

APPLICATION

Banned Carcinogenic Aromatic Amines by LC/UV Using a Kinetex® EVO C18 Core-Shell LC Column

Matthew Trass and Simon Lomas
Phenomenex, Inc., 411 Madrid Ave., Torrance, CA 90501 USA

Overview

Aromatic amines have numerous manufacturing applications including the production of dyes, polymers, surfactants, drugs and pesticides. However, these compounds present a risk to consumers since many aromatic amines have been classified as carcinogenic. Regulatory agencies including the FDA and EU have placed restrictions on the use of certain aromatic amines. Below is a fast analysis of 14 banned carcinogenic aromatic amines using a Kinetex EVO C18 core-shell HPLC/UHPLC column. The high-performance and unique selectivity of the Kinetex EVO C18 HPLC column gives us narrow peak widths along with excellent resolution between all 14 aromatic amines. Additionally, the fast analysis time lends to a potential increase in productivity for higher throughput laboratories. In the event that an even faster UHPLC method is preferred, this methodology can be transferred to a shorter Kinetex 1.7 µm EVO C18 column because of the direct scalability between the Kinetex particle sizes.

Find more information on Kinetex core-shell HPLC and UHPLC columns at:
www.phenomenex.com/kinetex

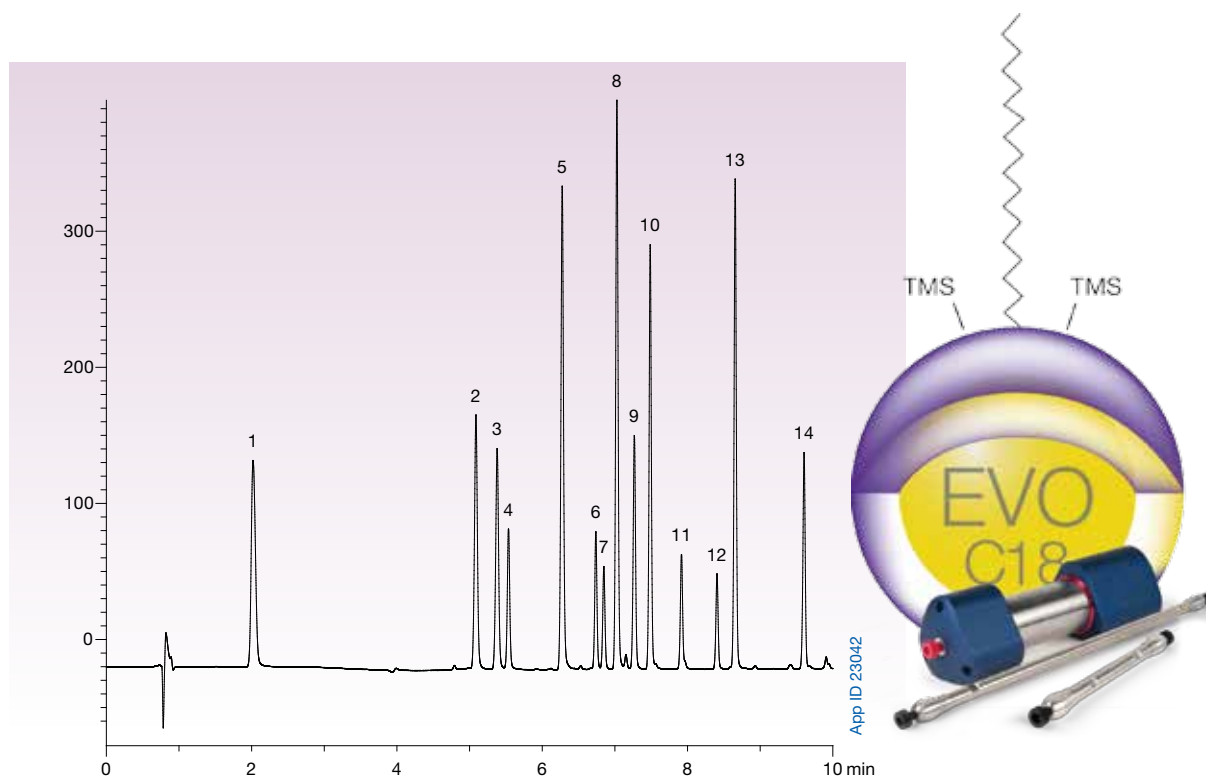
LC/UV Conditions

Column: Kinetex 2.6 µm EVO C18
Dimensions: 150 x 2.1 mm
Part No.: 00F-4725-AN
Mobile Phase: A: 10 mM Ammonium Acetate/Acetonitrile (95:5)
 B: Acetonitrile
Gradient:

Time (min)	% B
0	5
10	95

Flow Rate: 0.4 mL/min
Temperature: 50 °C
Detection: UV @ 240 nm
Sample:

1. 4-Methyl-m-phenylenediamine
2. o-Anisidine
3. o-Toluidine
4. Benzidine
5. 4-Chloroaniline
6. 3,3-Dimethoxybenzidine
7. 3,3-Dimethylbenzidine
8. 2-Naphthylamine
9. 2,4,5-Trimethylaniline
10. 4,4'-methylenedio-toluidine
11. 4-Aminobiphenyl
12. 3,3-Dichlorobenzidine
13. 2,2'-Dichloro-4,4'-methylenedianiline
14. o-Aminoazotoluene



