




COSMOSIL π NAP HPLC Columns

A New Stationary Phase for Unsaturated Compounds

- 
- **Naphtylethyl group bonded**
 - **Excellent Selectivity for Unsaturated Compounds**
 - **Enhanced $\pi - \pi$ Interactions**

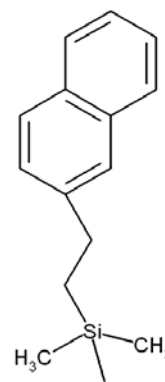
COSMOSIL π NAP HPLC Column

Separation of unsaturated compounds on conventional reversed phase columns such as C8 and C18 is often problematic. Phenyl stationary phases are commonly used for these compounds because they form $\pi - \pi$ interactions and show different selectivity from conventional alkyl phases. However, the $\pi - \pi$ interactions on phenyl stationary phases are moderate, and the separation for some unsaturated compounds are still insufficient.

COSMOSIL π NAP is a Reversed Phase HPLC Column with naphthylethyl group bonded silica packing material. The naphthylethyl group is composed of two fused aromatic rings and forms strong $\pi - \pi$ interactions with unsaturated compounds. This column offers improved selectivity for structural isomers that exhibit differences in saturation.

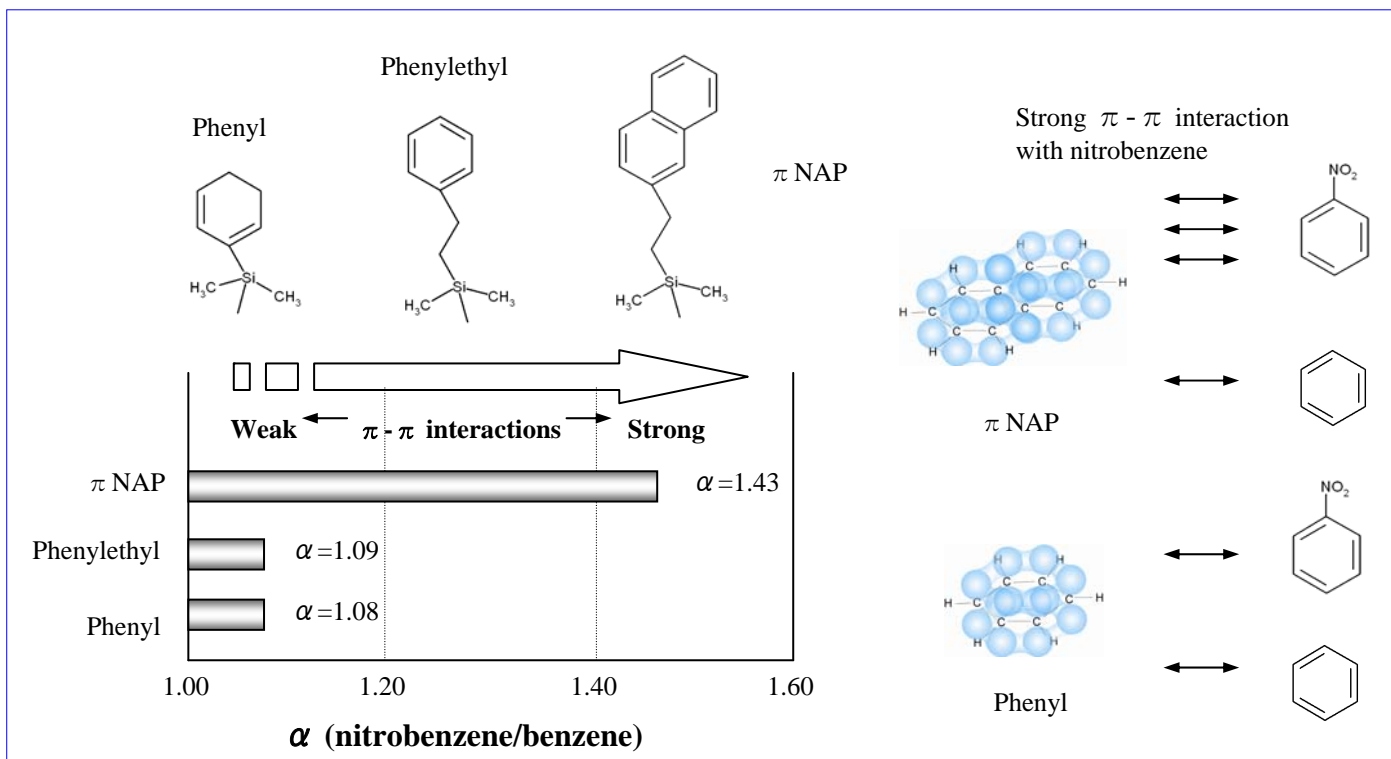
• Physical Characteristics

Silica Gel	High Purity Spherical Silica
Stationary Phase	Naphtylethyl group
Average Particle Size	5 μ m
Average Pore Size	120 Å
Surface Area	300m ² /g
Carbon content	Approx. 11%



