

# MACHEREY-NAGEL ALUGRAM<sup>®</sup> Xtra

Chromatography



State of the art TLC aluminum sheets

- Outstanding wettability
- Easy cutting
- Excellent separation efficiency

**MACHEREY-NAGEL**

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



# Modern TLC aluminum sheets

## ALUGRAM® Xtra SIL G · aluminum sheets

Unmodified standard silica layers on aluminum for TLC

Silica 60, mean pore size 60 Å, specific pore volume 0.75 mL/g, particle size 5–17 µm  
Indicator: manganese activated zinc silicate with green fluorescence for short-wave UV (254 nm); special inorganic fluorescent pigment with blue fluorescence for long-wave UV (366 nm)

Binder: highly polymeric product, which is stable in almost all organic solvents and resistant towards aggressive visualization reagents; binder system for ALUGRAM® Xtra is also completely stable in purely aqueous eluents.

- Outstanding wettability for precise colorization results, even with 100 % aqueous eluents
- Excellent separation efficiency and reproducibility from lot to lot
- Easy and reliable cutting due to an optimized binder system, no flaking of silica

### Separation of nutmeg ingredients

MN Appl. No. 403590

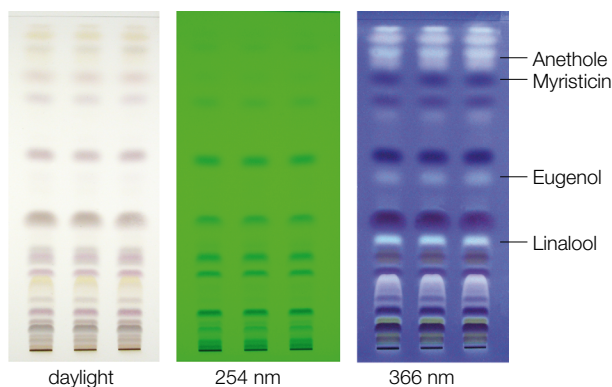
Plates: ALUGRAM® Xtra SIL G UV<sub>254</sub>, 20 × 20 cm (REF 818333)

Sample: Shake 1.0 g freshly powdered drug for 3 min with 4 mL methanol and filter; apply 10 µL

Eluent: Toluene – ethyl acetate (95:5, v/v)

Migration: 15 cm

Detection: 254 nm: undervivatized  
daylight and 366 nm: spray with 5 % ethanolic sulfuric acid, 1 % vanillic acid and heat to 105 °C



The chromatograms show the following zones with increasing R<sub>f</sub> values: linalool (bluish grey), eugenol (yellowish brown), myristicin (reddish brown), and anethole (pink-violet). Other colored zones may appear.

### Separation of saffron ingredients

MN Appl. No. 403600

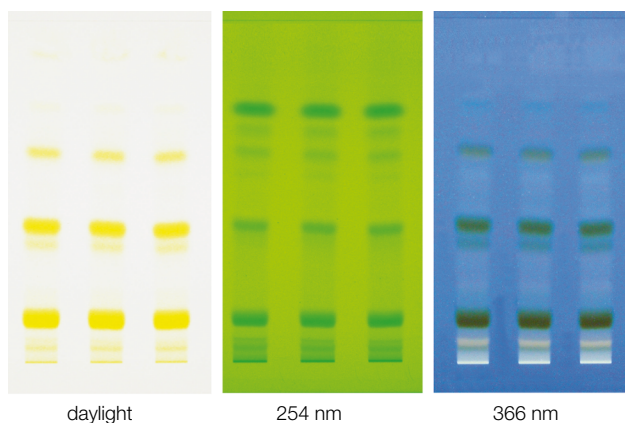
Plates: ALUGRAM® Xtra SIL G UV<sub>254</sub>, 20 × 20 cm (REF 818333)

Sample: Stir 10 mg drug with 50 µL water in a small glass reaction tube. After 3 minutes add 1 mL methanol and store the solution for 20 minutes in the dark. Afterwards filter through a CHROMAFIL® Xtra GF-100/25 filter; apply 10 µL

Eluent: Ethyl acetate – 2-propanol – water (65:25:10, v/v/v)

Migration: 10 cm

Detection: The sheet is dried with a hair dryer and analyzed under daylight, UV 254 nm and 366 nm.



The chromatograms show as main compound naphthol yellow S. Other colored zones may appear.

