

Dr. Maisch

Any Column, Any Size, Any Media



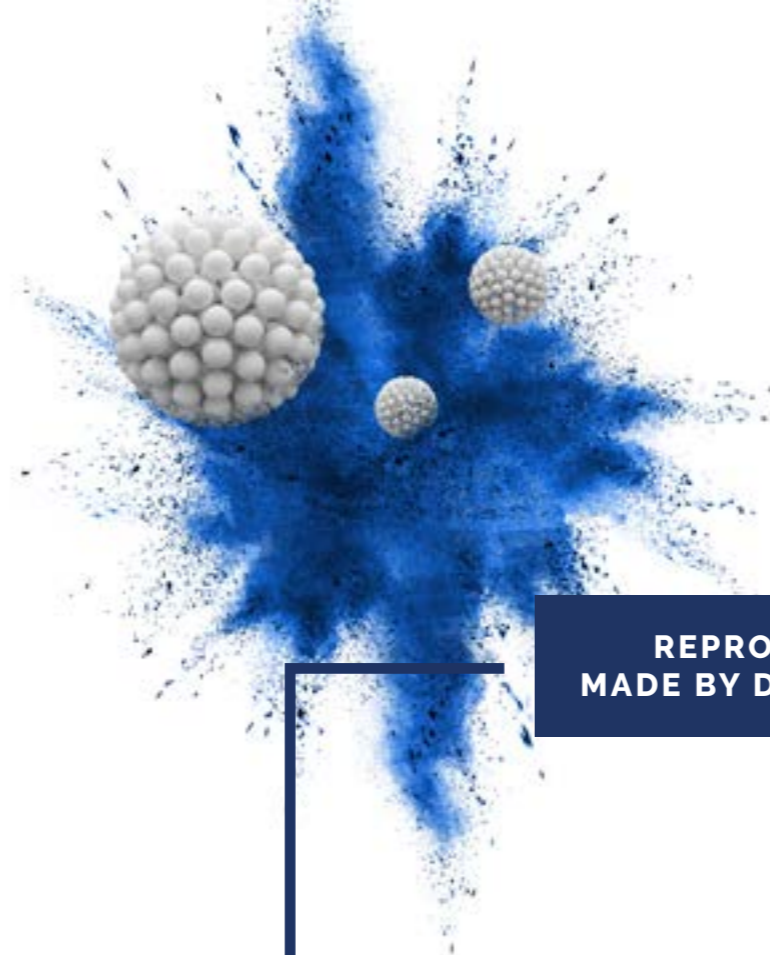
ReproSil-XR

超高纯硅胶色谱柱

MADE BY DR. MAISCH

内容

- P 4 - 超高纯度 色谱柱
- P 5 - 高重现性和卓越的性能
- P 6 - 9 - 应用案例
- P 10 - 11 - REPOSIL XR C18MS



**REPOSIL-XR
MADE BY DR. MAISCH**

来自欧洲最大的高效液相色谱（HPLC/UPLC）柱制造商之一

Choose Wisely - ReproSil-XR

Dr. Maisch HPLC GmbH 在高效液相色谱柱领域设立了新的标准。我们从硅胶颗粒到成品，一切都自己制造。精良的制造工艺使得我们能够以卓越的价值提供最高的性能！

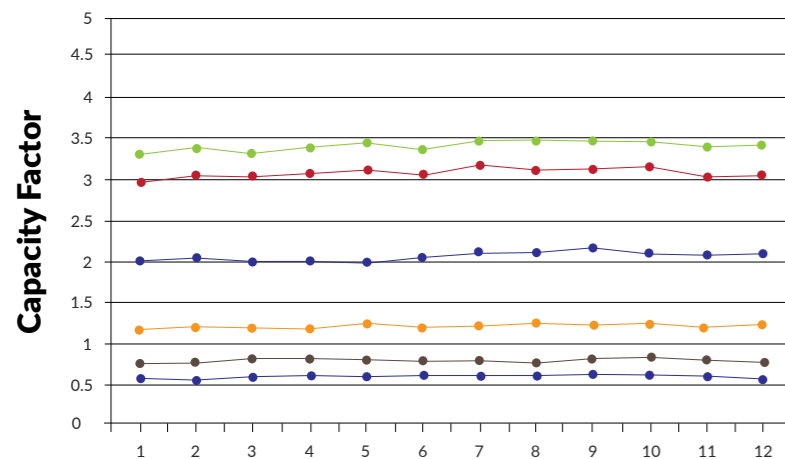
eXtRa high quality HPLC phases

超高纯度的硅胶和均匀的键合相覆盖意味着对酸碱物质有着对称的峰形，以及可预测的反相选择性。无论是常规分析还是新方法开发，使用ReproSil XR柱子可以在预算有限的情况下获得优质性能。