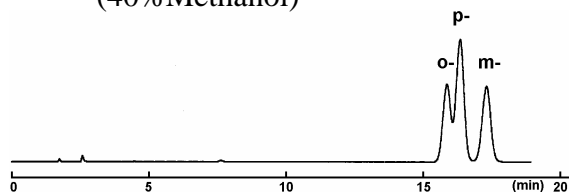
• Figure 1. Comparison of $\pi - \pi$ interactions

COSMOSIL π NAP shows stronger $\pi - \pi$ interactions than phenyl columns

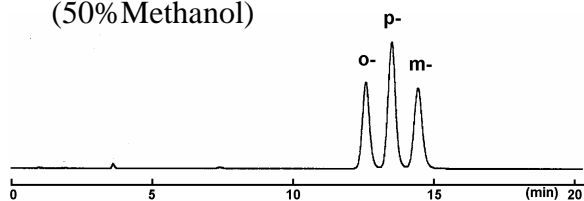


• **Figure 2. Separation of tolunitrile isomers**

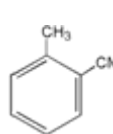
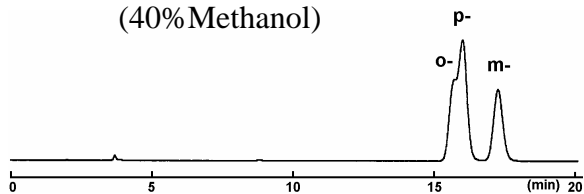
C18 phase
(40% Methanol)



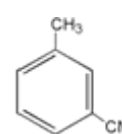
π NAP
(50% Methanol)



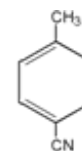
phenylethyl phase
(40% Methanol)



O -



m-



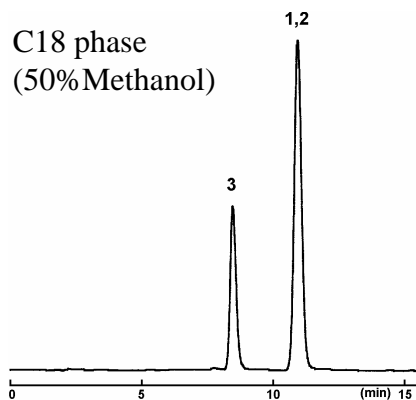
p-

Column size: 4.6mm I.D. \times 150mm
Flow rate: 1.0ml/min
Temperature: 30°C
Detection: UV 254 nm

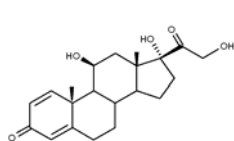
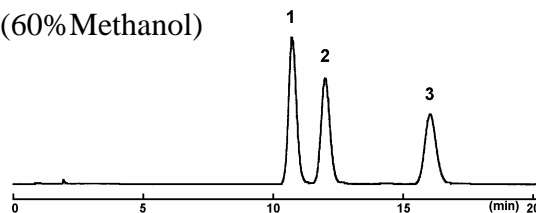
Sample: o-tolunitrile (2.0 μ g)
m-tolunitrile (2.0 μ g)
p-tolunitrile (2.0 μ g)

• **Figure 3. Separation of steroids**

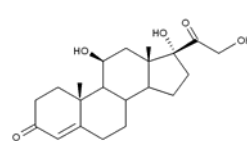
C18 phase
(50% Methanol)



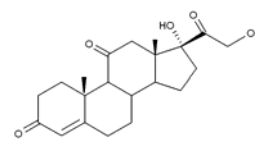
π NAP
(60% Methanol)



