Single High-pressure Six-way Switching Valve / Dual High-pressure Six-way Switching Valve

Indispensable for Column Switching Analysis

Various analytical systems can be constructed by combining a great variety of components.

Low Dead Volume Switching

The unique low-dead-volume valve head minimizes the influence of time lag and diffusion on separation in column switching analysis. (Dead volume: 0.8 µL)

Metal-free Structure

The flow channel is made of PEEK resin, making the valve effective for analyzing proteins of high adsorption to metals and physiologically active samples.

Programming Function

A schedule can be programmed easily to automate complex column switching.

Optimum Even for Complicated Multipurpose Channels

Either the single or dual type can be selected according to your needs.

Integration to Other HPLC Systems

Even a start signal from another manufacturer's system can activate the self program, and so can be used as part of the system.

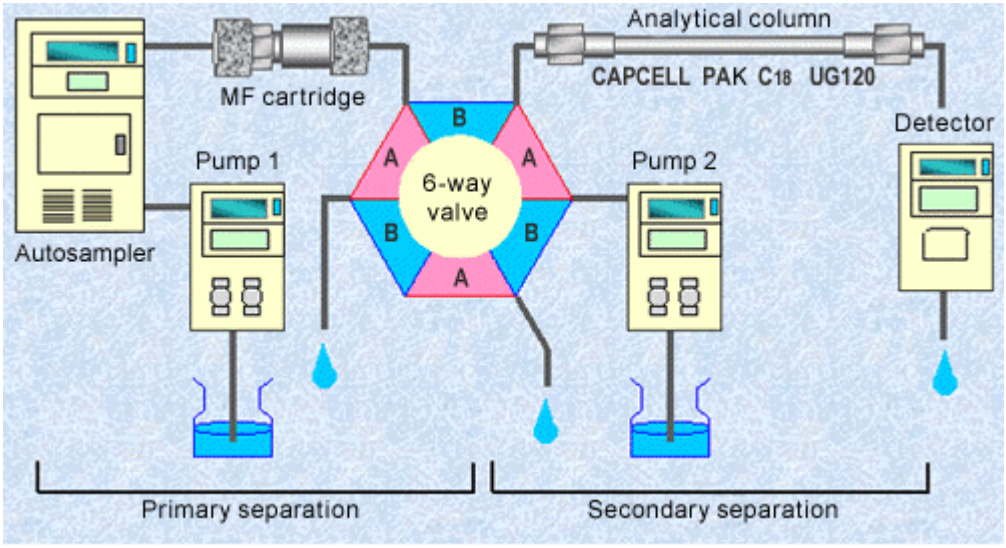
Standalone or Networked Control

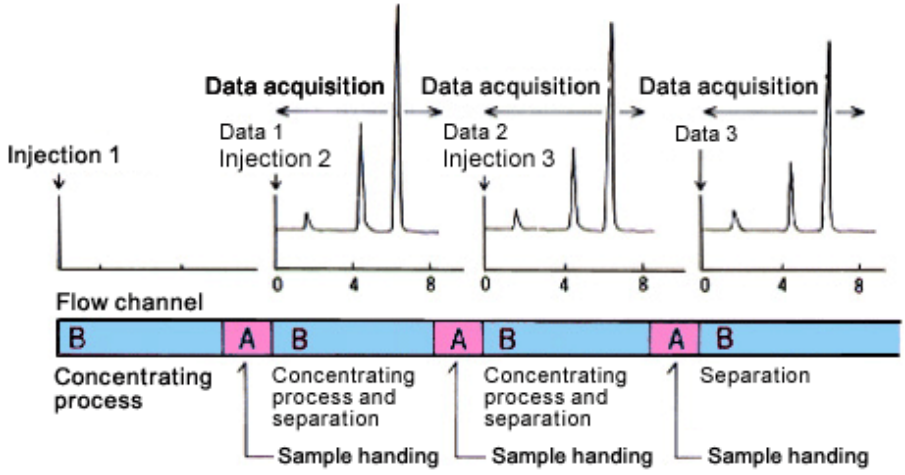
The valve allows programmed operation (standalone) by numerical keys without any special controller and has a function to communicate with Osaka Soda system controller program (PC).

