



Nano-SIL CN G A cyano-modified HPTLC silica layers

🔧 Technical characteristics

- Nano silica 60, mean pore size 60 Å, specific surface (BET) ~ 500 m²/g, specific pore volume 0.75 mL/g, pH stability 2–8, particle size 2–10 µm
- Indicator: acid-resistant product with a pale blue fluorescence for short-wave UV (254 nm), UV-absorbing substances appear as dark-blue to black spots on a light-blue background

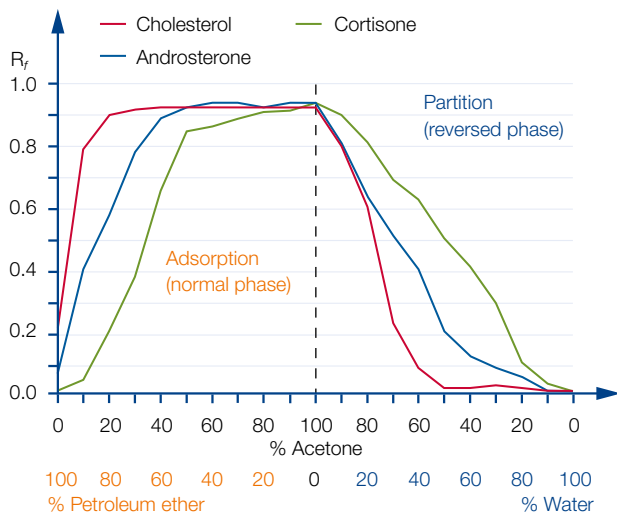
🔧 Modification

- Cyanopropyl modification, carbon content 5.5 %
- Order of polarity: silica > DIOL > NH₂ > CN > RP-2 > C18-50 > RP-18 W > C18-100

✅ Recommended application

- NP or RP separation modes depending on the polarity of the developing solvent (see figure below)
- Steroid hormones, phenols, preservatives

R_f values of different steroids as a function of eluent composition



Layer: Nano-SIL CN/UV

Polarity of the eluent governs the type of separation mechanism:

Eluent system petroleum ether (PE) – acetone (NP mode)

the higher the concentration of PE, the stronger are the adsorptive interactions of the steroids with the stationary phase

Eluent system acetone – water (RP mode)

the sequence of elution of the steroids is reversed, the most nonpolar compounds are most strongly retained

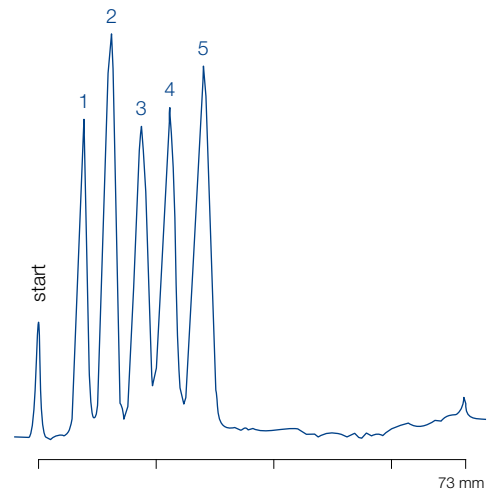
Separation of preservatives

MN Appl. No. 401440

Layer: Nano-SIL CN/UV
 Sample volume: 400 nL
 Eluent: ethanol – water – glacial acetic acid (20:80:0.2) with 0.1 mol/L tetraethylammonium chloride
 Migration distance: 73 mm in 30 min
 Detection: TLC scanner, UV 254 nm

Peaks:

1. Propyl p-hydroxybenzoate
2. Ethyl p-hydroxybenzoate
3. Methyl p-hydroxybenzoate
4. Benzoic acid
5. Sorbic acid



Ordering information

Plate size [cm]	4 x 8	10 x 10	10 x 20	Thickness of layer	Fluorescent indicator
Pack of [plates]	50	25	25		

Glass plates

Nano-SIL CN/UV	811115	811116	0.20 mm	UV ₂₅₄
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ALUGRAM® aluminum sheets

Nano-SIL CN/UV	818184		0.15 mm	UV ₂₅₄
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