## Modern TLC aluminum sheets

### ALUGRAM® Xtra Nano-SIL G · aluminum sheets

Nano silica layers for HPTLC

Nano silica 60, mean pore size 60 Å, specific pore volume 0.75 mL/g, particle size 2–10 µm

- Sharper separations in shorter development time and shorter migration distances
- Smaller samples and an increased detection sensitivity
- Easy cutting and outstanding wettability

### ALUGRAM® Xtra SILGUR · aluminum sheets

Standard silica layers with concentrating zone for TLC

Silica 60, mean pore size 60 Å, specific pore volume 0.75 mL/g, particle size 5–17 µm

Kieselguhr zone for rapid sample application: because kieselguhr is completely inert towards a large number of compounds, the samples always form a narrow band at the interface of the two adsorbents, irrespective of shape, size or position of the spots in the concentrating zone (see figure below). Separation then takes place in the silica layer.

- Concentrating zone: valuable aid for manual application and time saving
- Excellent separation efficiency
- Easy cutting and outstanding wettability

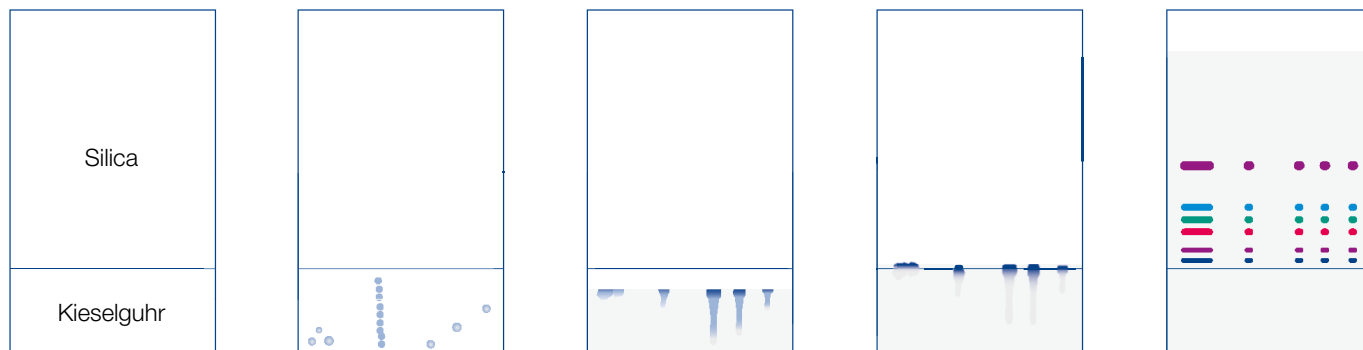
### ALUGRAM® Xtra Nano-SILGUR · aluminum sheets

Nano silica layers with concentrating zone for HPTLC

Nano silica 60, mean pore size 60 Å, specific pore volume 0.75 mL/g, particle size 2–10 µm

- Sharper separations in shorter development time and shorter migration distances
- Concentrating zone: valuable aid for manual application and time saving
- Easy cutting and outstanding wettability

## Operating mode of SILGUR plates with concentrating zone



The chromatograms show the SILGUR plates with concentrating zone.

After sample application in the kieselguhr layer the spots migrate to the kieselguhr/silica interface forming narrow bands. Separation then takes place in the silica layer.

# Modern TLC aluminum sheets

## Ordering information

Plate size [cm] Pack of [plates]	2.5 x 7.5 200	4 x 8 50	5 x 7.5 20	5 x 10 50	5 x 20 50	10 x 20 20	20 x 20 25	Thickness of layer	Fluorescent indicator
SIL G			818230.20	818261	818232		818233	0.20 mm	-
SIL G/UV <sub>254</sub>	818329	818331	818330.20	818360	818332	818362	818333	0.20 mm	UV <sub>254</sub>
SILGUR						818412	818413	0.20 mm	-
SILGUR UV <sub>254</sub>						818422	818423	0.20 mm	UV <sub>254</sub>
Nano-SIL G					818240		818241	0.20 mm	-
Nano-SIL G/UV <sub>254</sub>					818342		818343	0.20 mm	UV <sub>254</sub>
Nano-SILGUR						818432		0.20 mm	-
Nano-SILGUR G/UV <sub>254</sub>						818442		0.20 mm	UV <sub>254</sub>

### Accessories

Scissors for TLC / HPTLC sheets	818666
TLC developing chamber 10 x 10 cm	814018
TLC developing chamber 20 x 20 cm	814019



Your local distributor

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

# MACHEREY-NAGEL



MACHEREY-NAGEL GmbH & Co. KG  
Valenciener Str. 11  
52355 Düren · Germany

DE Tel.: +49 24 21 969-0 info@mn-net.com  
 CH Tel.: +41 62 388 55 00 sales-ch@mn-net.com  
 FR Tel.: +33 388 68 22 68 sales-fr@mn-net.com  
 US Tel.: +1 888 321 62 24 sales-us@mn-net.com