

Chromatography

# TLC

Thin Layer Chromatography

## Plates & Sheets



**Order your  
free samples  
today!**

**Quality  
Efficiency  
Selectivity**

**MACHERLY-NAGEL**

[www.mn-net.com](http://www.mn-net.com)



*Since 1911*



### Advantages of sheets:

- easy to cut / handle
- more economical than glass plates
- excellent separation efficiency

#### Analytical TLC polyester and aluminium sheets:

Silica 60, specific surface (BET) ~ 500 m<sup>2</sup>/g, mean pore size 60 Å, specific pore volume 0.75 mL/g, particle size 5–17 µm, thickness of layer 0.20 mm

### POLYGRAM®

### ALUGRAM®

size (cm)	pack of	REF with UV 254 nm	REF without UV indicator	REF with UV 254 nm	REF without UV indicator
2.5 x 7.5	200	805901	805902	818129	
4 x 8	50	805021	805032	818131	
5 x 7.5	20			818130.20	818030.20
5 x 10	100 50	805037	805039	818160	818161
5 x 20	50	805022	805012	818132	818032
10 x 20	50 20	805028	805034	818162	818163
20 x 20	25	805023	805013	818133	818033
40 x 20	25	805024	805014		
Roll 500 x 20	1	805017			

### Polyester sheets POLYGRAM®

#### Key features:

- unbreakable but easy to cut
- chemical resistant (against acids and bases)
- returns to planarity after bending
- transparent
- low in weight and price
- temperature stable up to 185 °C

### Aluminium sheets ALUGRAM®

#### Key features:

- unbreakable but easy to cut
- chemical resistant
- suitable for most solvents
- low in weight and price
- heat resistant

### TLC accessory



Description	REF
Simultaneous developing Chamber for TLC	
20 x 20 cm, for up to 5 plates	814019
10 x 10 cm, for up to 2 plates	814018
MN Alugram® scissors	818666



Thin layer chromatography is used for a wide range of applications. However, there is no universal plate, which meets all possible demands. For this reason MN offers different types of silica coated glass plates: SIL-G or ADAMANT with different selectivities and fields of use.

## Key features of analytical TLC glass plates:

- chemical resistance
- ability to scan (absolute planarity)
- preparative TLC possible
- transparent
- . . . but more fragile, difficult to cut and higher weight than sheets

### Analytical TLC glass plates:

Silica 60, specific surface (BET) ~ 500 m<sup>2</sup>/g, mean pore size 60 Å, specific pore volume 0.75 mL/g, particle size 5–17 µm, thickness of layer 0.25 mm

## SIL-G\*

smooth surface · easy to „scrape off“ · low polarity binder

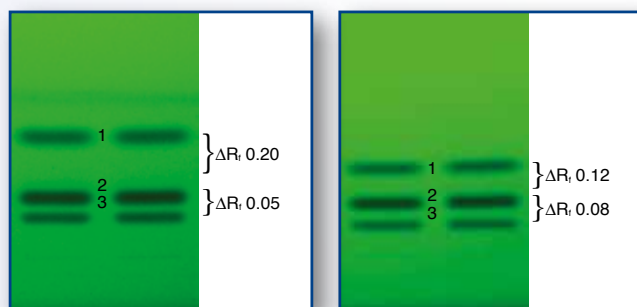
## ADAMANT

hard surface · can be pen labeled  
brilliant UV indicator system

size (cm)	pack of	REF with UV 254 nm	REF with UV 254/366 nm	REF without UV indicator	REF with UV 254 nm	REF without UV indicator
2.5 x 7.5	100	809028.100			821005	
5 x 10	200	809027.200			821010.200	
	50	809027		809017	821010	821040
5 x 20	100	809021	809121	809011	821015	
10 x 10	25	809020		809010	821020	821050
10 x 20	50	809022	809122	809012	821025	821070
20 x 20	25	809023	809123	809013	821030	821060

\*Also available as preparative plates in 0.50, 1.00 and 2.00 mm thickness.