1. Prednisolone

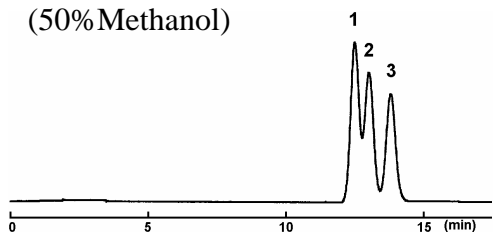


2. Hydrocortison



3. Cortison

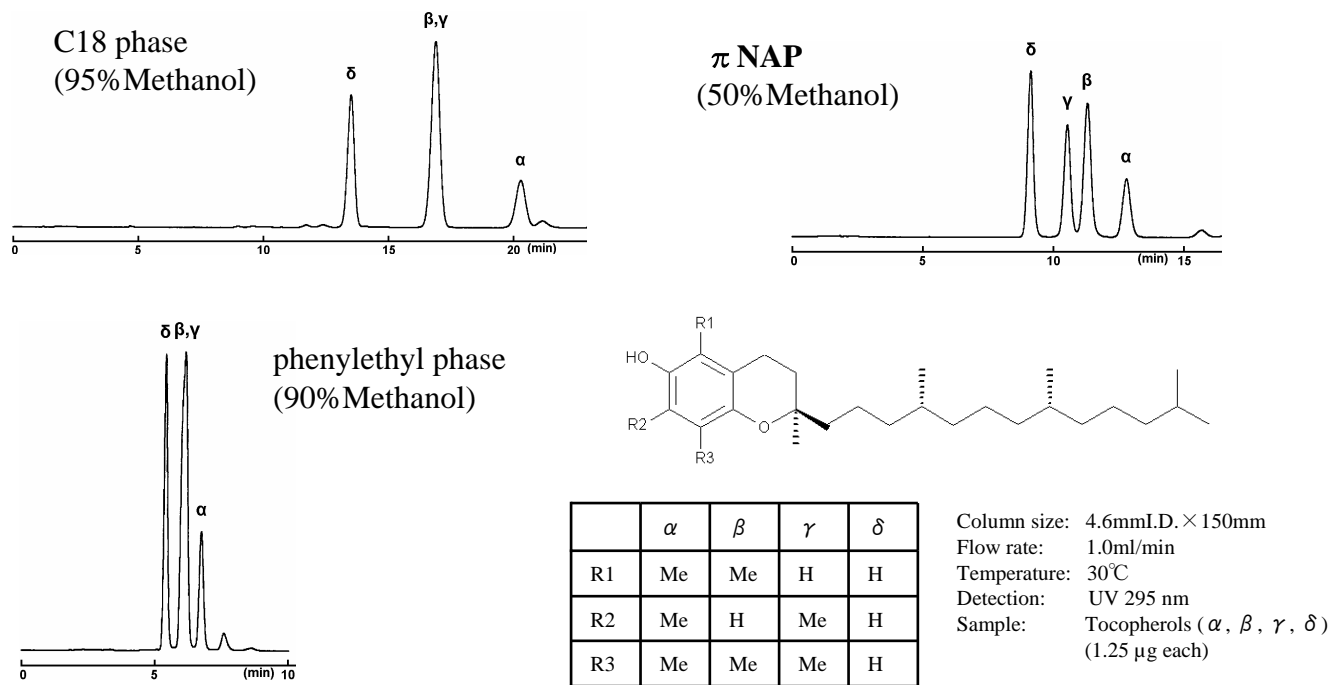
phenylethyl phase
(50% Methanol)



Column size: 4.6mm I.D. \times 150mm
Flow rate: 1.0ml/min
Temperature: 30°C
Detection: UV 254 nm

Sample: 1. Prednisolone (0.33 μ g)
2. Hydrocortison (0.33 μ g)
3. Cortison (0.33 μ g)

• Figure 4. Separation of tocopherols



• Ordering Information

Product	Cat No	Size	Price
COSMOSIL π NAP Guard Column	08082-71	4.6 mm I.D. x 10 mm	\$260
COSMOSIL π NAP Guard Column	08087-21	10 mm I.D. x 20 mm	\$480
COSMOSIL π NAP Guard Column	08090-61	20 mm I.D. x 20 mm	\$1,000
COSMOSIL π NAP Guard Column	08091-51	20 mm I.D. x 50 mm	\$1,400
COSMOSIL π NAP Guard Column	08094-21	28 mm I.D. x 50 mm	inquire
COSMOSIL π NAP Packed Column	08076-61	1.0 mm I.D. x 150 mm	\$750
COSMOSIL π NAP Packed Column	08077-51	1.0 mm I.D. x 250 mm	\$880
COSMOSIL π NAP Packed Column	08078-41	2.0 mm I.D. x 150 mm	\$660
COSMOSIL π NAP Packed Column	08079-31	2.0 mm I.D. x 250 mm	\$780
COSMOSIL π NAP Packed Column	08080-91	3.0 mm I.D. x 150 mm	\$550
COSMOSIL π NAP Packed Column	08081-81	3.0 mm I.D. x 250 mm	\$700
COSMOSIL π NAP Packed Column	08083-61	4.6 mm I.D. x 50 mm	\$370
COSMOSIL π NAP Packed Column	08084-51	4.6 mm I.D. x 100 mm	\$520
COSMOSIL π NAP Packed Column	08085-41	4.6 mm I.D. x 150 mm	\$550
COSMOSIL π NAP Packed Column	08086-31	4.6 mm I.D. x 250 mm	\$700
COSMOSIL π NAP Packed Column	08088-11	10 mm I.D. x 150 mm	\$1,300
COSMOSIL π NAP Packed Column	08089-01	10 mm I.D. x 250 mm	\$1,750
COSMOSIL π NAP Packed Column	08092-41	20 mm I.D. x 150 mm	\$2,600
COSMOSIL π NAP Packed Column	08093-31	20 mm I.D. x 250 mm	\$3,500
COSMOSIL π NAP Packed Column	08095-11	28 mm I.D. x 250 mm	inquire

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