



CAMAG

WORLD LEADER IN
INSTRUMENTAL PLANAR
CHROMATOGRAPHY



Headquarter in Muttenz



Dr. Dieter Jänchen, founder and CEO until end of 1994, Chairman of the Board of Directors until 2003

CAMAG – DEVELOPMENT AND VISION

CAMAG was founded in 1958 in Muttenz, Switzerland near Basel to produce aluminum oxide for chromatography and to promote its industrial use. Soon CAMAG turned to the emerging technique of thin-layer chromatography and from 1961 onwards TLC was the new focus. First, it was simple analytical equipment and accessories, which were sold worldwide, but beginning in 1975, CAMAG concentrated on the development of instruments and automated solutions for this now well-established analytical technique. Since the early to mid '80s, the advent of software controlled systems permitted the automation of the individual steps of the technique, Planar Chromatography, which was the new term for modern instrumental HPTLC. Planar Chromatography evolved into a niche position within the chromatography marketplace, as HPLC became much more widely used, although it has become clear that the two methods complement each other very well.

Wherever complex substance mixtures are analyzed (herbals, environmental analysis, forensic), Planar Chromatography is often an excellent alternative to GC and HPLC. Additionally it has proven value as a solid quantitative analysis technique in the quality assurance of food, pharmaceuticals and other industrial products.

CAMAG is the market leader in instrumental Planar Chromatography, having for decades held this position which it fortifies by working purposefully and successfully to widen the acceptance and improvement of this time-tested technique.

Our strategy is:

- To disseminate knowledge about Planar Chromatography globally through co-operation with regulatory authorities such as USP and EP, to standardize methods, through lectures at conferences, through publications, training courses and through in-house development of customized applications.
- To convince potential users through direct marketing efforts to key markets and through carefully selected and trained distributors in the other markets, both worldwide.
- To develop high-quality instruments, tools and software which meet all regulatory requirements.
- To maintain a comprehensive quality system EN-ISO 9001:2000, to secure the quality of our products and services.

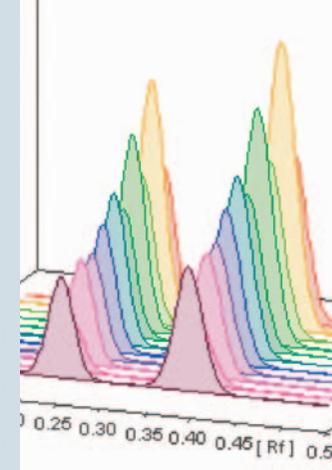
2008 CAMAG looks back at 50 years in business



WHAT IS CHROMATOGRAPHY?



Separation and quantification of the ingredients of ginseng



Chromatography

is today the most common separation method in analytical chemistry. Development, production and sales of chromatography equipment, software and consumable materials represent a worldwide billion-dollar business.

Why is the method called «chromatography»? It was around the turn of the century 1900, when the Russian chemist Michael Tswett, who lived in Switzerland, separated natural dyes with a novel technique for which he created the word «chromatography». Because he imagined that the procedure could only be applied to visible e.g. colored substances, he chose the name from the Greek «chromos» = color and «graphein» = to write.

In the next 5-6 decades, scientists applied the method to virtually all chemicals. Volatile substances are separated by gas chromatography. The separation of non-volatile substances in solution, is either performed in a column (column-liquid chromatography, LC, HPLC), or on a layer (Thin-Layer Chromatography, Planar Chromatography).

