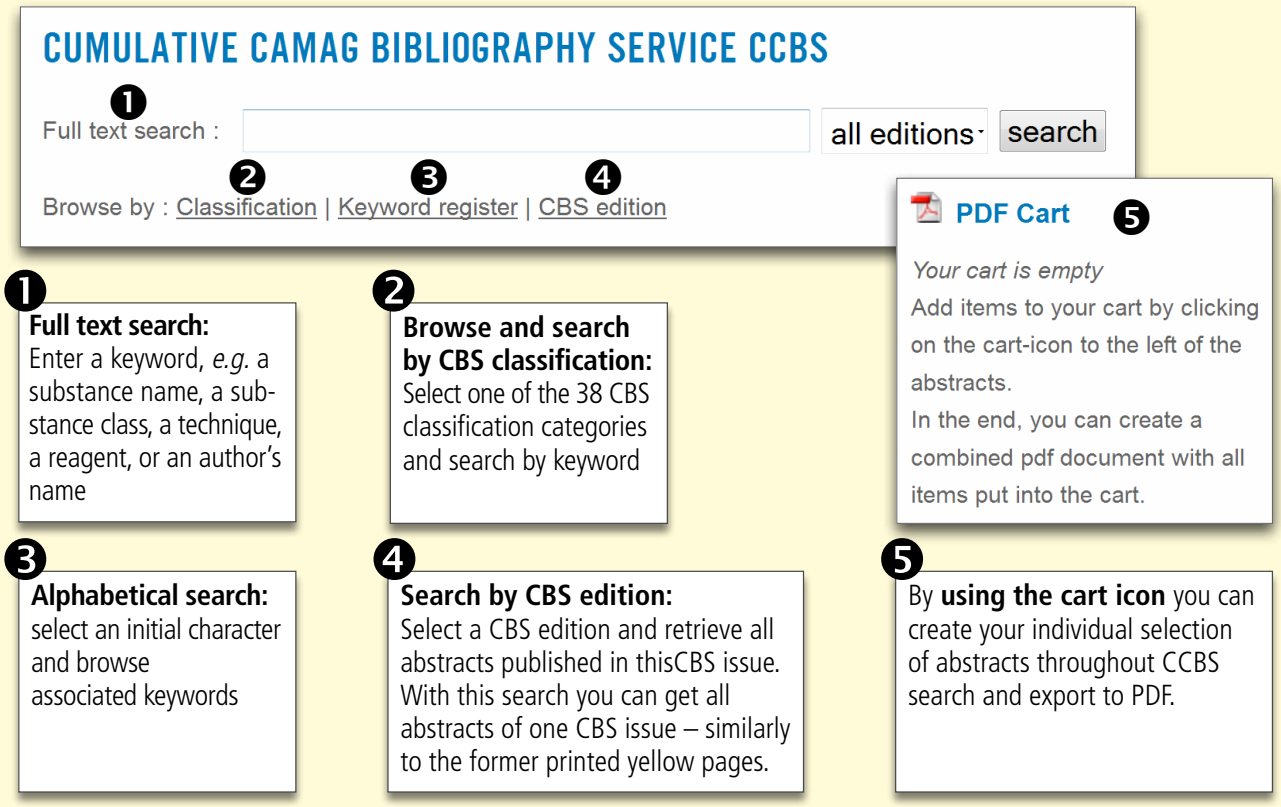
CAMAG LITERATURDIENST
CAMAG BIBLIOGRAPHY SERVICE
PLANAR CHROMATOGRAPHY

THE CBS CLASSIFICATION SYSTEM

1. **Reviews and books**
   a) Books on TLC
   b) Books containing one or several chapters on TLC
   c) Books containing frequent TLC information spread over several chapters of other information
2. **Fundamentals, theory and general**
   a) General
   b) Thermodynamics and theoretical relationship
   c) Relationship between structure and chrom. behaviour
   d) Measurement of physico-chemical and related values
   e) Optimization of solvent systems
   f) Validation of methods
3. **General techniques** (unless they are restricted to the application within one or two classification sections)
   a) New apparatus/techniques for sample preparation
   b) Separation material
   c) New apparatus for sample application/dosage
   d) New apparatus/techniques for chromatogram development
   e) New apparatus/techniques for pre- or post-chromatographic derivatization
   f) New apparatus/techniques for quantitative evaluation
   g) New apparatus/techniques for other TLC steps (distinguished from section 4)
4. **Special techniques**
   a) Automation of sample preparation/application
   b) Automation of complex chromatogram developing techniques
   c) Automation, computer application in quantitative chromatogram evaluation
   d) Combination of TLC with other chromatographic techniques
   e) Combination of TLC with other (non-chromatographic) techniques...MS, IR...etc.
5. **Hydrocarbons and halogen derivatives**
   a) Aliphatic hydrocarbons
   b) Cyclic hydrocarbons
   c) Halogen derivatives
   d) Complex hydrocarbon mixtures
6. **Alcohols**
7. **Phenols**
8. **Substances containing heterocyclic oxygen**
   a) Flavonoids
   b) Other compounds with heterocyclic oxygen
9. **Oxo compounds, ethers and epoxides**
10. **Carbohydrates**
    a) Mono- and oligosaccharides, structural studies
    b) Polysaccharides, mucopolysaccharides, lipopolysaccharides
11. **Organic acids and lipids**
    a) Organic acids and simple esters
    b) Prostaglandins
    c) Lipids and their constituents
    d) Lipoproteins and their constituents
    e) Glycosphingolipids (gangliosides, sulfatides, neutral glycosphingolipids)
12. **Organic peroxides**
13. **Steroids**
    a) Pregnane and androstane derivatives
    b) Estrogens
    c) Sterols
    d) Bile acids and alcohols
    e) Ecdysones and other insect steroid hormones