### 2 different selectivities for the separation of nitroanilines, separations under identical conditions



Sil-G

ADAMANT

### Brilliant UV indicator on ADAMANT plates



size (cm)	pack of	Glass plates	
		REF RP-18 W / UV <sub>254</sub> 0.25 mm	ALUGRAM® REF RP-18 W / UV <sub>254</sub> 0.15 mm
4 x 8	50		818144
5 x 10	50		818152
5 x 20	50	811073	818145
10 x 10	25	811075	818147
10 x 20	50	811072	
20 x 20	25	811071	818146

### C18 TLC and HPTLC plates

For reversed phase TLC we offer different plates with C18 modified silica. The wettable TLC RP18W can be developed with purely organic and organic/aqueous solvents as well as with purely aqueous eluents.

Further modifications with different degrees of silanisation (NanoSIL-C18-50) are also available.

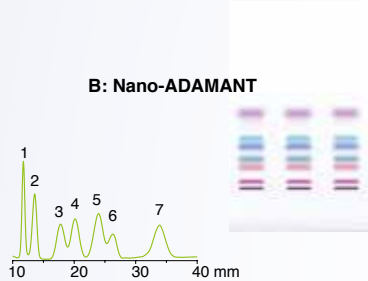
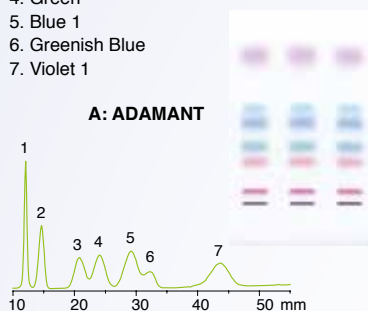


## Comparison of ADAMANT and Nano-ADAMANT plates

### Separation of anthraquinone dyes

Layers: A: ADAMANT,  
B: Nano-ADAMANT  
Sample: 1 µL about 0.1 %  
Eluent: toluene-cyclohexane (4:3, v/v)  
Migration time: A) 30 min, B) 15 min

Peaks:  
1. Blue 3  
2. Violet 2  
3. Red  
4. Green  
5. Blue 1  
6. Greenish Blue  
7. Violet 1



Higher efficiency on smaller particles . . .

in addition to TLC ready-to-use layers with standard silica coating we manufacture high performance ready-to-use layers (**HPTLC**) under the name “**Nano silica**”. The adsorbent, as in HPLC, is narrowly fractionated. We use mean particle sizes of 2–10 µm.

## Key features of HPTLC plates:

- sharper separations
- shorter developing times and migration distances
- smaller sample volumes 0.01–0.1 µL
- minimal diffusion
- increased detection sensitivity

### Analytical HPTLC glass plates:

Silica 60, specific surface (BET) ~ 500 m<sup>2</sup>/g, mean pore size 60 Å, specific pore volume 0.75 mL/g, thickness of layer 0.20 mm

size (cm)	pack of	Nano-SIL-G		Nano-ADAMANT	
		REF with UV 254 nm	REF without UV indicator	REF with UV 254 nm	REF without UV indicator
5 x 5	100	811021	811011	821100	821130
10 x 10	25	811022	811012	821110	821140
10 x 20	50	811023	811013	821120	821150

## Further TLC-products from MACHEREY-NAGEL:

- plates with concentrating zone
- preparative TLC plates (0.50, 1.00 and 2.00 mm thickness)
- plates and sheets with aluminium oxide or polyamide
- plates and sheets with cellulose, **MN 300** (native fibrous)  
**MN 400** (microcrystalline cellulose plates), modified cellulose with ion exchanger
- modified layers (CN, NH<sub>2</sub>, Diol)
- further RP layers  
(Nano-SIL C18-50, Nano-SIL C18-100, RP-2)
- CHIRALPLATE for enantiomeric separations
- layers for special applications (PAH, tensides)
- ion exchangers
- mixed layers  
(aluminium oxide/cellulose, cellulose/silica, kieselguhr/silica)
- visualisation reagents and accessories

For further information please feel free to order our general chromatography catalogue or contact your local distributor for free samples.

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