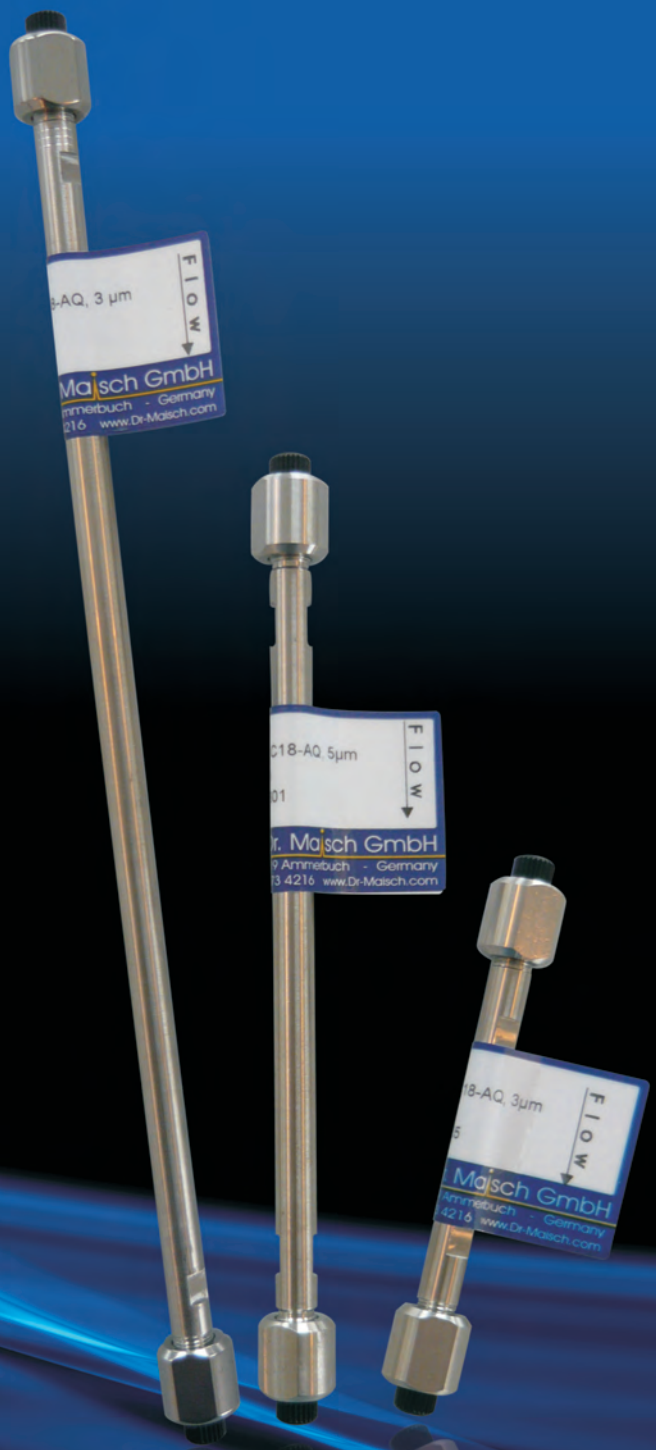
# Dr. Maisch GmbH

High Performance LC • HPLC-Columns and more

## COLUMNS MADE BY DR. MAISCH

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# Dr. Maisch GmbH

High Performance LC • HPLC-Columns and more

**HPLC-Phases from Dr. Maisch** Page



**Applications**

**Following phases are always in stock!**

## *Phases from Fa. Dr. Maisch-GmbH*

# ReproSil®-Pur (Maisch)

Porous spherical silica: 1.9 - 10 µm
Pore diameter: 100, 120, 200, 300 A°
Surface area: 450, 300, 200, 100 $m^2/g$
Purity > 99,999%
**Specifically designed for pharmaceutical and biotechnical separations. Fully validated phases. For all kind of samples. Ideal for LC-MS separations**.

