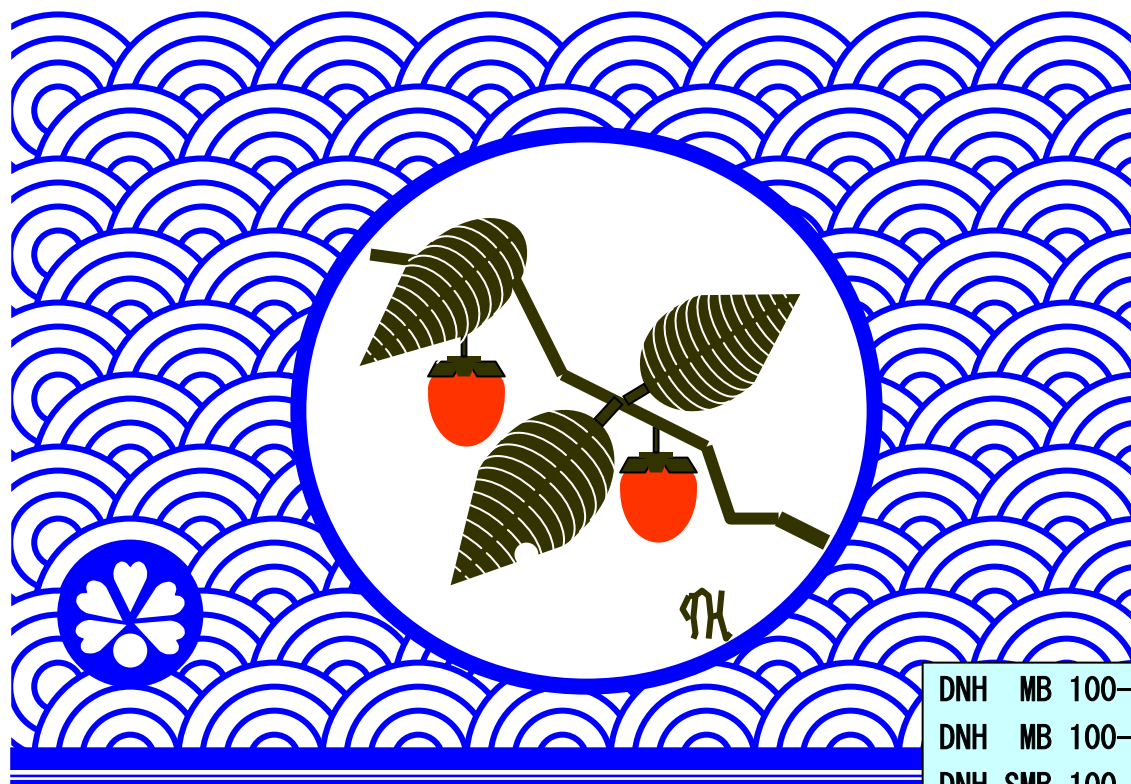


Separation for strong basic compounds

*CHROMATOREX-DNH*

**DNH SILICA**

(For Column Chromatography)



DNH	MB	100-75/200
DNH	MB	100-40/75
DNH	SMB	100-20/45

# Introduction

Separation methods with functionalized adsorbents by modification of silica surface have been widely used in various fields. Amino bonded silica gel (NH silica) is one of them and especially applied basic compounds that are generally called alkaloids including nitrogen atom from laboratory to industrial separation. This DNH silica is placed on the market as a new type of NH silica for separation of strong basic compounds. Please try this DNH silica as well as ordinary NH silica for purifications.

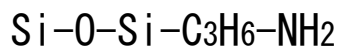
## DNH silica

3 kinds of different particle size grades are assorted based on 10nm pore size spherical silica. Please select from these grades as the application demands.

(Application)

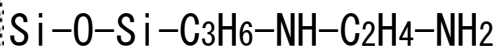
DNH MB 100-75/200	(A.P.S. 110 $\mu$ m)	Open column
DNH MB 100-40/75	(A.P.S. 60 $\mu$ m)	Flash Column, Cartridge Column
DNH SMB 100-20/45	(A.P.S. 30 $\mu$ m)	Cartridge Column, HPLC

【Surface Characteristics of NH silica】



(Primary amine)