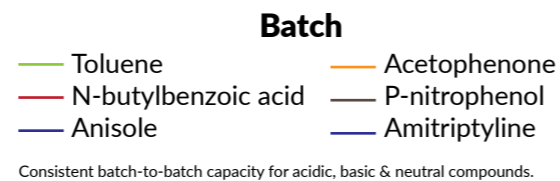
| ReproSil-XR | Specifications |
|-------------|--|
| 键合相 | Silica, C18, C18(MS), C8, Phenyl, CN, SCX, SAX |
| 封端 | (for C18, C8, Phenyl) |
| 比表面积 | 250 m ² /g, 100 m ² /g |
| 孔径 | 120 Å, 300 Å |
| 粒径 | 1.5, 3, 3.5, 5, 7 and 10 μm |

Reproducible Methods Start with Reproducible Columns

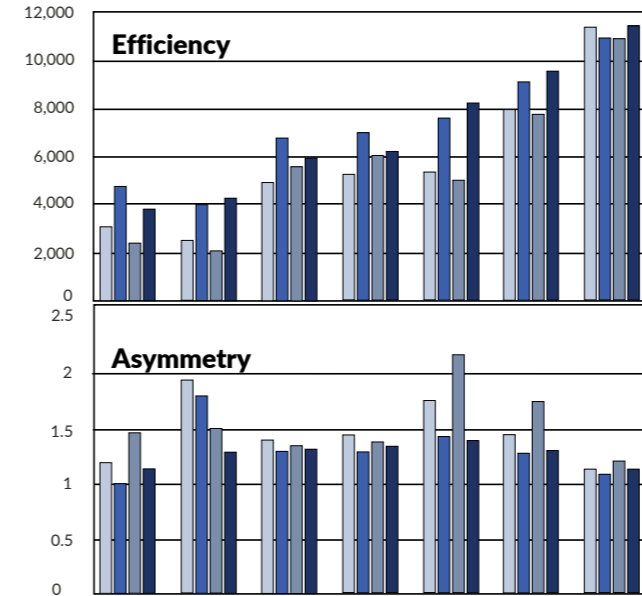
高重复性



严格控制二氧化硅合成和仔细进行键合导致选择性和容量因子的最小变化。



Expect competitive performance

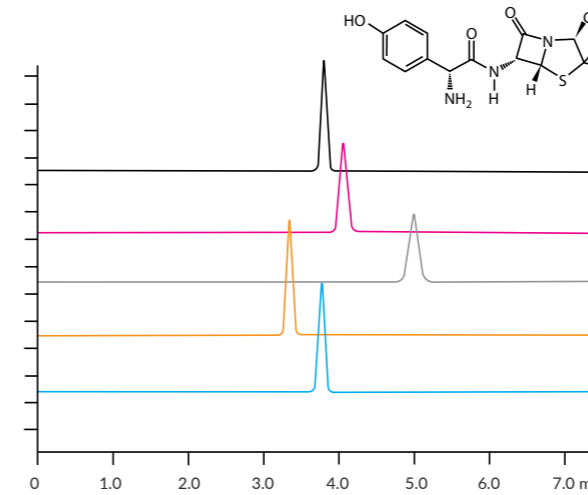


高效的制造流程是具有竞争力的价格的关键因素，但不会以牺牲性能为代价。与行业领先的LC色谱柱相比，ReproSil-XR色谱柱对碱性和酸性化合物具有相似或更好的效率和不对称性。

■ ReproSil-XR C18 Column
 ■ Competitor P C18 Column
 ■ Competitor H C18 Column
 ■ Competitor K C18 Column

ReproSil-XR columns compares favorable to leading competitor columns.