| **100A° Pores** | % Carbon | endcapping | Mat.No.: | Price group |
|---|---|---|---|---|
| **Reprosil-Pur Basic C18, 1.9** | **17 %** | **bidentate endc.** | **r119.b9** | **7** |
| **Reprosil-Pur Basic C18, 2.5 µm** | **17 %** | **bidentate endc.** | **r125.b9** | **7** |
| ReproSil-Pur Basic-C18, 3 µm | 17 % | bidentate endc. | r13.b9 | 5 |
| ReproSil-Pur Basic-C18, 4 µm | 17 % | bidentate endc. | r14.b9 | 5 |
| ReproSil-Pur Basic-C18, 5 µm | 17 % | bidentate endc . | r15.b9 | 4 |
| ReproSil-Pur Basic-C18, 10 µm | 17 % | bidentate endc. | r10.b9 | 4 |
| ReproSil-Pur Basic-C18-HD, 3 µm | 25 % | bidentate endc . | r13.b9h | 5 |
| ReproSil-Pur Basic-C18-HD, 5 µm | 25 % | bidentate endc . | r15.b9h | 4 |
| ReproSil-Pur Basic-C18-HD, 10 µm | 25 % | bidentate endc. | r10.b9h | 4 |
| **Reprosil-Pur Basic C8, 1.9** | **15 %** | **bidentate endc.** | **r119.b8** | **7** |
| ReproSil-Pur Basic-C8, 3 µm | 15 % | bidentate endc. | r13.b8 | 5 |
| ReproSil-Pur Basic-C8, 5 µm | 15 % | bidentate endc. | r15.b8 | 4 |
| ReproSil-Pur Basic-C8, 10 µm | 15 % | bidentate endc . | r10.b8 | 4 |
| ReproSil-Pur Basic-C8-2, 3 µm | 12 % | bidentate endc. | r13.b82 | 5 |
| ReproSil-Pur Basic-C8-2, 5 µm | 12 % | bidentate endc. | r15.b82 | 4 |
| **60 A° Pores:** | | | | |
| ReproSil-Pur 60 Si, 3 µm | | | r03.04. | 5 |
| ReproSil-Pur 60 Si, 5 µm | | | r05.04. | 4 |
| ReproSil-Pur 60 ODS-3, 5 µm | 18 % | endc. | r05.93. | 4 |
| **120A° Pores** | | | | |
| ReproSil-Pur 120 Si, 3 µm | | | r13.00. | 5 |
| ReproSil-Pur 120 Si, 5 µm | | | r15.00 | 4 |
| ReproSil-Pur 120 Si, 10 µm | | | r10.00. | 4 |
| ReproSil-Pur 120 C1, 3 µm | 4 % | endc. | r13.1e. | 5 |
| ReproSil-Pur 120 C1, 5 µm | 4 % | endc. | r15.1e. | 4 |
| ReproSil-Pur 120 C4, 3 µm | 7 % | endc. | r13.4e. | 5 |
| ReproSil-Pur 120 C4, 5 µm | 7 % | endc. | r15.4e. | 4 |
| ReproSil-Pur 120 C4, 10 µm | 7 % | endc. | r10.4e. | 4 |
| ReproSil-Pur 120 C4, 20 µm | 7 % | endc. | r120.4e. | 4 |
| ReproSil-Pur 120 C8, 3 µm | 9 % | endc. | r13.8e. | 5 |
| ReproSil-Pur 120 C8, 5 µm | 9 % | endc. | r15.8e. | 4 |
| ReproSil-Pur 120 C8, 10 µm | 9 % | endc. | r10.8e. | 4 |
| ReproSil-Pur 120 C8, 20 µm | 9 % | endc. | r120.8e. | 4 |
| **Reprosil-Pur 120 C18-AQ, 1.9 µm** | **15 %** | **endc.** | **r119.aq** | **7** |
| **Reprosil-Pur 120 C18-AQ, 2.4 µm** | **15 %** | **endc.** | **r124.aq** | **7** |
| ReproSil-Pur 120 C18-AQ, 3 µm | 15 % | endc. | r13.aq. | 5 |

| | | | | |
|---|---|---|---|---|
| ReproSil-Pur 120 C18-AQ, 5 µm | 15 % | endc. | r15.aq. | 4 |
| ReproSil-Pur 120 C18-AQ, 7 µm | 15 % | endc. | r17.aq. | 4 |
| ReproSil-Pur 120 C18-AQ, 10 µm | 15 % | endc. | r10.aq. | 4 |
| ReproSil-Pur 120 C18-AQ, 15 µm | 15 % | endc. | r115.aq. | 4 |
| ReproSil-Pur 120 C18-AQ, 20 µm | 15 % | endc. | r120.aq. | 4 |
| | | | | |
| ReproSil-Pur 120 ODS-3, 3 µm | 17 % | endc. | r13.93. | 5 |
| ReproSil-Pur 120 ODS-3, 5 µm | 17 % | endc. | r15.93. | 4 |
| ReproSil-Pur 120 ODS-3, 10 µm | 17 % | endc. | r10.93. | 4 |
| ReproSil-Pur 120 ODS-3, 20 µm | 17 % | endc. | r120.93. | 4 |
| | | | | |
| ReproSil-Pur 120 RP18-NE, 3 µm | 14 % | not endcapped! | r13.90. | 5 |
| ReproSil-Pur 120 RP18-NE, 5 µm | 14 % | not endcapped! | r15.90. | 4 |
| | | | | |
| ReproSil-Pur 120 Phenyl, 3 µm | 8 % | endc. | r13.pe. | 5 |
| ReproSil-Pur 120 Phenyl, 5 µm | 8 % | endc. | r15.pe. | 4 |
| ReproSil-Pur 120 Phenyl, 10 µm | 8 % | endc. | r10.pe. | 4 |
| | | | | |
| ReproSil-Pur 120 CN, 3 µm | 7 % | endc. | r13.ce. | 5 |
| ReproSil-Pur 120 CN, 5 µm | 7 % | endc. | r15.ce. | 4 |
| ReproSil-Pur 120 CN, 10 µm | 7 % | endc. | r10.ce. | 4 |
| | | | | |
| ReproSil-Pur 120 NH2, 3 µm | 4 % | | r13.a0. | 5 |
| ReproSil-Pur 120 NH2, 5 µm | 4 % | | r15.a0. | 4 |
| ReproSil-Pur 120 NH2, 10 µm | 4 % | | r10.a0. | 4 |
| | | | | |
| ReproSil-Pur 120 Diol, 3 µm | 7 % | | r13.d0. | 5 |
| ReproSil-Pur 120 Diol, 5 µm | 7 % | | r15.d0. | 4 |
| ReproSil-Pur 120 Diol, 10 µm | 7 % | | r10.d0. | 4 |