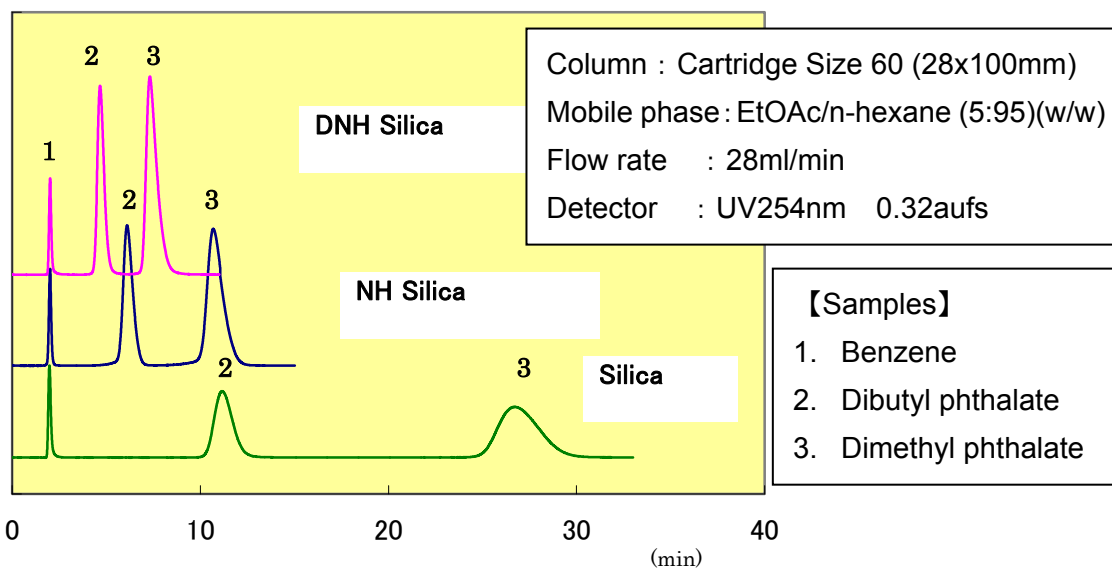
【Surface Characteristics of DNH silica】



(Secondary amine+ Primary amine)

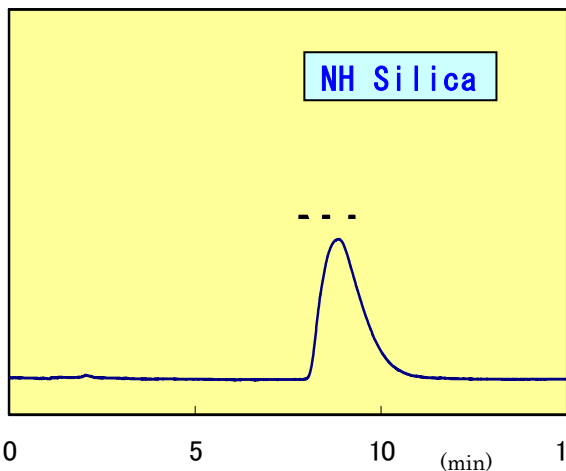
DNH Silica has secondary amine and primary amine and the amounts of amino bonds is 2times more than NH silica. That makes weaker hydrogen bonding due to stronger basic characteristics and longer carbon chain than NH silica. Therefore, it is possible to use low polarity solvent because elution time is faster than ordinary silica gel and NH silica.

Separation comparison of neutral compounds by silica, NH silica and DNH silica

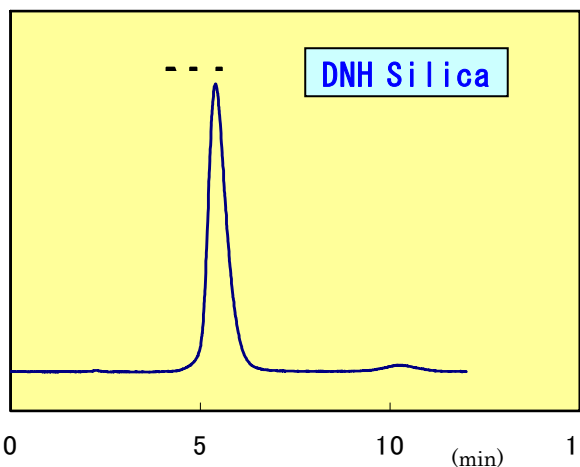


## Separation of Nicotine

DNH silica is used in low polarity mobile phase and improve peak asymmetry.



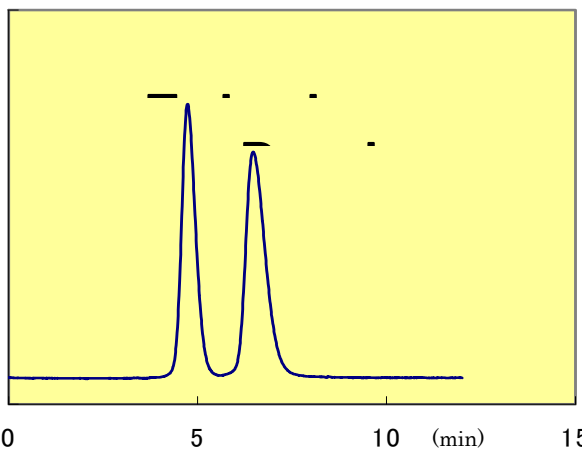
Packing media : NH SMB 100-20/45  
 Column : Cartridge Size 60 (28x100mm)  
 Mobile phase : EtOAc/n-hexane(1:9)(w/w)  
 Flow rate : 28ml/min  
 Detector : UV254nm 0.32aufs



