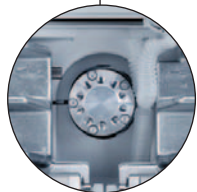


# Alternating column regeneration

Agilent 1100 Series 2-position/10-port valves



## Advantages:

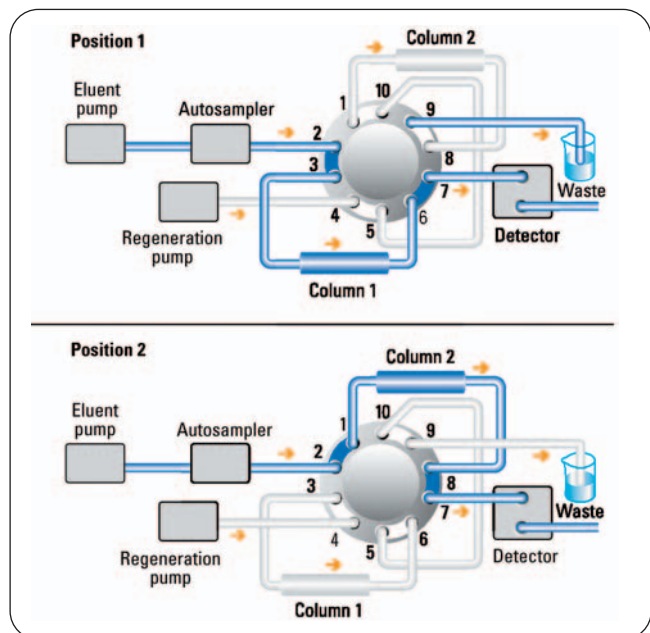
- High sample throughput
- Increased productivity
- High efficiency

Alternating column regeneration provides an elegant way to increase the sample throughput. Laboratories running large quantities of samples on LC and LC/MS can easily increase efficiency by using this valve application.

Gradient elution is widely used for fast separation of complex samples in LC. Since gradient elution requires the column to regenerate before subsequent runs, an automated column regeneration system will save valuable analysis time. Agilent's 2-position/10-port valves allow the simultaneous analysis of one sample on one LC column while a second, identical column is flushed (or backflushed) and equilibrated by an additional regeneration pump. At the end of the run, the valve switches to the second position and the next sample is separated on the previously flushed and equilibrated column, while the first column is flushed and equilibrated by the regeneration pump.

Often up to 50% of analysis time is required to equilibrate columns. Using alternating column regeneration saves time, for higher sample throughput.

For highest performance, Agilent offers optimized valves for different flow rates ranging from nl/min up to 100 ml/min for preparative purification. This valve type is also available in the 1100 Series thermostatted column compartment.



Comparison of cycle times with and without column regeneration