**Wide-Pore Phases** ( for Biopolymers, Proteins + Peptides)

**200A° Pores:**

| | | | | |
|---|---|---|---|---|
| ReproSil-Pur 200 C18-AQ, 3 µm | 11 % | endc. | r23.aq. | 5 |
| ReproSil-Pur 200 C18-AQ, 5 µm | 11 % | endc. | r25.aq. | 4 |
| ReproSil-Pur 200 ODS-3, 3 µm | 12 % | endc. | r23.93. | 5 |
| ReproSil-Pur 200 ODS-3, 5 µm | 12 % | endc. | r25.93. | 4 |
| ReproSil-Pur 200 Diol, 5 µm | 5 % | . | r25.d0. | 6 |

**300A° Pores:**

| | | | | |
|---|---|---|---|---|
| ReproSil-Pur 300 Si, 3 µm | | | r33.00. | 5 |
| ReproSil-Pur 300 Si, 5 µm | | | r35.00. | 4 |
| ReproSil-Pur 300 Si, 10 µm | | | r30.00. | 4 |
| | | | | |
| ReproSil-Pur 300 Diol, 5 µm | 3.5 % | | r35.d0. | 6 |
| ReproSil-Pur 300 C4, 3 µm | 2.5 % | endc. | r33.4e. | 5 |
| ReproSil-Pur 300 C4, 5 µm | 2.5 % | endc. | r35.4e. | 4 |
| ReproSil-Pur 300 C4, 10 µm | 2.5 % | endc. | r30.4e. | 4 |
| ReproSil-Pur 300 C8, 3 µm | 4 % | endc. | r33.8e. | 5 |
| ReproSil-Pur 300 C8, 5 µm | 4 % | endc. | r35.8e. | 4 |
| ReproSil-Pur 300 C8, 10 µm | 4 % | endc. | r30.8e. | 4 |
| ReproSil-Pur 300 ODS-3, 3 µm | 9 % | endc. | r33.93. | 5 |
| ReproSil-Pur 300 ODS-3, 5 µm | 9 % | endc. | r35.93. | 4 |
| ReproSil-Pur 300 ODS-3, 10 µm | 9 % | endc. | r30.93. | 4 |
| ReproSil-Pur 300 Phenyl, 3 µm | 3 % | endc. | r33.pe. | 5 |
| ReproSil-Pur 300 Phenyl, 5 µm | 3 % | endc. | r35.pe. | 4 |

**1000A° Pores:**

| | | | | |
|---|---|---|---|---|
| ReproSil-Pur 1000 ODS-3, 5 µm | | endc. | R65.93. | 4 |

**Prep. particles sizes::** 10, 15, 30, 50 µm.

# ReproSil®-Gold (Maisch)

Porous spherical silica: 3, 5, 10 µm
Pore diameter: 120 A°, 200 A°, 300 A°
Surface area: 300, 200, 100 $m^2/g$
Purity > 99,999%
**Ideal für LC-MS separations.**
**Unique endcapping technique: double bonded (bidentate):**
**Exceptional chemical stability! Perfect reproducibility!**

| **100A° Pores** | % Carbon | endcapping | Mat.No.: | Price group |
|---|---|---|---|---|
| Reprosil-Gold 120 C18, 1.9 µm | 20 % | bidentate endc. | r119.9g | 7 |
| Reprosil-Gold 120 C18, 3 µm | 20 % | bidentate endc. | r13.9g | 5 |
| Reprosil-Gold 120 C18, 4 µm | 20 % | bidentate endc.. | r14.9g | 5 |
| Reprosil-Gold 120 C18, 5 µm | 20 % | bidentate endc.. | r15.9g | 4 |
| Reprosil-Gold 120 C18, 10 µm | 20 % | bidentate endc.. | r10.9g | 4 |
| | | | | |
| Reprosil-Gold 120 C8, 3 µm | 12 % | bidentate endc. | r13.8g | 5 |
| Reprosil-Gold 120 C8, 4 µm | 12 % | bidentate endc.. | r14.8g | 5 |
| Reprosil-Gold 120 C8, 5 µm | 12 % | bidentate endc.. | r15.8g | 4 |
| Reprosil-Gold 120 C8, 10 µm | 12 % | bidentate endc. | r10.8g | 4 |
| Reprosil-Gold 120 C8, 20 µm | 12 % | bidentate endc. | r120.8g | 4 |
| | | | | |
| Reprosil-Gold 120 C4, 3 µm | 8 % | bidentate endc.. | r13.4g | 5 |
| Reprosil-Gold 120 C4, 5 µm | 8 % | bidentate endc.. | r15.4g | 4 |
| Reprosil-Gold 120 C4, 10 µm | 8 % | bidentate endc.. | r10.4g | 4 |
| Reprosil-Gold 120 C4, 20 µm | 8 % | bidentate endc.. | r120.4g | 4 |
| | | | | |
| Reprosil-Gold 120 C2, 5 µm (USP-L16) | 4 % | bidentate endc. | r15.2g | 4 |
| | | | | |
| **200 A° Pores** | | | | |
| Reprosil-Gold 200 C18, 3 µm | 14 % | bidentate endc.. | r23.9g | 5 |
| Reprosil-Gold 200 C18, 5 µm | 14 % | bidentate endc.. | r25.9g | 4 |
| Reprosil-Gold 200 C18, 10 µm | 14 % | bidentate endc. | r20.9g | 4 |
| Reprosil-Gold 200 C8, 5 µm | 8 % | bidentate endc. | r25.8g | 4 |
| Reprosil-Gold 200 C8, 10 µm | 8 % | bidentate endc.. | r20.8g | 4 |
| Reprosil-Gold 200 C4, 5 µm | 5 % | bidentate endc. | r25.4g | 4 |
| Reprosil-Gold 200 C4, 10 µm | 5 % | bidentate endc. | r20.4g | 4 |
| | | | | |
| **300 A° Pores** | | | | |
| Reprosil-Gold 300 C18, 3 µm | 8 % | bidentate endc. | r33.9g | 5 |
| Reprosil-Gold 300 C18, 5 µm | 8 % | bidentate endc. | r35.9g | 4 |
| Reprosil-Gold 300 C18, 10 µm | 8 % | bidentate endc. | r30.9g | 4 |
| | | | | |
| Reprosil-Gold 300 C8, 3 µm | 5 % | bidentate endc. | r33.8g | 5 |
| Reprosil-Gold 300 C8, 5 µm | 5 % | bidentate endc. | r35.8g | 4 |
| Reprosil-Gold 300 C8, 10 µm | 5 % | bidentate endc. | r30.8g | 4 |
| | | | | |
| Reprosil-Gold 300 C4, 3 µm | 3 % | bidentate endc. | r33.4g | 5 |
| Reprosil-Gold 300 C4, 5 µm | 3 % | bidentate endc. | r35.4g | 4 |
| Reprosil-Gold 300 C4, 10 µm | 3% | bidentate endc. | r30.4g | 4 |
| Reprosil-Gold 300 C4, 15 µm | 3% | bidentate endc. | r31.4g | 4 |
| | | | | |
| Reprosil-Gold 300 C2, 5 µm | 1% | bidentate endc. | r35.2g | 4 |