阿莫西林 (美国药典标准)

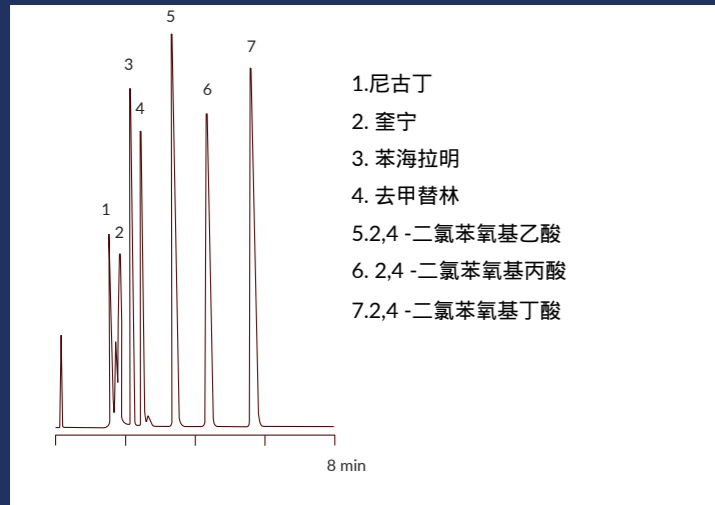


Column: ReproSil-XR 120 C18, 5 μm, 120 Å, 250 x 4.6 mm, (PN: rx15.9e.s2546)
Mobile phase: Isocratic, 50 mM KH₂PO₄, pH 5 : MeCN 96:4 (v:v)
Flow rate: 1.5 ml/min
Detector: UV at 230 nm
Column temp: 30° C
Injection vol: 10 μl

— ReproSil-XR C18 Column
 — Competitor P C18 Column
 — Competitor G C18 Column
 — Competitor H C18 Column
 — Competitor K C18 Column

| | ReproSil-XR C18 | Comp P C18 | Comp G C18 | Comp H C18 | Comp K C18 |
|--------------------|-----------------|------------|------------|------------|------------|
| Theoretical plates | 8650 | 7240 | 6230 | 7060 | 7680 |
| Tailing factor | 1.0 | 1.2 | 1.1 | 1.0 | 1.0 |

混合标品



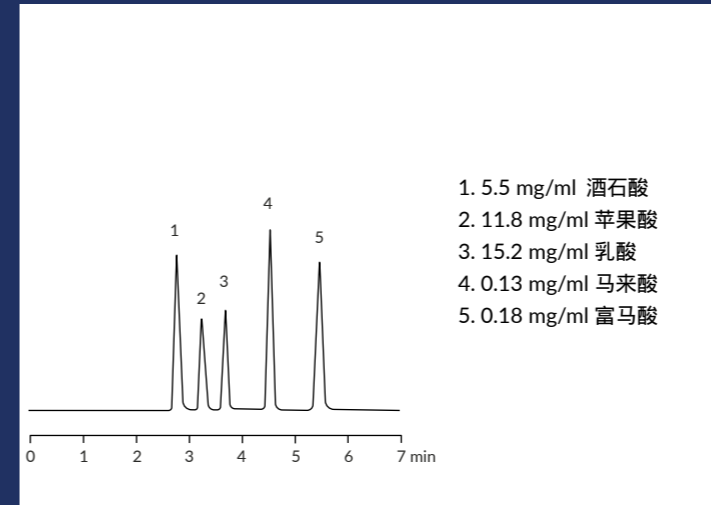
- 1. 尼古丁
- 2. 奎宁
- 3. 苯海拉明
- 4. 去甲替林
- 5. 2,4-二氯苯氧基乙酸
- 6. 2,4-二氯苯氧基丙酸
- 7. 2,4-二氯苯氧基丁酸

Column: **ReproSil-XR** 120 C18, 5 μm,
120 Å,
150 x 4.6 mm
(PN: rx15.9e.s1546)

Mobile phase:
MeCN : 50 mM KH₂PO₄
50:50 (v:v) pH 3 at 35°C

基线分离的挑战.