Packing media : DNH SMB 100-20/45  
 Column : Cartridge Size 60 (28x100mm)  
 Mobile phase : EtOAc/n-hexane(5:95)(w/w)  
 Flow rate : 28ml/min  
 Detector : UV254nm 0.32aufs

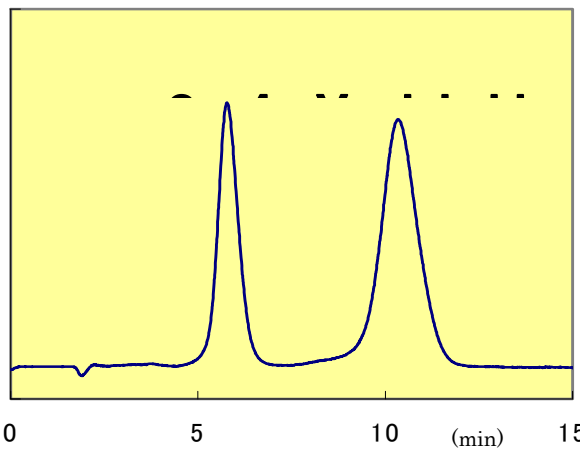
## Separation of standard basic compounds

( 1 ) Ethyl pyridine, Pyridine



Packing media : DNH SMB 100-20/45  
 Column : Cartridge Size 60 (28x100mm)  
 Mobile phase : EtOAc/n-hexane(5:95)(w/w)  
 Flow rate : 28ml/min  
 Detector : UV254nm 0.32aufs

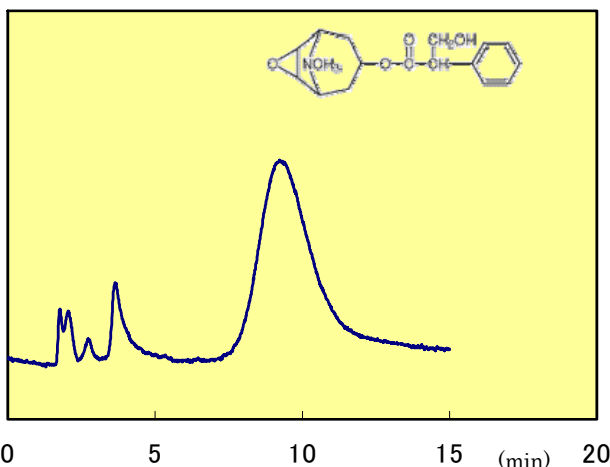
( 2 ) 3,4-Xylidine,  $\alpha$ -Naphthylamine



Packing media : DNH SMB 100-20/45  
 Column : Cartridge Size 60 (28x100mm)  
 Mobile phase : EtOAc/n-hexane(15:85)(w/w)  
 Flow rate : 28ml/min  
 Detector : UV254nm 0.32aufs

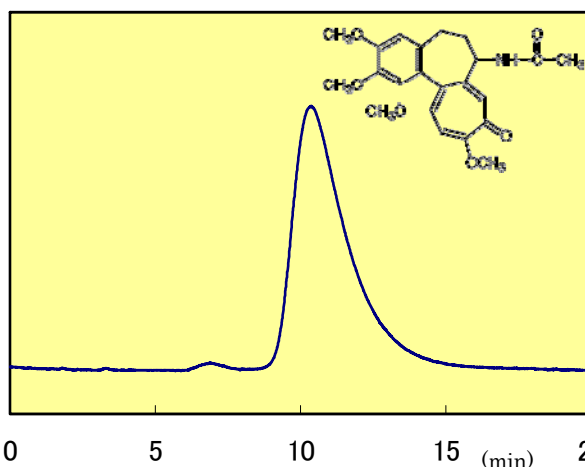
# Separation of alkaloids in natural products

Separation of Scopolamine



Packing media : DNH SMB 100-20/45  
 Column : Cartridge Size 60 (28x100mm)  
 Mobile phase : IPA/n-hexane(1:9)(w/w)  
 Flow rate : 28ml/min  
 Detector : UV254nm 0.08aufs

Separation of Colchicine



Packing media : DNH SMB 100-20/45  
 Column : Cartridge Size 60 (28x100mm)  
 Mobile phase : IPA/n-hexane(2:8)(w/w)  
 Flow rate : 28ml/min  
 Detector : UV254nm 0.32aufs

## Grade

Grade	Net(kg)
DNH MB 100-75/200	1
	5
DNH MB 100-40/75	1
	5
DNH SMB 100-20/45	1

DNH TLC (20*20cm)	Glass plate
Thickness 0.25mm F254	10 pieces

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