**Prep. particles sizes::** 10, 15, 30, 50 µm

## ReproSil® 80 (Maisch)

Porous spherical silica: 3, 5, 10 µm
Pore diameter: 80 A°.
Surface area: 220 $m^2$/g
**Alternative to Spherisorb!**

| | % Carbon | endcapping | Mat.No.: | Price group |
|---|---|---|---|---|
| ReproSil 80 Si, 3 µm | | | r03.00. | 5 |
| ReproSil 80 Si, 5 µm | | | r05.00. | 3 |
| | | | | |
| ReproSil 80 C1, 5 µm | 3 % | | r05.10. | 3 |
| ReproSil 80 Hexyl, 5 µm | 6% | | r05.60. | 4 |
| ReproSil 80 Phenyl, 3 µm | 6 % | part. endc. | r03.p0. | 5 |
| ReproSil 80 Phenyl, 5 µm | 6 % | part. endc. | r05.p0. | 4 |
| ReproSil 80 C8, 3 µm | 6 % | endc. | r03.8e. | 5 |
| ReproSil 80 C8, 5 µm | 6 % | endc. | r05.8e. | 3 |
| ReproSil 80 ODS-1, 3 µm | 7 % | part. endc | r03.91. | 5 |
| ReproSil 80 ODS-1, 5 µm | 7 % | part. endc | r05.91. | 3 |
| ReproSil 80 ODS-1, 10 µm | 7 % | part. endc | r00.91. | 3 |
| ReproSil 80 ODS-2, 3 µm | 12 % | endc. | r03.92. | 5 |
| ReproSil 80 ODS-2, 5 µm | 12 % | endc. | r05.92. | 3 |
| ReproSil 80 ODS-2, 10µm | 12 % | endc. | r00.92. | 3 |
| ReproSil 80 NH2, 3 µm | 2 % | | r03.a0. | 5 |
| ReproSil 80 NH2, 5 µm | 2 % | | r05.a0. | 3 |
| ReproSil 80 Diol, 5 µm | (OH-phase) | | r05.d0. | 3 |
| ReproSil 80 CN, 3 µm | 3.5 % | | r03.c0. | 5 |
| ReproSil 80 CN, 5 µm | 3.5 % | | r05.c0. | 5 |
| ReproSil 80 SAX, 5 µm | (4 % C, strong anion exchanger) | | r05.sa. | 4 |
| ReproSil 80 SAX, 10 µm | (strong anion exchanger) | | r00.sa. | 4 |
| ReproSil 80 SAX-2, 5 µm | (4 % C, strong anion exchanger, ultrapur) | | r05.sa2. | 4 |
| ReproSil 80 SCX, 5 µm | (6 % C, strong cation exchanger) | | r05.sc. | 4 |
| ReproSil 80 SCX, 10 µm | (6 % C, strong cation exchanger) | | r00.sc. | 4 |
| ReproSil Polyamin, 3 µm | (for sugars and for Proteins-WAX) | | r33.ap. | 6 |
| ReproSil Polyamin, 5 µm | (for sugars and for Proteins-WAX) | | r35.ap. | 5 |

## ReproSil® 70, 100, 300 (Maisch)

Porous spherical silica: 3, 5, 10 µm
Pore diamater: 70, 100, 300 A°
Surface area: 500, 280, 100 $m^2$/g
Pore volume: 0.9, 1.1, 1.1 ml/g
Purity: Na: 50 ppm, Fe: 4 ppm, Pb: < 1ppm

| **70A° Pores** | % Carbon | endcapping | Mat.No.: | Price proup |
|---|---|---|---|---|
| ReproSil 70 Si, 5 µm | | | r05.06. | 4 |
| ReproSil 70 C18, 3 µm | 20 % | endc. | r03.96. | 5 |
| ReproSil 70 C18, 5 µm | 20 % | endc. | r05.96. | 4 |
| ReproSil 70 C8, 5 µm | 14 % | endc. | r05.86. | 4 |
| ReproSil 70 C4, 5 µm | 10 % | endc. | r05.56. | 4 |
| ReproSil 70 Phenyl, 5 µm | 16 % | endc. | r05.p6. | 4 |
| ReproSil 70 CN, 5 µm | 10 % | | r05.c6. | 4 |
| ReproSil 70 Diol, 5 µm | 4 % | | r05.d6. | 4 |
| ReproSil 70 NH2, 5 µm | 5 % | | r05.a6. | 4 |