有机酸



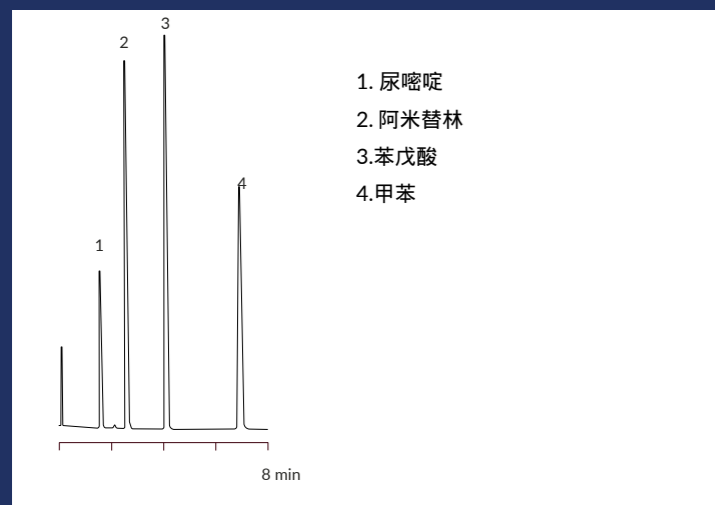
- 1. 5.5 mg/ml 酒石酸
- 2. 11.8 mg/ml 苹果酸
- 3. 15.2 mg/ml 乳酸
- 4. 0.13 mg/ml 马来酸
- 5. 0.18 mg/ml 富马酸

Column: **ReproSil-XR** 120 C18, 5 μm,
120 Å,
150 x 4.6 mm
(PN: rx15.9e.s1546)

Mobile phase: 25 mM KH₂PO₄ : MeOH
97:3 (v:v)

Flow rate: 0.7 ml/min
Detector: UV at 220 nm
Injection vol: 1 μl

酸、碱和中性物质



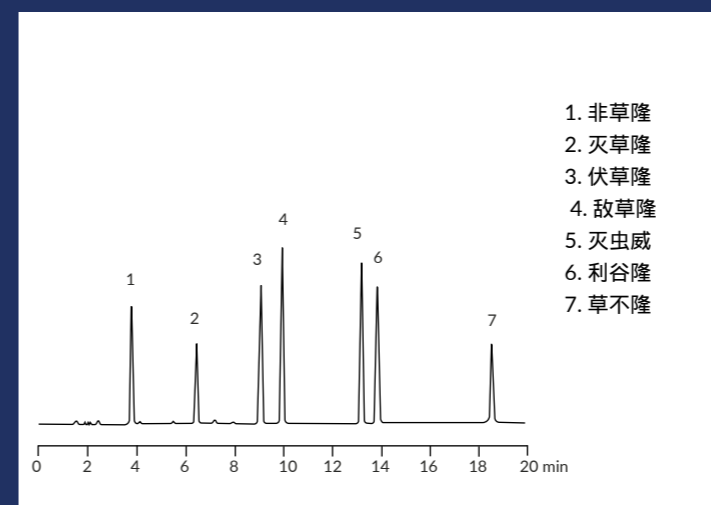
- 1. 尿嘧啶
- 2. 阿米替林
- 3. 苯戊酸
- 4. 甲苯

Column: **ReproSil-XR** 120 C18, 5 μm,
120 Å,
150 x 4.6 mm
(PN: rx15.9e.s1546)

Mobile phase:
MeCN : 50 mM KH₂PO₄
50:50 (v:v) pH 3 at 35°C

酸和碱的峰形对称.

氨基甲酸酯和尿素



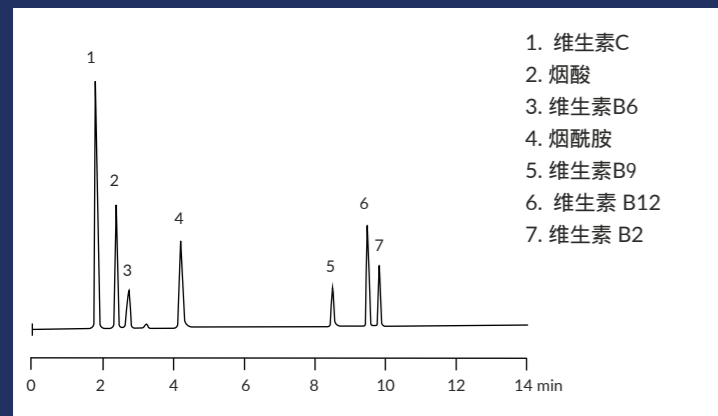
- 1. 非草隆
- 2. 灭草隆
- 3. 伏草隆
- 4. 敌草隆
- 5. 灭虫威
- 6. 利谷隆
- 7. 草不隆

