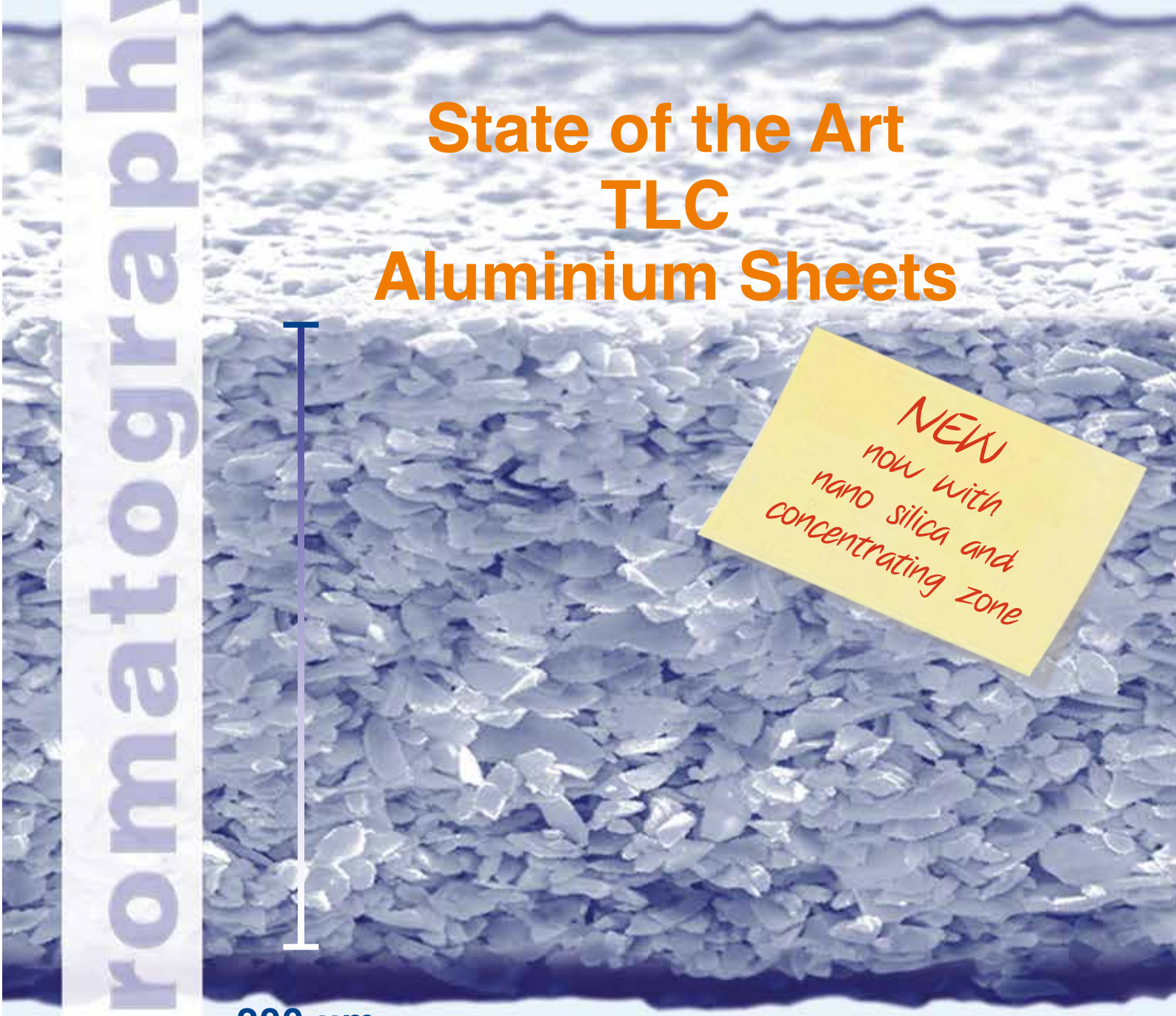
ALUGRAM® Xtra

Chromatography

State of the Art TLC Aluminium Sheets



200 µm

Greyhound CHROMATOGRAPHY AND ALLIED CHEMICALS

outstanding wettability
easy and reliable
excellent separation efficiency

MACHEREY-NAGEL

www.mn-net.com

MN Since 1911

Modern TLC aluminium sheets

ALUGRAM® X*tra* SIL G · aluminium sheets
unmodified standard silica layers on aluminium for TLC