**100 A° Pores.**
**Very well suited for preparative columns. Very competitively priced.**

| | | | | |
|---|---|---|---|---|
| ReproSil 100 Si, 3 µm | | | r13.06. | 4 |
| ReproSil 100 Si, 5 µm | | | r15.06. | 2 |
| ReproSil 100 Si, 10 µm | | | r10.06. | 2 |
| ReproSil 100 Si, 15 µm | | | r115.06. | 2 |
| ReproSil 100 C4, 3 µm | 5 % | endc. | r13.46. | 4 |
| ReproSil 100 C4, 5 µm | 5 % | endc. | r15.46. | 2 |
| ReproSil 100 C4, 10 µm | 5 % | endc. | r10.46. | 2 |
| ReproSil 100 C8, 3 µm | 8 % | endc. | r13.86. | 4 |
| ReproSil 100 C8, 4 µm | 8 % | endc. | r14.86. | 4 |
| ReproSil 100 C8, 5 µm | 8 % | endc. | r15.86. | 2 |
| ReproSil 100 C8, 10 µm | 8 % | endc. | r10.86. | 2 |
| ReproSil 100 C8-AB, 5 µm | 12 % | endc. | r15.8b | 3 |
| ReproSil 100 C18, 3 µm | 15 % | endc. | r13.96. | 4 |
| ReproSil 100 C18, 4 µm | 15 % | endc. | r14.96. | 4 |
| ReproSil 100 C18, 5 µm | 15 % | endc. | r15.96. | 2 |
| Reprosil 100 C18, 7 µm | 15 % | endc. | r17.96 | 2 |
| ReproSil 100 C18, 10 µm | 15 % | endc. | r10.96. | 2 |
| ReproSil 100 C18, 15 µm | 15 % | endc. | r115.96. | 2 |
| ReproSil 100 C18, 30 µm | 15 % | endc. | r130.96. | 2 |
| ReproSil 100 C18, 50 µm | 15 % | endc. | r150.96. | 2 |
| Reprosil Amid-C18 ABZ, 3 µm | (Altern. to Supelcosil ABZ) USP-L60 | | r23.ace. | 7 |
| Reprosil Amid-C18 ABZ, 5 µm | (Altern. to Supelcosil ABZ) USP-L60 | | r25.ace. | 6 |
| ReproSil C18-MP, 5 µm | (Alternative to MP-Gel ODS) endc. | | r15.9mp. | 5 |
| ReproSil 100 C18-AB, 5 µm | 18 % | endc. | r05.9b. | 4 |
| ReproSil 100 ODS-A, 3 µm | 16 % | endc. | r13.9a. | 4 |
| ReproSil 100 ODS-A, 5 µm | 16 % | endc. | r15.9a. | 2 |
| ReproSil 100 ODS-AQ, 3 µm | 13 % | pol Gr.+endc. | r13.9aq. | 5 |
| ReproSil 100 ODS-AQ, 5 µm | 13 % | pol Gr.+endc. | r15.9aq. | 4 |
| ReproSil 100 Phenyl, 3 µm | 9 % | endc. | r13.p6. | 4 |
| ReproSil 100 Phenyl, 5 µm | 9 % | endc. | r15.p6. | 2 |
| ReproSil 100 Phenyl, 10 µm | 9 % | endc. | r10.p6. | 2 |
| ReproSil 100 CN, 3 µm | 2 % | | r13.c6. | 4 |
| ReproSil 100 CN, 5 µm | 2 % | | r15.c6. | 2 |
| ReproSil 100 CN, 10 µm | 2 % | | r10.c6. | 2 |
| ReproSil 100 NH2, 3 µm | 3 % | | r13.a6. | 4 |
| ReproSil 100 NH2, 5 µm | 3 % | | r15.a6. | 2 |
| ReproSil 100 NH2, 10 µm | 3 % | | r10.a6. | 2 |
| Reprosil 100 DNH, 3 µm | 5 % (Diamin) | | r13.dnh. | 5 |
| Reprosil 100 DNH, 5 µm | 5 % (Diamin) | | r15.dnh. | 3 |
| ReproSil 100 Diol, 5 µm | 3 % | | r15.d6. | 2 |
| ReproSil 100 Diol, 10 µm | 3 % | | r10.d6. | 2 |
| Reprosil 100 C30-m, 5 µm | (monomer, endc.) | | st15.3m. | 6 |
| ReproSil DIBS-RP, 5 µm | (for **D**irect **I**njection of **B**iological **S**amples) | | r15.dibs. | 7 |
| ReproSil 100 CAT, 5 µm | ( mono- + divalent Cations in 1 run) | | r15.cat. | 7 |
| ReproSil 100 CAT, 7 µm | ( mono- + divalent Cations in 1 run) | | r17.cat. | 7 |