Example of Single Valve Application

Analysis of diazepam

Combination of single high-pressure six-way switching valve and CAPCELL PAK MF (column for direct introduction of biological samples) for automatic analysis of diazepam in human serum


Analytical column
CAPCELL PAK C18 UG120
MF cartridge
Detector
Pump 1
Pump 2
6-way valve
Autosampler
Primary separation
Secondary separation

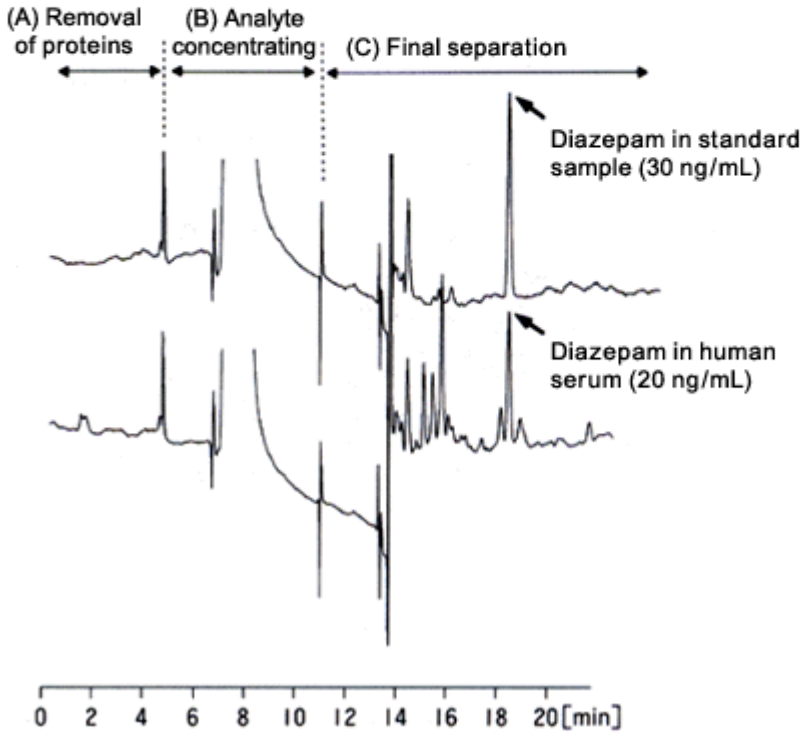

Data acquisition
Data acquisition
Data acquisition
Data 1
Injection 2
Data 2
Injection 3
Data 3
Injection 1
Flow channel
Concentrating process
Concentrating process and separation
Concentrating process and separation
Separation
Sample handing
Sample handing
Sample handing

Primary Separation (A + B)

Column	: CAPCELL PAK MF cartridge
Mobile phase	: 100 m mol/L Phosphate buffer/Acetonitrile = 98/2, pH7.0
Flow rate	: (A) 1.0 mL/min (B) 200 µL/min
Temperature	: 35°C
Injection volume	: 80 µL

Secondary Separation (C)