Column: **ReproSil-XR** 120 C18, 5 μm,
120 Å,
150 x 4.6 mm
(PN: rx15.9e.s1546)

Mobile phase: A: 25 mM KH₂PO₄
pH 3.2
B: MeCN

Gradient: (Time, %B): (0,30), (20,60)
Flow rate: 1.0 ml/min
Detector: UV at 240 nm
Injection vol: 10 μl

水溶性维生素



Column: ReproSil-XR 120 C18, 5 μm, 120 Å, 150 x 4.6 mm (PN: rx15.9e.s1546)

Mobile phase: A: 100 mM NH₄H₂PO₄ Buffer, pH 4.5
B: MeCN

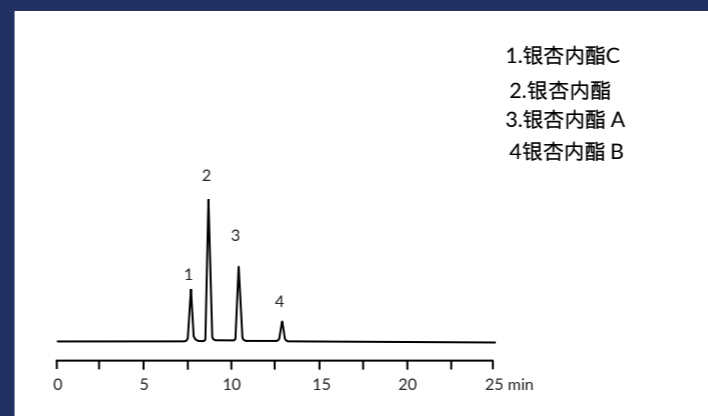
Gradient: (Time, %B): (0,5), (4,5), (10,40), (15,40)

Flow rate: 1.0 mL/min

Detector: UV at 254 nm

Injection vol: 2 μl

银杏叶



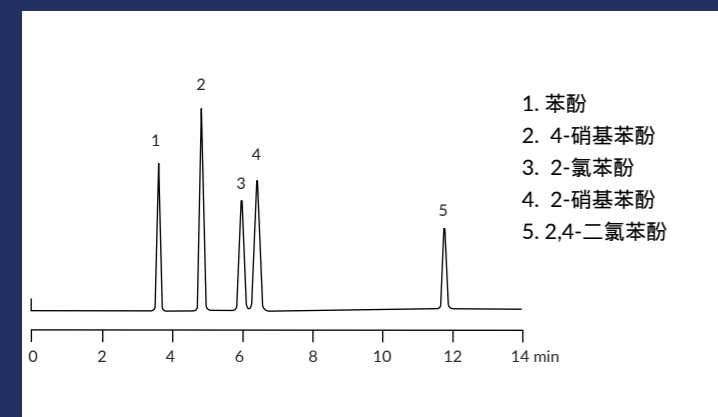
Column: ReproSil-XR 120 C18, 5 μm, 120 Å, 150 x 4.6 mm (PN: rx15.9e.s1546)

Mobile phase: MeOH:THF:H₂O 25:10:65 (v:v:v)

Flow rate: 1.0 ml/min

Detector: ELSD

酚类



Column: ReproSil-XR 120 C18, 5 μm, 120 Å, 150 x 4.6 mm (PN: rx15.9e.s1546)