**WP-200 /300:** for Proteins and Peptides

| | | | | |
|---|---|---|---|---|
| ReproSil 200 C18, 5 µm | 9 % | endc. | r25.96. | 3 |

| | | | | |
|---|---|---|---|---|
| ReproSil 300 C4, 5 µm | 2.5 % | endc. | r35.46. | 3 |
| ReproSil 300 C4, 10 µm | 2.5 % | endc. | r30.46. | 3 |
| ReproSil 300 C8, 5 µm | 4 %C | endc. | r35.86. | 3 |
| ReproSil 300 C8, 10 µm | 4 %C | endc. | r30.86. | 3 |
| ReproSil 300 C18, 5 µm | 6 %C | endc. | r35.96. | 3 |
| ReproSil 300 C18, 10 µm | 6 %C | endc. | r30.96. | 3 |
| ReproSil 300 DEAE , 5 µm | | | r35.deae. | 6 |

## ReproSil® 100 C18-XBD (Maisch)

Porous spherical silica: 5, 10 µm
Pore diameter: 100 A°
Surface area: 300 $m^2$/g
Pore volume: 0.9 ml/g

**Well suited for preparative columns. High sample recovery. Long column life time.**

XBD = e**X**tra **B**ase-**d**eactivated with 2 endcappings.

| | | | | |
|---|---|---|---|---|
| ReproSil 100 C18-XBD, 5 µm | 16 % | double endc. | r15.9x. | 3 |
| ReproSil 100 C18-XBD, 10 µm | 16 % | double endc. | r10.9x. | 3 |

## ReproSil® Saphir (Maisch)

Porous spherical silica: 1.8 µm, 2.2 µm, 3 µm, 5 µm, 10 µm
Pore diameter /Surfac area:
100 A° / 400 $m^2$/g
300 A° / 100 $m^2$/g
Ultrapure phases: Purity: Ca, Mg, Al, Ti, Fe: all < 1 ppm

**Specifically designed for pharmaceutical and biotechnical separations. Fully validated phases.**

| | % Carbon | endcapping | Mat.No.: | Price group |
|---|---|---|---|---|
| **Reprosil Saphir 100 C18, 1.5 µm** | **20 %** | **endc.** | **ra115.9e** | **7** |
| **Reprosil Saphir 100 C18, 1.8 µm** | **20 %** | **endc.** | **ra118.9e** | **7** |
| **Reprosil Saphir 100 C18 , 2.2 µm** | **20 %** | **endc.** | **ra122.9e** | **7** |
| Reprosil Saphir 100 C18, 3 µm | 20 % | endc. | ra13.9e | 5 |
| Reprosil Saphir 100 C18, 5 µm | 20 % | endc. | ra15.9e | 4 |
| Reprosil Saphir 100 C18, 10 µm | 20 % | endc. | ra10.9e | 4 |
| Reprosil Saphir 100 C8, 5 µm | 12 % | endc. | ra15.8e | 4 |
| Reprosil Saphir 100 C8, 10 µm | 12 % | endc. | ra10.8e | 4 |
| Reprosil Saphir 100 C4, 5 µm | 8 % | endc. | ra15.4e | 4 |
| Reprosil Saphir 100 C4, 10 µm | 8 % | endc. | ra10.4e | 4 |
| Reprosil 100 Saphir NH2, 5 µm | 4 % | not endc. | ra15.ao | 4 |
| **Weak Cation exchanger (CM)** (with 300A° for Proteins and Enzymes) | | | | |
| Reprosil Saphir 300 CM, 5 µm | (Carboxymethyl, WCX) | | ra35.cm | 4 |
| Reprosil Saphir 300 CM, 15 µm | (Carboxymethyl, WCX) | | ra315.cm | 4 |

**Stong cation exchanger (SCX) : 100 A° + 300 A°**

| | | | |
|---|---|---|---|
| Reprosil Saphir 300 SCX, 5 µm | (Sulfopropyl, SP) | ra35.scx | 4 |
| Reprosil Saphir 300 SCX, 15 µm | (Sulfopropyl, SP) | ra315.scx | 4 |
| Reprosil Saphir 100 SCX, 3 µm | (Sulfopropyl, SP) | ra13.scx | 5 |
| Reprosil Saphir 100 SCX, 5 µm | (Sulfopropyl, SP) | ra15.scx | 4 |
| Reprosil Saphir 100 SCX, 10 µm | (Sulfopropyl, SP) | ra10.scx | 4 |

**Strong Anion Exchanger,** (Organic acids: Carboxylic + Sulfonic acids, Pesticides, Herbicides, Pharmaceutics, Nucleotides)

| | | | |
|---|---|---|---|
| Reprosil Saphir 100 SAX, 5 µm | (**S**trong **A**nion e**X**changer) | ra15.sax | 4 |

(pH range: 2-7, Citrate- or phosphate buffers (+ org. modifier), Example for Eluent:0,1 M KH2PO4, pH 3)

## Reprospher (Maisch) 1.8 µm – 30 µm Particles

Porous spherical silica: 1.8, 3, 5, 10 µm
Pore diameter: 100 A°
Surfac area: 350 $m^2/g$
Ultrapure phases: Purity: 99,999
Excellent efficiency. Ideal for LC-MS separations.
Ca, Mg, AL, Fe, Zr, Ti: all < 10 ppm
**Specifically designed for pharmaceutical and biotechnical separations.**