- **outstanding wettability for precise colorization results, even with 100 % aqueous eluents**
- **excellent separation efficiency and reproducibilty from lot to lot**
- **easy and reliable cutting due to an optimized binder system, no flaking of silica**

Silica 60, specific surface (BET) ~ 500 m²/g, mean pore size 60 Å, specific pore volume 0.75 mL/g, **particle size 5–17 µm**

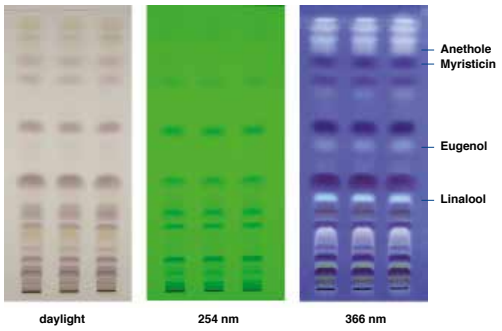
Indicator: manganese activated zinc silicate with green fluorescence for short-wave UV (254 nm); special inorganic fluorescent pigment with blue fluorescence for long-wave UV (366 nm)

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

Ordering information

Plate size [cm]	2.5 x 7.5	4 x 8	5 x 7.5	5 x 10	5 x 20	10 x 20	20 x 20	Thickness of layer	Fluorescent indicator
Pack of [plates]	200	50	20	50	50	20	25		
ALUGRAM® *Xtra* SIL G · aluminium sheets with standard silica									
SIL G			**818230.20**	**818261**	**818232**		**818233**	0.20 mm	–
SIL G/UV$_{254}$	**818329**	**818331**	**818330.20**	**818360**	**818332**	**818362**	**818333**	0.20 mm	UV$_{254}$

Separation of nutmeg ingredients

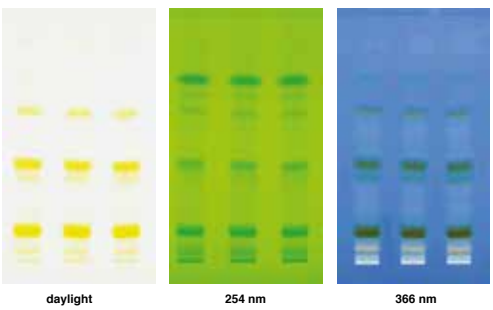


The chromatograms show the following zones with increasing R_f values: linalool (bluish grey), eugenol (yellowish brown), myristicin (reddish brown), and anethole (pink-violet). Other colored zones may appear.

Sample solution:	shake 1.0 g freshly powdered drug for 3 min with 4 mL methanol and filter; apply 10 µL
Layer:	ALUGRAM® Xtra SIL G UV$_{254}$
Eluent:	toluene – ethyl acetate (95:5, v/v)
Migration distance:	15 cm
Detection:	254 nm: underivatized daylight and 366 nm: spray with 5 % ethanolic sulphuric acid, 1 % vanillic acid and heat to 105 °C

MN Appl. No. 403590

Separation of saffron ingredients



Sample solution:	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
Layer:	ALUGRAM® Xtra SIL G UV$_{254}$
Eluent:	ethyl acetate – 2-propanol – water (65:25:10, v/v/v)
Migration distance:	10 cm
Detection:	the sheet is dryed with a hair dryer and analyzed under daylight, UV 254 nm and 366 nm.

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

MN Appl. No. 403600

NEW
ALUGRAM® X*tra* SILGUR · aluminium sheets
standard silica layers with concentrating zone for TLC

- **concentrating zone:** valuable aid for manual application and time saving
- **excellent separation efficiency**
- **easy cutting and outstanding wettability**