Mobile phase: A: 1% CH₃COOH in H₂O
B: 1% CH₃COOH in MeOH

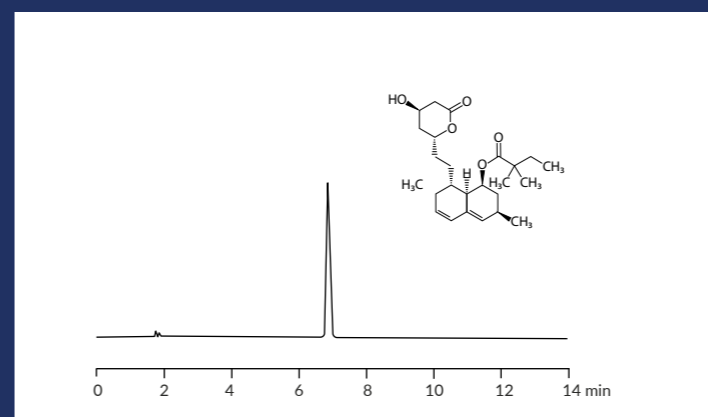
Gradient: (Time, %B): (0,45), (6,45), (8,60), (15,80)

Flow rate: 1.0 mL/min

Detector: UV at 280 nm

Injection vol: 10 μl

辛伐他汀片 (美国药典标准)



Column: ReproSil-XR 120 C18, 5 μm, 120 Å, 250 x 4.6 mm (PN: rx15.9e.s2546)

Mobile phase: 0.39% KH₂PO₄ pH 4.5 : MeCN 35:65 (v:v)

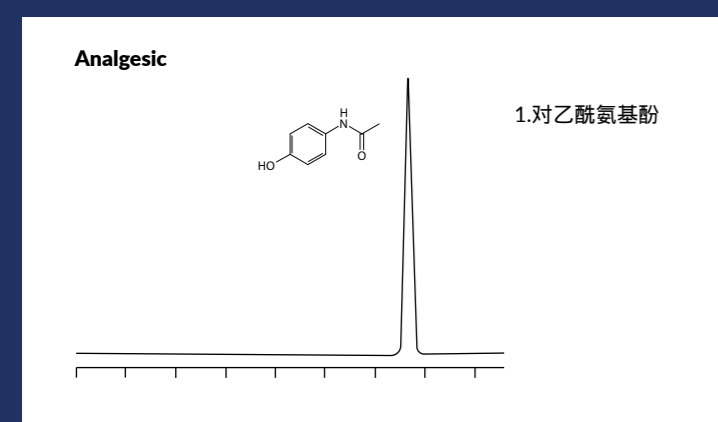
Flow rate: 1.5 ml/min

Detector: UV at 238 nm

Column temp: 45°C

Injection vol: 10 μl

中国药典中对乙酰氨基酚泡腾片的测定



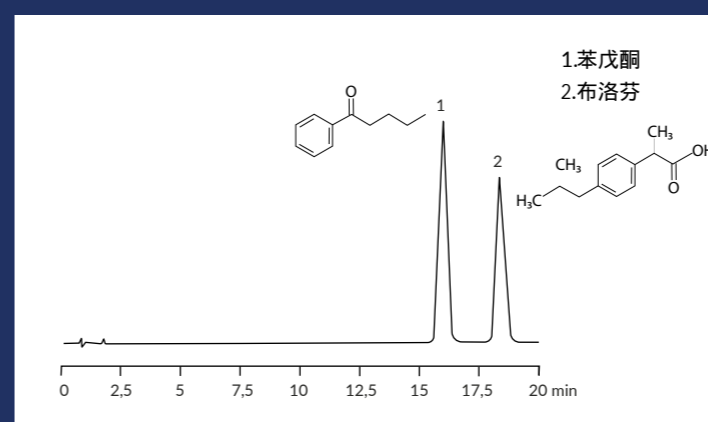
Column: ReproSil-XR 120 C18, 5 μm, 120 Å, 250 x 4.6 mm (PN: rx15.9e.s2546)

Mobile phase: KH₂PO₄ : MeOH 80:20 (v:v)

Flow rate: 1.0 mL/min

Detector: UV at 254 nm

布洛芬 (美国药典)



Column: ReproSil-XR 120 C18, 5 μm, 120 Å, 150 x 4.6 mm (PN: rx15.9e.s1546)

Mobile phase: H₂O (adjusted with H₃PO₄ to a pH of 2.5) : MeCN 65:35 (v:v)