Thin-Layer Chromatography

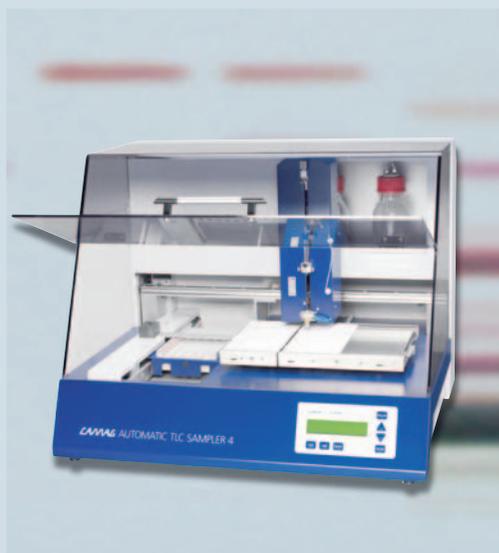
was introduced in the late 50s, and spread very quickly. Initially it was a simple qualitative analysis and was practiced with simple equipment and tools. During the 70s, the performance of thin-layer chromatography was significantly improved using instrumental techniques, expanding its application to quantitative analysis. CAMAG has strived through determined research and development of appropriate instruments to improve efficiency and accuracy of thin-layer chromatography and to develop it to a modern efficient method which we call HPTLC. Today extensive standardization, ensuring improved reproducibility is CAMAG's new focus to gain acceptance of the method. In order to distinguish this far superior technique from the simple thin-layer chromatography, the expression »Planar Chromatography« is preferably used.

SOME CAMAG INSTRUMENTS



Automatic TLC Sampler ATS 4

Automated sample application is a key factor in productivity and precision of planar chromatography.



TLC Scanner 3

In conjunction with winCATS software it is the most advanced measuring station for the quantitative densitometric analysis of planar chromatograms and for spectra recording.



Automatic Developing Chamber ADC 2

Development of chromatograms is a crucial step in planar chromatography. The ADC 2 can be operated stand-alone or with winCATS software. CAMAG offers other options for the development of chromatography plates.



Documentation System DigiStore 2

For image analysis in conjunction with winCATS software, this system is unparalleled for documentation and archival of planar chromatograms under illumination with visible light, long wave and short wave UV.



winCATS Planar Chromatography Manager

This integrated software concept from CAMAG manages all steps of planar chromatography from sample application, chromatogram development to chromatogram evaluation and image documentation. winCATS is fully CFR 21 Part 11 compliant.



APPLICATIONS OF PLANAR CHROMATOGRAPHY



Forensic

- Proof of document forgery
- Investigation of poisoning cases
- Color analysis



Environment

- Water
- Soil
- Air



Herbals

- Identification
- Stability tests
- Detection of adulteration
- Assay of marker compounds, etc.



Cosmetic

- Identity of raw material
- Preservatives, coloring materials, etc.
- Screening for illegal substances, etc.



Pharma

- Quality assurance of active and auxiliary materials as well as finished drugs
- Content assays
- Content Uniformity Test (CUT)
- Identity, purity tests
- Stability tests



Food/Feedstuff

- Quality control
- Additives (e.g. preservation materials, dyes, anti oxidants, emulsifiers, vitamins)
- Adverse (toxic) substances (e.g. mycotoxins, pesticides, veterinary drug residues)



Clinical Applications

- Lipids
- Metabolic studies
- Drug screening



Industrial Applications

- Process development
- Process control
- Cleaning validation

CAMAG LABORATORY AND USER TRAINING

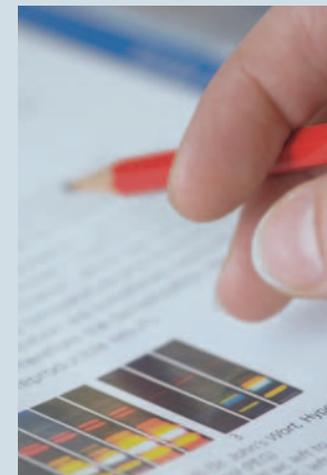
CAMAG Laboratory

The CAMAG Laboratory serves in many ways as a link to our customers. In addition to customer courses, contract analysis and application support for our customers, it develops methods and works on the standardization of planar chromatographic methodology. Furthermore, it not only provides advice on the development of new equipment and software, but assists with product testing, as well.