APPLICATION

Ordering Information

Kinetex[®] EVO C18 Core-Shell LC Columns

5 µm Minibore Columns (mm)				SecurityGuard [™] ULTRA Cartridges [†]
30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	3/pk
00A-4633-AN	00B-4633-AN	00D-4633-AN	00F-4633-AN	AJO-9298 for 2.1 mm ID

5 µm MidBore [™] Columns (mm)			SecurityGuard [™] ULTRA Cartridges [†]
50 x 3.0	100 x 3.0	150 x 3.0	3/pk
00B-4633-YO	00D-4633-YO	00F-4633-YO	AJO-9297 for 3.0 mm ID

5 µm Analytical Columns (mm)				SecurityGuard [™] ULTRA Cartridges [†]
50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	3/pk
00B-4633-E0	00D-4633-E0	00F-4633-E0	00G-4633-E0	AJO-9296 for 4.6 mm ID

2.6 µm Minibore Columns (mm)				SecurityGuard [™] ULTRA Cartridges [†]
30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	3/pk
00A-4725-AN	00B-4725-AN	00D-4725-AN	00F-4725-AN	AJO-9298 for 2.1 mm ID

2.6 µm MidBore [™] Columns (mm)			SecurityGuard [™] ULTRA Cartridges [†]
50 x 3.0	100 x 3.0	150 x 3.0	3/pk
00B-4725-YO	00D-4725-YO	00F-4725-YO	AJO-9297 for 3.0 mm ID

2.6 µm Analytical Columns (mm)			SecurityGuard [™] ULTRA Cartridges [†]
50 x 4.6	100 x 4.6	150 x 4.6	3/pk
00B-4725-E0	00D-4725-E0	00F-4725-E0	AJO-9296 for 4.6 mm ID

1.7 µm Minibore Columns (mm)			SecurityGuard [™] ULTRA Cartridges [†]
50 x 2.1	100 x 2.1	150 x 2.1	3/pk
00B-4726-AN	00D-4726-AN	00F-4726-AN	AJO-9298 for 2.1 mm ID

[†] SecurityGuard ULTRA Cartridges require holder, Part No.: AJO-9000



If Phenomenex products in this technical note do not provide at least an equivalent separation as compared to other products of the same phase and dimensions, return the product with comparative data within 45 days for a FULL REFUND.

Australia

t: +61 (0)2-9428-6444
f: +61 (0)2-9428-6445
auinfo@phenomenex.com

Austria

t: +43 (0)1-319-1301
f: +43 (0)1-319-1300
anfrage@phenomenex.com

Belgium

t: +32 (0)2 503 4015 (French)
t: +32 (0)2 511 8666 (Dutch)
f: +31 (0)30-2383749
beinfo@phenomenex.com

Canada

t: +1 (800) 543-3681
f: +1 (310) 328-7768
info@phenomenex.com

China

t: +86 (0)20 2282-6668
f: +86 (0)20 2809-8130
chinainfo@phenomenex.com

Denmark

t: +45 4824 8048
f: +45 4810 6265
nordicinfo@phenomenex.com

Finland

t: +358 (0)9 4789 0063
f: +45 4810 6265
nordicinfo@phenomenex.com

France

t: +33 (0)1 30 09 21 10
f: +33 (0)1 30 09 21 11
franceinfo@phenomenex.com

Germany

t: +49 (0)6021-58830-0
f: +49 (0)6021-58830-11
anfrage@phenomenex.com

India

t: +91 (0)40-3012 2400
f: +91 (0)40-3012 2411
indiainfo@phenomenex.com

Ireland

t: +353 (0)1 247 5405
f: +44 1625-501796
eireinfo@phenomenex.com

Italy

t: +39 051 6327511
f: +39 051 6327555
italiainfo@phenomenex.com

Luxembourg

t: +31 (0)30-2418700
f: +31 (0)30-2383749
nlinfo@phenomenex.com

Mexico

t: 001-800-844-5226
f: 001-310-328-7768
tecnicomx@phenomenex.com

The Netherlands

t: +31 (0)30-2418700
f: +31 (0)30-2383749
nlinfo@phenomenex.com

New Zealand

t: +64 (0)9-4780951
f: +64 (0)9-4780952
nzinfo@phenomenex.com

Norway

t: +47 810 02 005
f: +45 4810 6265
nordicinfo@phenomenex.com

Puerto Rico

t: +1 (800) 541-HPLC
f: +1 (310) 328-7768
info@phenomenex.com

Spain

t: +34 91-413-8613
f: +34 91-413-2290
espinfo@phenomenex.com

Sweden

t: +46 (0)8 611 6950
f: +45 4810 6265
nordicinfo@phenomenex.com


United Kingdom

t: +44 (0)1625-501367
f: +44 (0)1625-501796
ukinfo@phenomenex.com

USA

t: +1 (310) 212-0555
f: +1 (310) 328-7768
info@phenomenex.com

All other countries

Corporate Office USA 
t: +1 (310) 212-0555
f: +1 (310) 328-7768
info@phenomenex.com

www.phenomenex.com

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Kinetex EVO is patented by Phenomenex. U.S. Patent Nos. 7,563,367 and 8,658,038 and foreign counterparts.

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