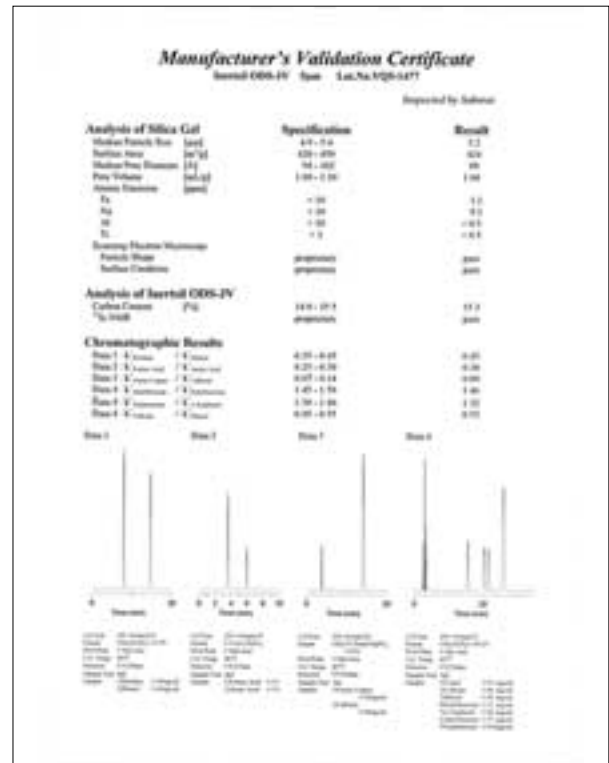
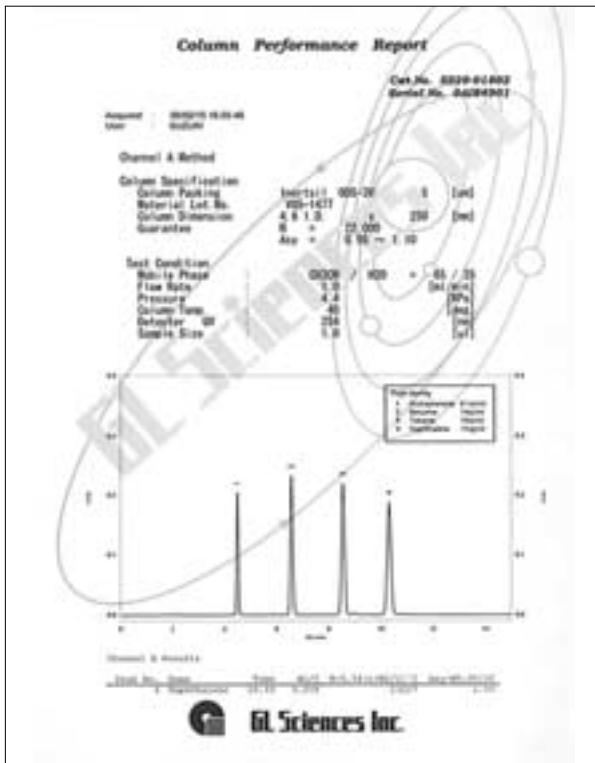


# Column Performance

Finally, the packing materials are packed into columns and the column performance is inspected according to the calculation procedure by USP. This inspection determines how well the column is packed and the likely stability of the packed bed. The result of the inspection is

summarized in the Column Performance Report and the column is shipped with the actual report. Only Inertsil® ODS-3V columns are provided with Manufacturer's Validation Certificate for your method validation.



## Column performance reproducibility of Inertsil® ODS-3V

The packing material from the same batch is used.

The performance is checked for individual columns by measuring the number of theoretical plates and peak asymmetry factor using Naphthalene as the sample.

Eluent : Acetonitrile / Water = 65 / 35 Flow rate : 1.0mL/min Column Temp. : 40°C Sample Size : 1µL  
 Sample : 1. Acetophenone 0.1µg 2. Benzene 14.0µg 3. Toluene 10.0µg 4. Naphthalene 1.0µg

Column	Retention time(min)	Theoretical plates	Peak asymmetry factor
1	6.46	14,169	1.02
2	6.45	14,003	1.01
3	6.43	14,100	1.03
4	6.46	14,321	1.01
5	6.42	14,256	1.00
6	6.45	14,193	1.01
7	6.48	14,010	1.02

## Column Performance Measurement

### Calculation

N : Number of theoretical plates  
 Rt : Retention time  
 W/2 : Half-height width

150x4.6mm.I.D. 13,000 more  
 250x4.6mm.I.D. 22,000 more

S : peak asymmetry 5% peak height  
 1 < leading, fronting  
 1 > Tailing  
 Peak asymmetry 0.95~1.10