14. **Steroid glycosides, saponins and other terpenoid glycosides**
15. **Terpenes and other volatile plant ingredients**
    a) Terpenes
    b) Essential oils
16. **Nitro and nitroso compounds**
17. **Amines, amides and related nitrogen compounds**
    a) Amines and polyamines
    b) Catecholamines and their metabolites
    c) Amino derivatives and amides (excluding peptides)
18. **Amino acids and peptides, chemical structure of proteins**
    a) Amino acids and their derivatives
    b) Peptides and peptidic proteinous hormones
19. **Proteins**
20. **Enzymes**
21. **Purines, pyrimidines, nucleic acids and their constituents**
    a) Purines, pyrimidines, nucleosides, nucleotides
    b) Nucleic acids, RNA, DNA
22. **Alkaloids**
23. **Other substances containing heterocyclic nitrogen**
    a) Porphyrins and other pyrroles
    b) Bile pigments
    c) Indole derivatives
    d) Pyridine derivatives
    e) other N-heterocyclic compounds
24. **Organic sulfur compounds**
25. **Organic phosphorus compounds** (other than phospholipids)
26. **Organometallic and related compounds**
    a) Organometallic compounds
    b) Boranes, silanes and related non-metallic compounds
    c) Coordination compounds
27. **Vitamins and various growth regulators** (non-peptidic)
28. **Antibiotics, Mycotoxins**
    a) Antibiotics
    b) Aflatoxins and other mycotoxins
29. **Pesticides and other agrochemicals**
    a) Chlorinated insecticides
    b) Phosphorus insecticides
    c) Carbamates
    d) Herbicides
    e) Fungicides
    f) Other types of pesticides and various agrochemicals
30. **Synthetic and natural dyes**
    a) Synthetic dyes
    b) Chloroplasts and other natural pigments
31. **Plastics and their intermediates**
32. **Pharmaceutical and biomedical applications**
    a) Synthetic drugs
    b) Pharmacokinetic studies
    c) Drug monitoring
    d) Toxicological applications
    e) Plant extracts, herbal and traditional medicines
    f) Clinico-chemical applications and profiling body fluids
33. **Inorganic substances**
    a) Cations
    b) Anions
34. **Radioactive and other isotopic compounds**
35. **Other technical products and complex mixtures**
    a) Surfactants
    b) Antioxidants and preservatives
    c) Various specific technical products
    d) Complex mixtures and non-identified compounds
36. **Thin-layer electrophoresis**
37. **Environmental analysis**
    a) General papers
    b) Air pollution
    c) Water pollution
    d) Soil pollution
38. **Chiral separations**