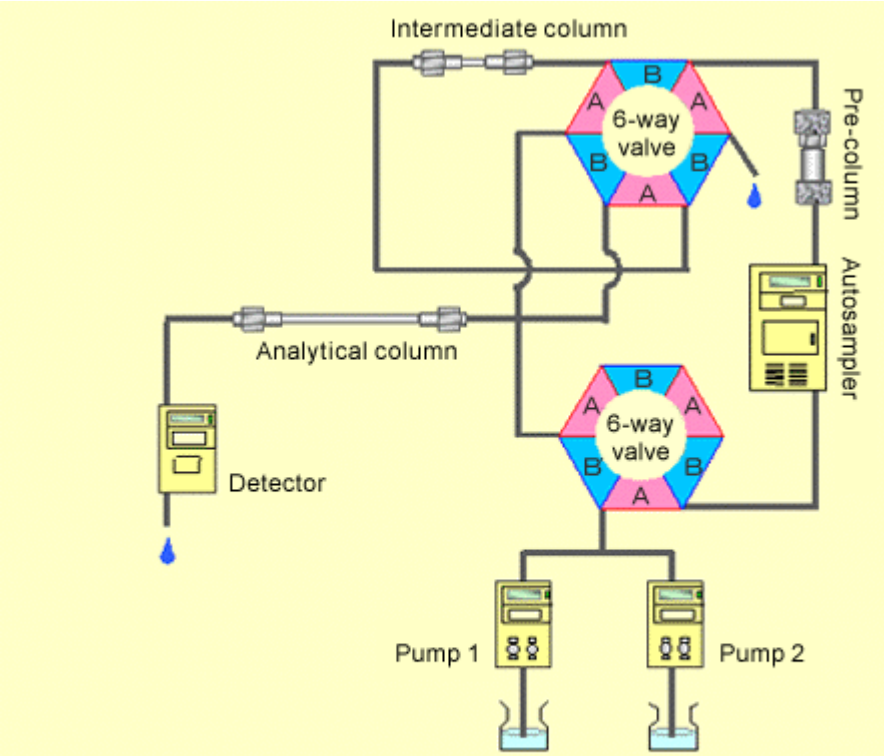
Column	: CAPCELL PAK C18 UG120 2.0 mm i.d. x 250 mm
Mobile phase	: 100 m mol/L Phosphate buffer/ Acetonitrile = 50/50, pH7.0
Flow rate	: 200 µL/min
Temperature	: 35°C
Detection	: UV 230 nm

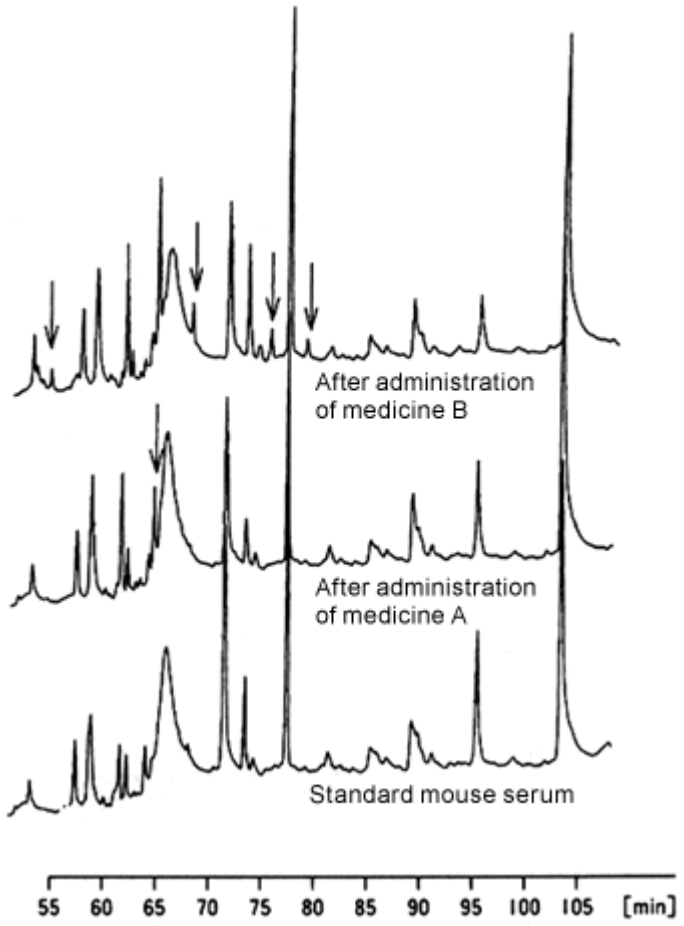


Example of Dual Valve Application

Accurate gradient curve at low flow rate

Combination of dual high-pressure six-way switching valve and CAPCELL PAK MF (column for direct inspection of biological samples) for trace analysis of Chinese medicine and metabolites in mouse serum (Gradient system)