Flow rate: 2 ml/min

Detector: UV at 214 nm

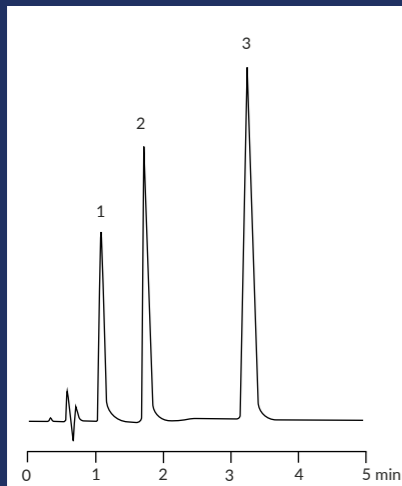
Injection vol: 5 μl

难的酸/碱或螯合物？没问题

ReproSil-XR的卓越特性

高极性: 与常规C18相有着不同选择性
超高纯硅胶基质: 使用高比例有机相：有助于MS检测。
酸、碱、螯合物: 拥有高纯二氧化硅的所有优点。
100%水相稳定: 抵抗相塌陷。
与MS缓冲液兼容: 很好的兼容一些挥发性的缓冲盐
高稳定性: 没有嵌入相位限制稳定性。
低流失: 帮助MS检测。

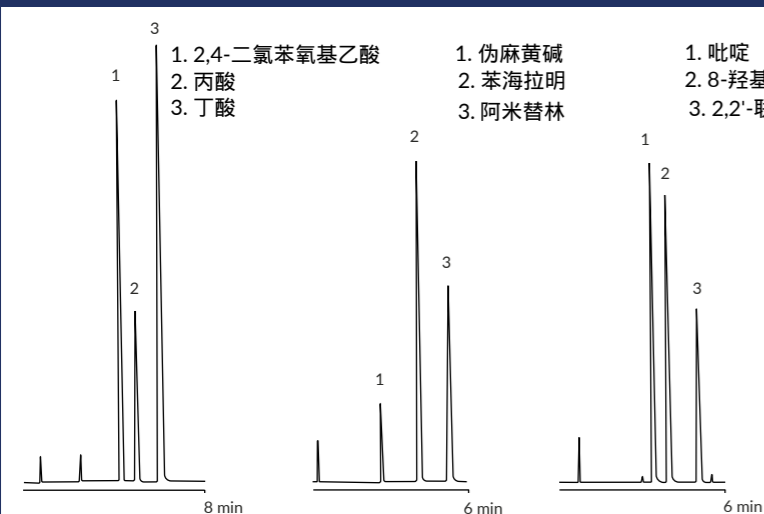
在中性 PH 值下分离高碱性组分



1. 苯肾上腺素
 2. 苯海拉明
 3. 阿米替林

Column: ReproSil-XR 120 C18MS, 1.5 μm, 120 Å, 50 x 2.0 mm
Mobile phase: (PN: rx115.9ms.s0502) 50mM NH₄COOH, pH 7: MeOH (20:80)
Column Temp: 40°C
Flow rate: 0.2mL/min
Detector: UV at 210nm

对酸、碱和螯合物具有出色的峰形

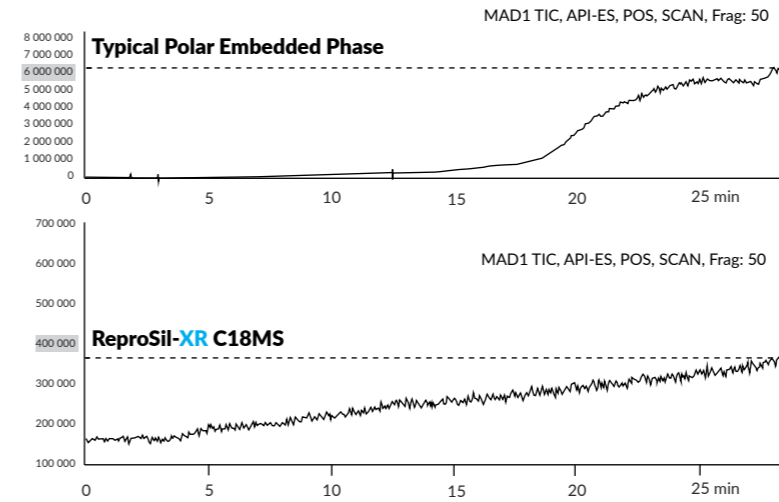


1. 2,4-二氯苯氧基乙酸
 2. 丙酸
 3. 丁酸
 1. 伪麻黄碱
 2. 苯海拉明
 3. 阿米替林
 1. 吡啶
 2. 8-羟基喹啉
 3. 2,2'-联吡啶

