

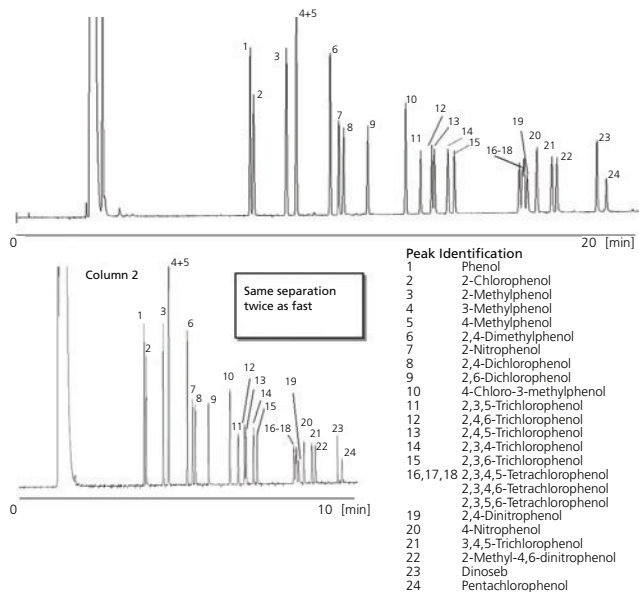
# Additional FactorFour Selectivities

## Five Additional Selectivities Analysis Times Halved using 0.15 mm Capillaries

The introduction of fused silica columns with an internal diameter of 0.15 mm has been a great success. Many users have experienced the unique benefits of the smaller bore columns without compromising separation efficiency:

- Run times halved, using the same set-up
- Column hardware compatible with your existing instrumentation - GC and GC/MS
- Minimal method redevelopment means fast implementation
- Installation/operation as easy as with a 0.25 mm capillary - even the ferrules are interchangeable!

Using the 0.15 mm ID column, analysis times are halved!



### Original Capillary

Length (m)	ID (mm)	Df (µm)
15	0.25	0.25
30	0.25	0.25
60	0.25	0.25
15	0.32	0.25
30	0.32	0.25
60	0.32	0.25

### 0.15 mm Capillary - Twice as Fast

Length (m)	ID (mm)	Df (µm)
10	0.15	0.15
20	0.15	0.15
40	0.15	0.15
10	0.15	0.15
15	0.15	0.15
30	0.15	0.15

By customer request, Varian has extended this series of 0.15 mm columns with six new FactorFour phases, from non-polar to polar: VF-624ms, VF-1701ms, VF-35ms, VF-17ms, VF-200ms and VF-23ms.

## Which Columns and Conditions to Use?

### Column Dimensions

Existing column dimensions are replaced by a 0.15 mm capillary which generates equivalent, if not improved, separations.

The separation below illustrates the comparison of a free phenol separation on an 0.25 mm with a 0.15 mm VF-17ms capillary

## Analysis Times Halved! Oven Program

For similar elution temperatures and a reduced risk of changes to the peak elution order, reduce the isothermal periods by a factor of two and increase the temperature program by a factor of two.

Application Areas for 0.15 mm ID FactorFour Columns

- Petrochemicals
- Environmental
- Pharmaceutical
- Food Science

## Comprehensive GC

The two dimensional GC known as "comprehensive gas chromatography" has become very popular as it provides massive peak capacity. After separation on a long capillary, an 0.15 mm column is the most efficient second dimension column, mainly due to optimal linear gas velocity.

## Polar Phases

Choose from

- Cyano
- Phenyl
- Cyano-Phenyl
- Trifluoropropyl