Academy savant
e-Learning Science

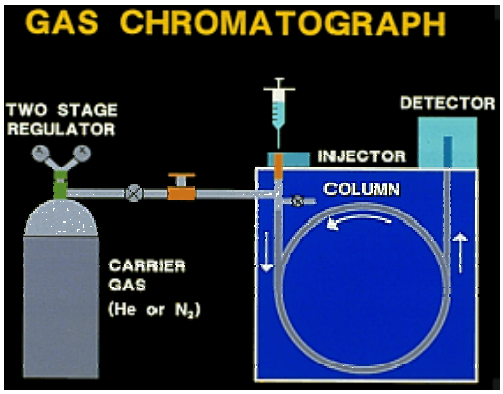
Gas Chromatography

Video-based training programs

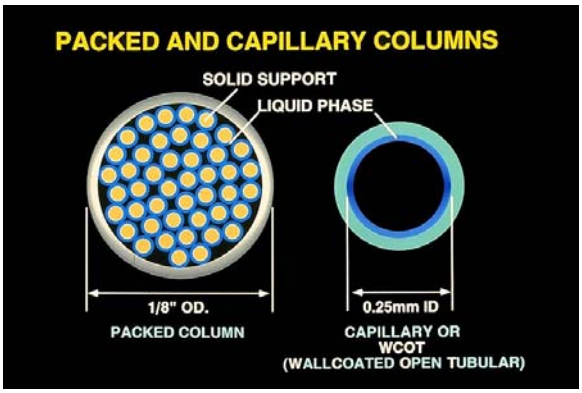
Principles of Gas Chromatography

Dr. Harold M. McNair

GC-101



Basic GC concepts are introduced with an explanation of principles and fundamental terms: retention time, theoretical plate, HETP, capacity factor, selectivity and resolution. Instrumentation is discussed generically by viewing the overall schematic. Topics include selection of carrier gas, sampling devices, packed and capillary columns and detectors. Recorders, printer plotter integrators and video work stations are illustrated. Chromatograms are used extensively to illustrate temperature programming, capillary columns, trace analysis and high-speed separations. Both advantages and limitations of the GC technique are presented in this thoroughly professional and authoritative training program.
40 Minutes



Capillary Columns in Gas Chromatography

Dr. Harold M. McNair

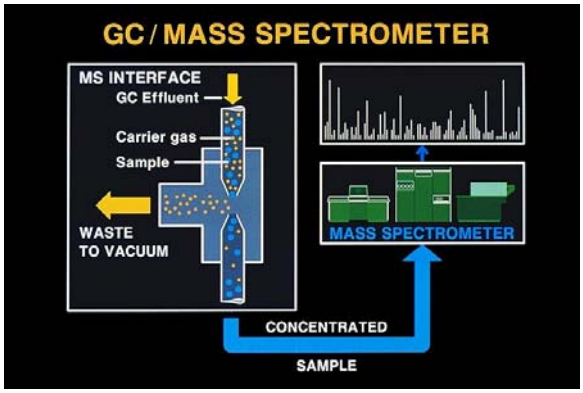
GC-103

Types of capillary columns including WCOT, SCOT and PLOT are described. Construction of fused silica and effect of column operating parameters, such as internal diameter, length, film thickness, liquid phase and flow rate are examined and illustrated. Other topics include sample inlet splitters, splitless injection, on-column injection, types of carrier gas and detectors used with capillary columns.
40 Minutes

Qualitative and Quantitative Analysis by Gas Chromatography

Dr. Harold M. McNair

GC-104



This program explains qualitative analysis (i.e., peak identification) by retention time comparison, ÒspikingÓ and use of auxiliary spectroscopic techniques, MS and IR, both off-line and on-line. Quantitative analysis first discusses precision and accuracy, and then details the steps in a quantitative GC procedure: sampling, sample preparation, chromatography, integration and calculations. Peak integration and calculation methods are illustrated and compared.
41 Minutes

Ph 800-4-SAVANT (800-472-8268) & 714-870-7880 ♦ Fax 714-526-7400
info@academysavant.com ♦ PO Box 3670, Fullerton CA 92834 ♦ www.academysavant.com