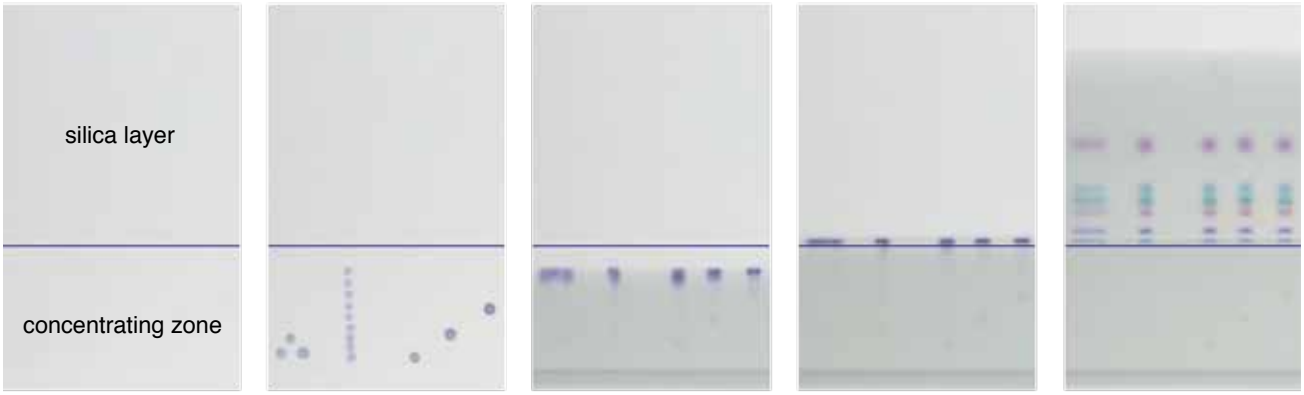
Silica 60, specific surface (BET) ~ 500 m²/g, mean pore size 60 Å, specific pore volume 0.75 mL/g, **particle size 5–17 µm**

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). Separation then takes place in the silica layer.

Ordering information

Plate size [cm]	10 x 20	20 x 20	Thickness of layer	Fluorescent indicator
Pack of [plates]	20	25		
NEW **ALUGRAM® X*tra* · aluminium sheets standard silica layers with concentrating zone**				
SILGUR	**818412**	**818413**	0.20 mm	–
SILGUR UV_{254}	**818422**	**818423**	0.20 mm	UV_{254}

Save your precious time!



❶ ALUGRAM® X*tra* SILGUR

❷ arbitrary application

❸ arbitrary application-focusing in concentrating zone

❹ arbitrary application focused on starting line

❺ developed chromatogram

A valuable aid for manual application especially of large volumes of very dilute samples is the concentrating zone ❶, which consists of a chromatography inactive adsorbent (kieselguhr). The substances to be separated are concentrated to a narrow band in the concentrating zone ❸. The separation starts at the beginning of the chromatographically active adsorbent silica ❹.

Concentrating zone as “rapid application zone” - quantitative evaluation of chromatograms is possible, even if samples applied irregular ❷. TLC layers with concentrating zone facilitate the handling and also save time in analysis.

Modern TLC aluminium sheets

Chromatography

NEW
ALUGRAM® X*tra* Nano-SIL G · aluminium sheets
nano silica layers for HPTLC

- **sharper separations in shorter development time and shorter migration distances**
- **smaller samples and an increased detection sensitivity**
- **easy cutting and outstanding wettability**

Nano silica 60, specific surface (BET) ~ 500 m²/g, mean pore size 60 Å, specific pore volume 0.75 mL/g, **particle size 2–10 µm**

Ordering information

Plate size [cm]	5 x 20	20 x 20	Thickness of layer	Fluorescent indicator
Pack of [plates]	50	25		
NEW **ALUGRAM® X*tra* Nano-SIL G · aluminium sheets nano silica layers for HPTLC**				
Nano-SIL G	**818240**	**818241**	0.20 mm	–
Nano-SIL G/UV_{254}	**818342**	**818343**	0.20 mm	UV_{254}

NEW
ALUGRAM® X*tra* Nano-SILGUR · aluminium sheets
nano silica layers with concentrating zone for HPTLC

- **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**

Nano silica 60, specific surface (BET) ~ 500 m²/g, mean pore size 60 Å, specific pore volume 0.75 mL/g, **particle size 2–10 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. Separation then takes place in the silica layer.

Ordering information

Plate size [cm]	10 x 10	Thickness of layer	Fluorescent indicator
Pack of [plates]	25		
NEW **ALUGRAM® X*tra* · Nano-SILGUR aluminium sheets nano silica layers with concentrating zone for HPTLC**			
Nano-SILGUR	**818432**	0.20 mm	–
Nano-SILGUR UV_{254}	**818442**	0.20 mm	UV_{254}

Distributed By
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