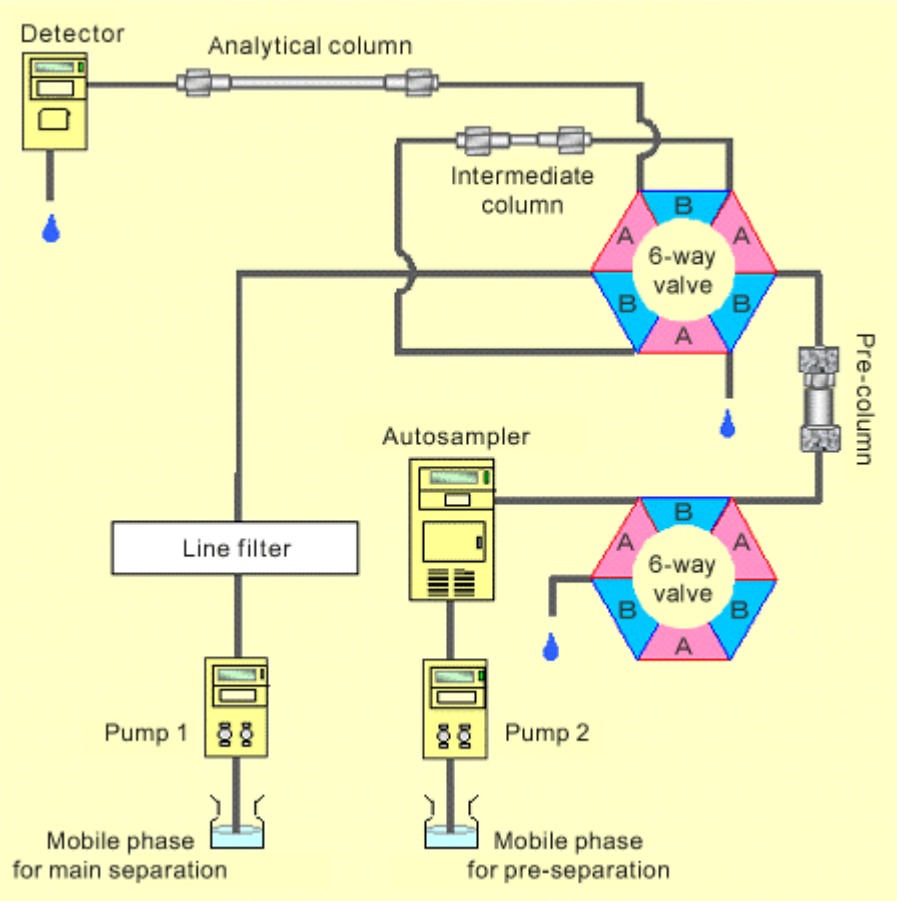




Source: Prof. Tashiro of the Showa Pharmaceutical University

Example of Dual Valve Application

Rinsing system
The valve can also be built into a system for washing away sample carryover.



Specifications

Product No.	Single high-pressure six-way switching valve: 3011 Dual high-pressure six-way switching valve: 3012
Product Name	Single high-pressure six-way switching valve/Dual high-pressure six-way switching valve
System	6-port, 2-position high-pressure switching
Number of Valves	3011: One 3012: Two
Max. Pressure	35 MPa
Channel Material	Polyetheretherketone (PEEK), ceramic
Control Mode	(1) Manual control (2) Control by self-program (0.00 to 999.99 min) (3) Control by external input (4) System control
Dimensions	120(W) x 230(H) x 491(D) mm
Weight	3011: About 8 kg 3012: About 10 kg