Column: ReproSil-XR 120 C18MS, 5 μm, 120 Å, 150 x 4.6 mm
Mobile phase: (PN: rx15.9ms.s1546) 50% MeCN : 50% 50 mM
Column Temp: KH₂PO₄ pH 3,
Flow rate: 35°C

低流失

Comparison of MS Bleeding

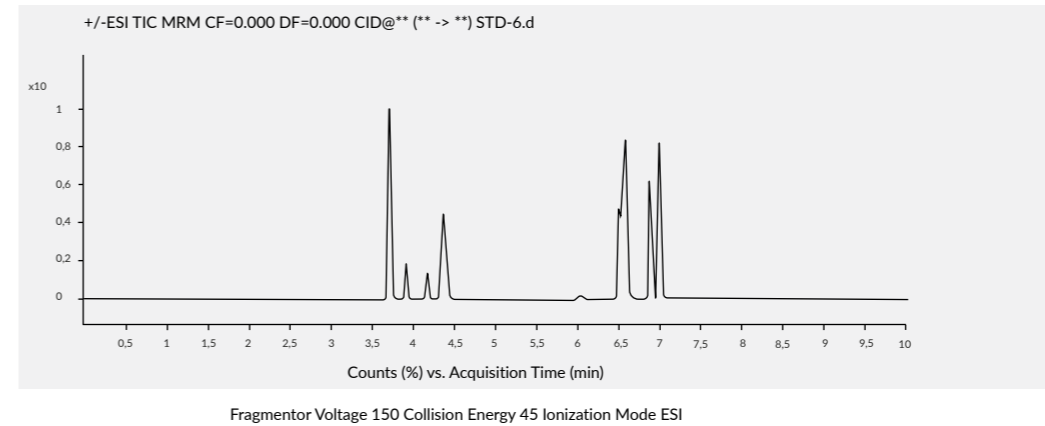


4个重要的优点

- 兼容更高的甲醇含量 从而提高 MS 灵敏度
- 降低进入质谱的铵离子甲酸盐 2.5 倍的浓度 (10%水溶液对比25%)
- 由于粘度较低，背压减少了一半。
- 由于能使用更高的流速而不产生过高的背压，因此分析速度更快。

ReproSil-XR 120 C18MS 在 TFA 梯度的 LC/MS 中使用时，表现出了极低的柱流失。第一张图显示了典型的极性嵌入/封端产品的流失水平。

Pesticides



Column: ReproSil-XR 120 C18MS, 1.5μm, 120 Å, 10 x 2mm
Mobile phase: A: H₂O, B: MeCN
Gradient:

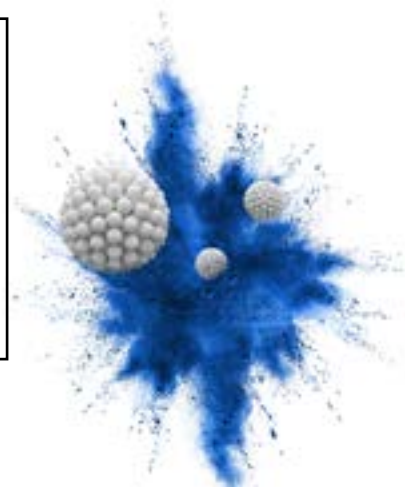
| | | | | | | | | |
|----|---|---|----|----|----|----|-----|----|
| A: | 0 | 2 | 3 | 5 | 6 | 8 | 8.1 | 10 |
| B: | 5 | 5 | 35 | 35 | 95 | 95 | 5 | 5 |

Flow rate: 0.4ml/min
Detector: 6400 Series Triple Quadrupole

Dr. Maisch

Any Column, Any Size, Any Media

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