



ON-LINE GAS CHROMATOGRAPHY

AVANS⁺, SPECIALIST IN DEVELOPPING PEOPLE AND ORGANIZATIONS

With more than 200 bachelor's, post bachelor's and Master degree programs is Avans⁺ the leading trainer for professionals. Personal contact and acquisition of practically applicable knowledge are central in our approach.

OBJECTIVE ON-LINE GC

During this course you will learn to carry out preventive and corrective maintenance of tools that are used in the online process control. This is done on the basis of basic chromatographic principles, the construction of instruments, injectors, detectors, columns and column switching techniques. You acquire these new skills not only from the theory, but you also apply them directly during practical assignments in our laboratory.

This course is composed and is carried out by specialists from Avans⁺ and Actemium.

TARGET GROUP

You have done at least the course Introduction to capillary GC (level 1) or have a evidently comparable experience. You work with online gas chromatographs in process chemistry and regularly carry out preventive and/or corrective maintenance. Some basic knowledge of chemistry and experience in maintaining online gas chromatographs is recommended, but also inexperienced technicians can take part in this course.

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PROGRAM

During the On-line gas chromatography course, we pay attention to the following topics:

- + Flow and pressure control:
 - Injection valves
 - The various types of injection valves (STEM, rotating, diaphragm, sliding plate) and their operation are discussed both theoretically and practically.
- + Detectors: The detectors used in on-line gas chromatography (FID, TCD, FID with methaniser) and their principles (theoretical and practical).
- + Column switching techniques: We discuss the usefulness of column switching techniques, backflush, heart-cut, parking and pressure switching, including live-T switching.
- + Qualitative and quantitative analysis: Topics are validation, calibration, normalized 100% method, peak identification and peak integration.
- + Practical sessions

METHODOLOGY

Interactive theory lectures and practical session alternate constantly. The practical nature of this course ensures a high degree of recognition and contributes to improving the image of this technique.

During the practical sessions, you will learn how to optimize the correct switching times for a 2-3 column backflush system with a column switching system. Live demonstrations and hands-on exercises give you good insight into the operation and maintenance of all different types of switching and injection valves.

We test your progress with questionnaires and assignments.

DURATION

The study load is 16 hours in total (2 course days). Some knowledge of capillary gas chromatography is required for this course. If you did not follow the course Introduction to capillary GC (level 1) at Avans+, a short test will be part of the admission to this course.

CERTIFICATE

At completing this course, you will receive a certificate of attendance.

FINAL RESULT

After completing this course you will be able to describe the chromatographic separation process and select and set the right conditions for the column. You can also optimize a column switching system and correct the switching times. You can carry out the maintenance of switch valves independently.

COURSE LOCATION AND DATES

The actual information you can find on www.avansplus.nl.

STUDY COSTS AND SUBSCRIPTION

The actual prices can be found on www.avansplus.nl.
On the website you can subscribe for this course.

MORE INFORMATION?

Do you have questions about the course or are you interested in an in-company training?

Contact course manager

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