

MACHEREY-NAGEL

CHROMABOND®

Carbon Active

Chromatography



Enrichment of acrylamide from aqueous samples

- Preparation of water and sludge samples according to DIN 38413-6
- High batch-to-batch reproducibility for reliable HPLC quantification
- Secure supply, manufactured in Germany



**MACHEREY-NAGEL**

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





# CHROMABOND® Carbon Active

## Why should you choose CHROMABOND® Carbon Active?

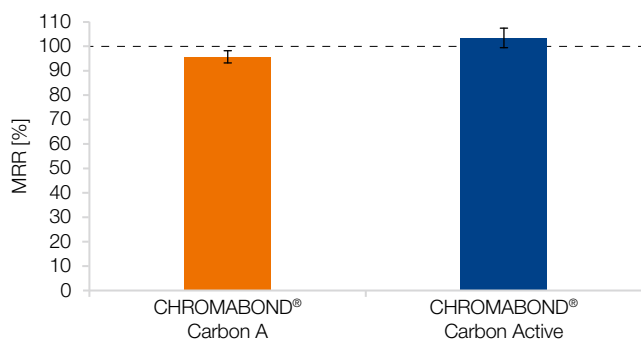
When health is the top priority, uncompromising precision is essential. CHROMABOND® Carbon Active SPE products are engineered to deliver high recovery rates and excellent batch-to-batch reproducibility in sample preparation. The sample is freed from interfering contaminants and harmful particles without any significant loss of the analyte. A reasonable sample preparation enhances column longevity without compromising analytical results. CHROMABOND® Carbon Active offers the the perfect value for money benefiting from our long-time experience as SPE- and sorbent-manufacturer. In addition, full production in Germany ensures consistent quality and reliable availability through short and independent supply chains.



## Comparison

Although CHROMABOND® Carbon A and CHROMABOND® Carbon Active are distinct SPE products, they share the same foundation. Both utilize spherical, activated carbon particles with a very high specific surface of more than 1000 m<sup>2</sup>/g as sorbent, making them versatile, interchangeable options for various applications.

During the development of the CHROMABOND® Carbon Active line, a comparative study was conducted to evaluate recovery rates for acrylamides following DIN 38413-6 to ensure a smooth transition. The results confirmed that both products deliver equivalent performance, proving that CHROMABOND® Carbon Active is a reliable replacement for your existing CHROMABOND® Carbon A workflows.



	Carbon A	Carbon Active
Particle size distribution	0.1 – 0.315 mm: ≥ 90 %	0.1 – 0.315 mm: ≥ 90 %
Particle shape	Spherical	Spherical
Iodine number	1380 – 1480 mg/g	1380 – 1480 mg/g
Bulk density	≥ 580 g/L	510 – 600 g/L
Surface area	≥ 1000 m <sup>2</sup> /g	≥ 1000 m <sup>2</sup> /g

## Order information


### CHROMABOND® Carbon Active polypropylene




REF	Description
7300058	CHROMABOND Carbon Active, 6 mL/500 mg, 30 Pc.
7300056	CHROMABOND Carbon Active, 6 mL/1000 mg, 30 Pc.
7300057	CHROMABOND Carbon Active, 6 mL/2000 mg, 30 Pc.


# CHROMABOND® Carbon Active

## Standard SPE procedure for CHROMABOND® Carbon Active

MN Appl. No. 306130			
	<b>Column type:</b>	CHROMABOND® Carbon Active, 6 mL, 1000 mg, REF 7300056	<b>Washing:</b> 1–10 mL water
	<b>Column conditioning:</b>	3 x 6 mL methanol 3 x 6 mL methanol	<b>Drying:</b> 5–10 min of vacuum or nitrogen flow
	<b>Sample application:</b>	5–20 mL/min	<b>Elution:</b> 3 x 2 mL methanol
			<b>Further analysis:</b> if necessary, evaporate and redissolve in a suitable solvent

## Determination of acrylamide from drinking water (spiked sample), according to DIN 38413-6

MN Appl. No. 306140			
	<b>Column type:</b>	CHROMABOND® Carbon Active, 6 mL, 1000 mg, REF 7300056	<b>Concentration:</b> combine eluate fractions and concentrate to 1 mL
	<b>Sample pretreatment:</b>	A sample of drinking water is taken according to DIN 38402. Then, the sample is treated with 100 mg/L sodium thiosulfate pentahydrate to reduce oxidizing species. 40 mg/L sodium azide was added to avoid microbiological degradation. An aliquot of 500 mL of the sample is taken and 50 ng of acrylamide were added.	<b>Further analysis:</b> HPLC, according to MN Appl. No. 127530
	<b>Column conditioning:</b>	1 x 8 mL methanol 1 x 8 mL water	<b>Column:</b> EC 150/3 NUCLEODUR® C <sub>18</sub> Gravity, 3 µm (REF 760083.30)
	<b>Sample application:</b>	Sample was aspirated at a flow of 20 mL/min	<b>Eluent A:</b> 0.001 % formic acid in water
	<b>Washing:</b>	1 mL water	<b>Eluent B:</b> 0.001 % formic acid in methanol
	<b>Drying:</b>	15 min of nitrogen or air flow	<b>Gradient:</b> 10 % B in 10 min to 100 % B, back to 10 % B in 2 min, hold for 5 min
	<b>Elution:</b>	5 x 2 mL methanol	<b>Flow rate:</b> 0.25 mL/min
			<b>Temperature:</b> 60 °C
			<b>Injection:</b> 10 µL
			<b>Detection:</b> MS/MS
			<b>Recovery rate:</b> 81 % (SD: 5 %; n= 6)



For further information please visit [www.mn-net.com/apps](http://www.mn-net.com/apps)

## CHROMABOND® accessories\*

Description	Quantity	REF
<b>Vacuum manifold complete</b> consists of: glass cabinet with lid and lid gasket, removable needles on lower side of lid, vacuum gauge, control valve, valves and caps, variable		
for up to 12 columns or cartridges (including PP)	1	730150N
for up to 24 columns or cartridges	1	730151N
<b>Tubing adapters for application of large sample volumes (PTFE tube length approx. 1 m)</b>		
for 1, 3 and 6 mL polypropylene	4	730243

\*More CHROMABOND® accessories are available. For details see our website or contact us.

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

# MACHEREY-NAGEL



Management System  
EN ISO 13485:2016  
ISO 9001:2015



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