## Reprospher: *U*p and *D*own scaling *LC*-Phases, 1.8 µm - 30 µm

| | % Carbon | endcapping | Mat.No.: | Price group |
|---|---|---|---|---|
| **Reprospher 100 C18, 1.8 µm** | **16 %** | **endc.** | **rs118.9e.** | **7** |
| **Reprospher 100 C18, 2 µm** | **16 %** | **endc.** | **rs12.9e.** | **7** |
| **Reprospher 100 C18, 2.5 µm** | **16 %** | **endc.** | **rs125.9e.** | **6** |
| Reprospher 100 C18, 3 µm | 16 % | endc. | rs13.9e. | 4 |
| Reprospher 100 C18, 4 µm | 16 % | endc. | rs14.9e. | 4 |
| Reprospher 100 C18, 5 µm | 16 % | endc. | rs15.9e. | 3 |
| Reprospher 100 C18, 10 µm | 16 % | endc. | rs10.9e. | 3 |
| **Reprospher 100 C18-DE, 1.8 µm** | **16 %** | **double endc.** | **rs118.9de.** | **7** |
| **Reprospher 100 C18-DE, 2 µm** | **16 %** | **double endc.** | **rs12.9de.** | **7** |
| **Reprospher 100 C18-DE, 2.5 µm** | **16 %** | **double endc.** | **rs125.9de.** | **6** |
| Reprospher 100 C18-DE, 3 µm | 16 % | double endc. | rs13.9de. | 4 |
| Reprospher 100 C18-DE, 5 µm | 16 % | double endc. | rs15.9de. | 3 |
| Reprospher 100 C18-DE, 7 µm | 16 % | double endc. | rs17.9de. | 3 |
| Reprospher 100 C18-DE, 10 µm | 16 % | double endc. | rs10.9de. | 3 |
| **Reprospher 100 C18-Aqua, 1.8 µm** | **12 %** | **pol.Gr.+ endc.** | **rs118.9aq.** | **7** |
| **Reprospher 100 C18-Aqua, 2 µm** | **12 %** | **pol.Gr.+ endc.** | **rs12.9aq.** | **7** |
| **Reprospher 100 C18-Aqua, 2.5 µm** | **12%** | **pol.Gr.+ endc.** | **rs125.9aq.** | **6** |
| Reprospher 100 C18-Aqua, 3 µm | 12 % | pol.Gr.+ endc. | rs13.9aq. | 5 |
| Reprospher 100 C18-Aqua, 5 µm | 12 % | pol.Gr.+ endc. | rs15.9aq. | 4 |
| Reprospher 100 C18-Aqua, 10 µm | 12 % | pol.Gr.+ endc. | rs10.9aq. | 4 |
| Reprospher 100 C18-Aqua, 30 µm | 12 % | pol.Gr.+ endc. | rs130.9aq. | 2 |
| Reprospher 100 C18-Aqua-DE, 3 µm | 12 % | pol.Gr.+ double endc. | rs13.9aqd. | 5 |
| **Reprospher 100 C18-NE, 1.8 µm** | **15 %** | **not endc.** | **rs118.90.** | **7** |
| Reprospher 100 C18-NE, 5 µm | 15 % | not endc . | rs15.90 | 3 |
| Reprospher 100 C18-Phenyl, 5 µm | (C18+Phenyl) | endc. | rs15.9ph | 5 |
| Reprospher 100 C18-Phenyl, 10 µm | (C18+Phenyl) | endc. | rs10.9ph | 5 |
| Reprospher 100 C18-WCX, 5 µm | (C18+ Weak Anion exch., for Peptides) | | rs15.9ac | 5 |