The CAMAG Laboratory is an integral part of the international scientific community with the Director serving in strategic associations with EP, USP, FDA, AOAC, etc. Numerous publications, presentations at international conferences and a variety of application notes testify to CAMAG's high academic standard.

User Training

To spread knowledge about planar chromatography worldwide, CAMAG organizes introductory and advanced training courses at the headquarters in Muttenz, at CAMAG subsidiaries, at key distributors, as well as at international events and customer sites.



CAMAG MANAGEMENT

CAMAG Muttentz Management



Rolf Rolli

CEO, adds rich management experience. Before joining CAMAG in 2007, he was CEO of various companies with comparable business.



Christian Gfeller

CFO, at CAMAG since 1966, since 1992 member of the Board of Directors and since mid 2003 its Chairman. Christian Gfeller is also one of the two Business Managers of CAMAG Berlin and our American subsidiary.



Jürg Bär

Head Production and Representative for Quality Systems, at CAMAG since 1971 and member of the management since then. Before development and production were divided into two departments in 1992, he was also responsible for development of our advanced product program.



CAMAG Berlin



Dr. Konstantinos Natsias

Joined CAMAG Berlin as Sales & Marketing Manager in 1989, since 2001 one of the two Business Managers.



CAMAG USA



Roger James

at CAMAG Scientific, USA since 1988, since 1993 General Manager.



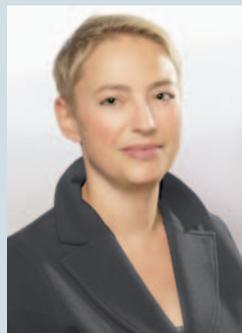
Dr. Eike Reich

Head CAMAG Laboratory, at CAMAG since 1998, and since 2003 member of the Management. Before joining CAMAG he was 9 years professor of chemistry at Longwood College, Farmville, Virginia, USA.



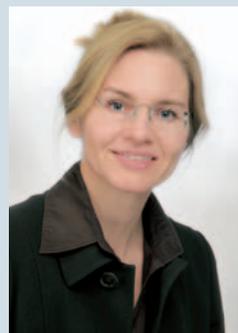
Dr. Matthias Loppacher

Head of Research & Development, after studying physics at the University of Basel, he was initially in the university sector, including postdoc at a nuclear research institute in Newport News, Virginia, USA, then product manager in an internationally operating company and joined CAMAG in 2003. Since 2005 he is a member of the Management.



Claudia Nachbur

Head Sales & Marketing, is graduated scientist from ETH Zurich, was employed by two Swiss companies as sales manager in the international sales of capital goods and joined CAMAG in 2005. Since 2007 she is a member of the Management.



Dr. Gerda Morlock

Assistant Professor at the University of Hohenheim in Stuttgart, editor of the CBS since 2003, she was head of CAMAG Laboratory from 1994 to 1997 and was elected in 2007 to the Board of Directors of CAMAG.

OUR SUBSIDIARIES

Management Germany and USA

CBS – CAMAG Bibliography Service

The CBS has been our scientific communication platform since 1965 and provides information about the latest publications and applications of planar chromatography. It is published twice yearly and distributed free of charge to those interested.

