

LabTrain

Essential HPLC Training Course

Based on the successful "Kayprime" HPLC training courses of the early 1990's, this course has been extensively updated and revamped. All you need to know about HPLC, the theory, practical aspect, new developments and intuitive thinking is instilled in this 4-day course (see overleaf for course content). The course relies on the use of theoretical practicals based on real-life examples, as well as DryLab, HPLC optimization software used to model any parameter change. No other HPLC course can offer these capabilities in coming to grips with the terms and aspects of this technique.

Students from the following institutions have attended:

- *SAPS Forensic Science Laboratory*
- *SGS- Agri Lab*
- *Rand Water Board*
- *Meyer - Zall Laboratories*
- *Rhone Poulenc Rourer*
- *Oberon Pharmaceuticals*
- *Sasol Synthetic Fuels*
- *Technikon Pretoria*
- *SABS- Pesticide, Pharmaceutical div.*
- *Logos - Agvet*
- *Medunsa- Pharmacol, Chem Path depts*
- *The Scientific Group*
- *Roche Vitamins*

This course can be tailor-made to run in-house as well anywhere in the country.

SOME OF THE COMMENTS ON THE COURSE:

On the course itself:

- "Very good detailed explanations and practical applications to back up"
- "Every concept was clearly illustrated"
- "Solved all the problems I have experienced so far"

On the theoretical practicals:

- "It seems to cover about everything and really boost your knowledge and confidence in HPLC work"
- "After this course I know more about practical HPLC than before"
- "Real life situations well put through"
- "Great in understanding theory and getting real practical"

On the lecturer:

- "....really made sure you understand a concept clearly"
- "Well put together. The lecturer prepared very well for the lectures"

ABOUT THE LECTURER:

HPLC expert Daniel Garside has been involved with HPLC for over 30 years. He has MSc in Analytical Science from UCT having exclusively worked on HPLC assays in his post graduate years. He spent a year at Lennon Limited in the R&D department developing HPLC methods for the QC pharmaceutical field. He was Beckman's HPLC Product Specialist for 4 years where, besides the sales and support on the new System Gold HPLC, he also devised and ran the local Beckman HPLC Training Courses since 1987. After this in 1990 he then ran successful HPLC courses under the Kayprime banner for a further 3 years as well as doing HPLC consulting work. Many of these courses were run nation-wide, half of which were in-house courses to various clients. This was followed by a 6-year period selling Shimadzu HPLC system and providing support and training to Shimadzu HPLC users. He was then MD for LabHouse, which ran training courses and sold lab equipment. He is very well known for his knowledge and ability on the HPLC technique throughout the country. At present he is MD of LabTrain, a company specialising in laboratory training.

VENUE: In-house or on-site
DATES: Regularly throughout the year.
COST: Available on request
DURATION: 3 Days.
CONTACT: 083 384 5299
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HERE'S TO GOOD SEPARATIONS!

SUMMARY OF CONTENTS **OF HPLC COURSE**

INTRODUCTION

- HPLC in the Analytical Laboratory
- The evolution of Modern Liquid Chromatography
- LC system overview
- The separation process

CHROMATOGRAPHY THEORY

- Resolution
- Column selectivity
- Column efficiency
- Column capacity factor, or retention
- The resolution equation.
- Other theoretical considerations

EQUIPMENT AND COLUMN DIMENSIONS

- Solvent delivery systems
- Sample injectors
- Detectors
- Data collection
- Column dimensions

SAMPLE PREPARATION AND GRADIENT ELUTION

- Sample preparation techniques
- Gradient elution

COLUMN CHEMISTRIES

- Normal phase
- Ion exchange
- Gel permeation chromatography
- Affinity chromatography
- Reversed phase

ION SUPPRESSION AND ION PAIRING

- Ion suppression
- Ion pairing

METHOD DEVELOPMENT

- Important method development factors
- Procedure for developing a method
- Qualitative Analysis

METHOD AND SYSTEM VALIDATION

- Aspects of method validation
- Hardware validation

INTEGRATION CHECKS

- Principles of peak detection
- Integration of fused and tailing peaks

CALIBRATION & QUANTITATION

- Basic calibration
- Calibration procedure

RECORD KEEPING AND RUNNING COST CALCULATIONS

- Method of analysis
- Chromatogram and calculations
- Equipment and column use records
- Running cost calculations

BASIC STATISTICS

- Mean and standard deviation
- Confidence limits
- Number of parallel determinations
- Rejection of data
- Comparison results

CARE AND USE OF COLUMNS AND EQUIPMENT

- Preparation of mobile phases
- Sample preparation
- Column care and use
- Equipment care and use

TROUBLESHOOTING

- Pump-related problems
- Autosampler problems
- Detector problems
- Changes in chromatogram
- Band tailing problems

COMPUTERIZATION, AUTOMATION AND LIMS

- Computerization
- Automation
- Laboratory information management
- 21 CFR part 11 and data integrity

NEW TECHNIQUES

- Preparative HPLC
- Capillary electrophoresis
- Non-silica stationary phases
- Chiral separations
- UPLC differences