XX. (abstract number underlined) refers to HPTLC related publication or application using HPTLC materials

New: Now you can directly search online the Cumulative CAMAG Bibliography Service (CCBS) database



The Cumulative CAMAG Bibliography Service (CCBS) is now available online without the need of downloading the entire database as has been the case in the past. This new online application will be updated after the publication of each new CBS edition. Currently, this extensive database includes more than 11'000 abstracts of publications between 1983 and today. The CCBS features additional practical information for the analyst in the lab, for example details on the mobile phase or the detection. With CCBS the analyst is able to find relevant TLC/HPTLC publications which might be helpful for solving a particular analytical question. The printed abstracts will no longer be published in the yellow page format beginning with CBS 113 onwards.

CCBS covers numerous scientific journals, such as Journal of Chromatography A and B, Journal of Liquid Chromatography & Related Technologies, Journal of AOAC International, Journal of Planar Chromatography, Planta Medica, Analytical Letters, Food Chemistry, Trends in Analytical Chemistry, Journal of Ethnopharmacology, Tetrahedron, Rapid Communications in Mass Spectrometry, Journal of Pharmaceutical and Biomedical Analysis, Journal of Agricultural Food Chemistry, and Journal of Separation Science. In addition various publications in German, French, Spanish, Portuguese and Chinese are reviewed for CCBS.

With the Cumulative CAMAG Bibliography Service CCBS you can now perform your own detailed TLC/HPTLC online literature search.

Register now and explore the new CCBS Online Application. This service is free of charge for you.

www.camag.com/ccbs

International Symposium on High-Performance Thin-Layer Chromatography in Lyon

The recently held International Symposium on High-Performance Thin-Layer Chromatography in Lyon, France, 02–04, July 2014, was a great success and attracted scientists from about 25 countries, with leading participations from France, Germany, Poland, Switzerland, India, USA and Spain. All the nations enjoyed the unique charming French hospitality and great thank is owed to the organization committee! The auditorium was gender-balanced with equal representation from industry and academia. 190 Abstracts were submitted and actually 46 oral presentations were held and 108 posters presented. Practical workshops were followed by three comprehensive tutorials, a freshened, but fruitful panel discussion on research & development with representatives of five manufacturers, a historic lecture on Lyon and many other excellent presentations.

Some of the latest research was presented for the first time at the Symposium. Examples are new generations of miniaturized nanostructured or electrospun layer materials or substantial improvements in effect-directed analysis, *e.g.*, for sensitive detection of estrogens in complex samples down to the femtogram-per-zone range. Modern direct bioautography, generating sharp zones, seems to become an attractive tool for non-target analyses.

But also the effectiveness of HPTLC was proven by benchmarking with HPLC as shown for the example of the streamlined analysis of sugars in chicory root juice. The increased use of HPTLC-MS

was evident and new ionization sources were presented like the combined laser desorption/electrospray and atmospheric pressure chemical ionization source. Particularly young researchers presented their work.

The high quality throughout all the presentations was highly recognized: "I very much enjoyed the meeting as I was really impressed by quality of the work presented and the power of modern HPTLC" or "The technical quality of the meeting was extremely high with a large number of really excellent presentations". These are only some voices out of a plenty of positive feedbacks. So thanks to all the committed presenters – this is your great success!

All the poster presentations were greatly appreciated and provided a fertile ground for intense discussion, followed by collaborations. Knowledge was shared and new ideas discussed. This was also valued by many feedbacks: "Are the HPTLC meetings always this much fun and exchange of knowledge?" or "…really an excellent platform for learning and sharing" or "We had wanted to meet you for some time. The HPTLC symposium provided the perfect opportunity" or simply "It was really a piece of a very good work".

We are already looking forward to the next International HPTLC Symposium, scheduled in Berlin, Germany, in beginning of July 2017. Try to be better by keeping yourself updated and joining us!