CBS 99 - September 2007
CAMAG BIBLIOGRAPHY SERVICE PLANAR CHROMATOGRAPHY

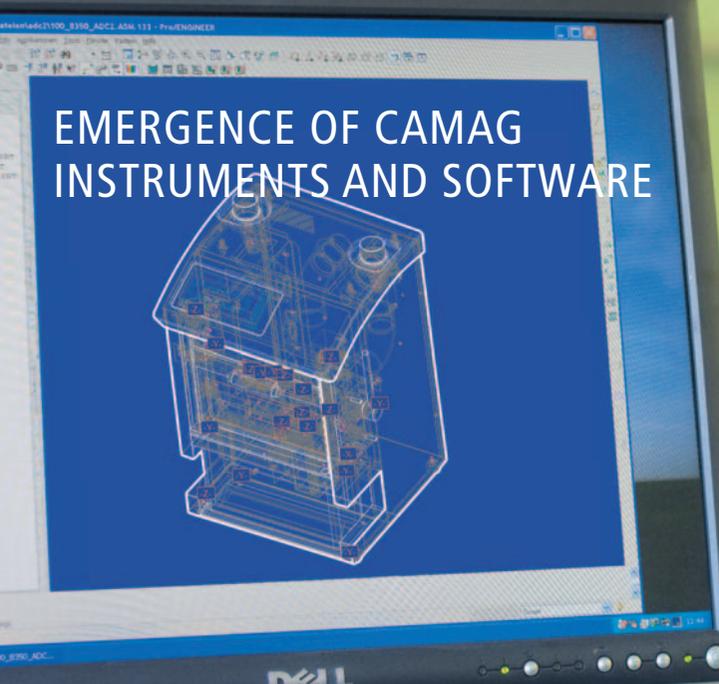
CBS
CAMAG BIBLIOGRAPHY SERVICE

Analysis of herbals using Planar Chromatography – one step ahead due to its image feature

CAMAG 99

The Board of Directors includes:

Christian Gfeller (President), Dr. Dieter Jänchen, Hans Reichenbach, Prof. Dr. Pascal Simonius, Dr. Gerda Morlock



EMERGENCE OF CAMAG INSTRUMENTS AND SOFTWARE



CAMAG QUALITY

Development of CAMAG Instruments and Software

CAMAG instruments are developed after thorough analysis of customer needs. This is done in collaboration with renowned scientists from industry and research. The software is developed in accordance with CFR 21 Part 11.

Manufacture of CAMAG Instruments

Supported by modern logistics, all mechanical parts and assemblies are manufactured by selected suppliers. The production of electronic boards is executed at the CAMAG manufacturing department. There is also the final assembly of the instruments through a well-trained team.

Testing of CAMAG Instruments and Software

Each instrument and the corresponding software are subjected to a comprehensive test program and subsequently to a final inspection, where function and performance data are checked.

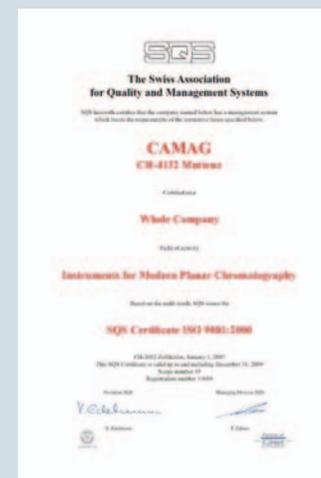
Quality Systems of CAMAG

CAMAG has a comprehensive Quality System according ISO 9001:2000. The quality assurance starts at product development, proceeds through quality control of all purchased parts and covers all stages of production to final inspection.

The CAMAG laboratory works in accordance with ISO 17025 standard.

Swiss Quality

CAMAG is a Swiss company that ensures products of excellent quality by retaining well-trained employees, by maintaining a network of reliable suppliers, and by close contacts with many life sciences companies and end users. The CAMAG instruments for planar chromatography have thus won an excellent worldwide reputation.



SWISS 
QUALITY

CAMAG - GLOBAL PRESENCE



CAMAG markets its products in Switzerland directly from the headquarter, in Germany and the United States through their subsidiaries. In France and China, CAMAG has financially participated in building specialized sales organizations. In more than 70 other countries CAMAG is represented by selected companies. CAMAG distributors regularly send their product specialists for education and training to our headquarters. Furthermore CAMAG organizes training courses overseas, e.g. in the Far East. The task of CAMAG product specialists is to advise customers in system selection and application competence and in the operation of their CAMAG systems. Service engineers of our distributors are also regularly trained in Muttenz.

To our customers and distributors is a comprehensive Web-based information offer available: www.camag.com for product and company information, www.camag-laboratory.com for applications. CAMAG is a flexible, customer oriented and scientifically sound company, which in its 50-year company history has profiled as a valued partner in all areas of Planar Chromatography.

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