| | | | | |
|---|---|---|---|---|
| Reprospher 100 C18-WCX, 10 µm | (C18+ Weak Anion exch., for Peptides) | | rs10.9ac | 5 |
| Reprospher 100 C18-TDE, 3 µm | 20 % | polymer-C18-de | rs13.9tde | 5 |
| Reprospher 100 C18-TDE, 5 µm | 20 % | polymer-C18-de | rs15.9tde | 4 |
| Reprospher 100 C18-TDE, 10 µm | 20 % | polymer-C18-de | rs10.9tde | 4 |
| Reprospher 100 C18-TN, 5 µm | 17 % | polymer-C18, not endc. | rs15.9tn | 4 |
| **Reprospher 100 Phenyl, 1.8 µm** | **9 %** | double endc. | **rs118.pde.** | **7** |
| **Reprospher 100 Phenyl, 2 µm** | **9 %** | double endc. | **rs12.pde.** | **7** |
| **Reprospher 100 Phenyl, 2.5 µm** | **9 %** | double endc.. | **rs125.pde.** | **6** |
| Reprospher 100 Phenyl, 3 µm | 9 % | double endc.. | rs13.pde. | 4 |
| Reprospher 100 Phenyl, 5 µm | 9 % | double endc. | rs15.pde. | 3 |
| Reprospher 100 Phenyl, 10 µm | 9 % | double endc. | rs10.pde. | 3 |
| Reprospher 100 Phenyl-Hexyl, 3 µm | 13 % | | rs13.ph. | 6 |
| Reprospher 100 Phenyl-Hexyl, 5 µm | 13 % | | rs15.ph. | 5 |
| Reprospher 100 Phenyl-Hexyl, 10 µm | 14 % | (for prep.) | rs10.ph. | 4 |
| Reprospher 100 Phenyl-Hexyl-e, 5 µm | 13 % | endc. | rs15.phe. | 5 |
| Reprospher 100 C6-TDE, 5 µm | 8 % | trifunct.- endc. | rs15.6tde. | 4 |
| Reprospher 100 C4-Aqua, 5 µm | 6 % | pol.Gr.+ endc. | rs15.4aq. | 4 |
| Reprospher 100 C4-Aqua, 10µm | 6 % | pol.Gr.+ endc. | rs10.4aq. | 4 |
| Reprospher 100 C4-DE, 5 µm | 7 % | double endc.. | rs15.4de. | 3 |
| **Reprospher 100 CN, 1.8 µm** | **7 %** | | **rs.118.C0.** | **7** |
| Reprospher 100 CN, 2 µm | 7 % | | rs12.C0. | 7 |
| Reprospher 100 CN, 2.5 µm | 7 % | | rs125.C0. | 6 |
| Reprospher 100 CN, 3 µm | 7 % | | rs.13.C0. | 4 |
| Reprospher 100 CN, 5 µm | 7 % | | rs.15.C0. | 3 |
| Reprospher 100 CN-DE, 5 µm | 7 % | double endc. | rs15.cde. | 3 |
| Reprospher 100 Diol-DE, 5 µm | 7 % | double endc. | rs15.dde. | 3 |
| **Reprospher 100 NH2, 1.8 µm** | **4 %** | | **rs118.ade.** | **7** |
| **Reprospher 100 NH2, 2 µm** | **4 %** | | **rs12.ade.** | **7** |
| Reprospher 100 NH2, 3 µm | 4 % | | rs13.ade. | 4 |
| Reprospher 100 NH2,5 µm | 4 % | | rs15.ade. | 3 |
| Reprospher 100 NH2, 10 µm | 4 % | | rs10.ade. | 3 |
| Reprospher 100 PEI, 3 µm | (**P**oly**e**thylen**i**mine-Phase) | | rs13.pei. | 6 |
| Reprospher 100 PEI, 5 µm | (**P**oly**e**thylen**i**mine-Phase) | | rs15.pei. | 5 |
| Reprospher 100 SAX, 5 µm | (**S**trong **A**nion e**X**changer) | | rs15.sax. | 5 |
| Reprospher 100 Si, 1.8 µm | | | rs118.00. | 7 |
| Reprospher 100 Si, 2 µm | | | rs12.00. | 7 |
| Reprospher 100 Si, 2.5 µm | | | rs125.00. | 6 |
| Reprospher 100 Si, 3 µm | | | rs13.00. | 4 |
| Reprospher 100 Si, 5 µm | | | rs15.00. | 3 |
| Reprospher 100 Si,10 µm | | | rs10.00. | 3 |
| Reprospher HILIC-P, 3 µm | HILIC for **P**eptides | | rs13.HCP. | 7 |
| Reprospher HILIC-P, 5 µm | HILIC for **P**eptides | | rs15.HCP. | 6 |
| Reprospher HILIC-P, 10 µm | HILIC for **P**eptides | | rs10.HCP. | 6 |
| Reprospher HILIC-A, 3 µm | HILIC for **A**cids | | rs13.HCA. | 7 |
| Reprospher HILIC-A, 5 µm | HILIC for **A**cids | | rs15.HCA. | 6 |
| Reprospher HILIC-A, 10 µm | HILIC for **A**cids | | rs10.HCA. | 6 |
| Reprospher Acidosil-S, 5 µm | SO3H-Silica | | rs15.sh. | 3 |
| Reprospher Acidosil-S, 10 µm | SO3H-Silica | | rs10.sh. | 3 |
| Reprospher Acidosil-C, 5 µm | COOH-Silica | | rs15.ch. | 3 |
| Reprospher Acidosil-C, 5 µm | COOH-Silica | | rs10.ch. | 3 |

**Wide Pore Phases for Peptides and Proteins:**

**200 A° Pores**

| | | | | |
|---|---|---|---|---|
| Reprospher 200 Si, 5 µm | | | rs25.00. | 5 |
| Reprospher 200 C18-TN, 5 µm | 11 % | polymer-C18, not endc. | rs25.9tn. | 5 |
| Reprospher 200 C18-TN, 7 µm | 11 % | polymer-C18, not endc. | rs27.9tn. | 5 |
| Reprospher 200 C18-TN, 10 µm | 11 % | polymer-C18, not endc. | rs20.9tn. | 5 |
| Reprospher 200 C18-DE, 2.5 µm | 10 % | double endc. | rs225.9de. | 7 |
| Reprospher 200 C18-DE, 3 µm | 10 % | double endc. | rs23.9de. | 4 |
| Reprospher 100 C18-WCX, 5 µm | (C18+ Weak Anion exch., for Peptides) | | rs15.9ac | 5 |
| Reprospher 100 C18-WCX, 10 µm | (C18+ Weak Anion exch., for Peptides) | | rs10.9ac | 5 |
| Reprospher 200 C18-Aqua, 3 µm | 5 % | pol.Gr.+ endc. | rs23.9aq. | 4 |
| Reprospher 200 C18-Aqua, 5 µm | 5 % | pol.Gr.+ endc. | rs25.9aq. | 4 |

**300 A° Pores**

| | | | | |
|---|---|---|---|---|
| Reprospher 300 C4, 1.8 µm | 2.5 % | endc. | rs318.4e. | 7 |
| Reprospher 300 C4, 2 µm | 2.5 % | endc. | rs32.4e. | 7 |
| Reprospher 300 C4-DE, 2.5 µm | 3 % | double endc. | rs35.4de. | 7 |
| Reprospher 300 C4-DE, 3 µm | 3 % | double endc. | rs33.4de. | 5 |
| Reprospher 300 C4-DE, 5 µm | 3 % | double endc. | rs35.4de. | 4 |
| Reprospher 300 C8, 1.8 µm | 4 % | endc. | rs32.8e. | 7 |
| Reprospher 300 C8, 2 µm | 4 % | endc. | rs32.8e. | 7 |
| Reprospher 300 C8-TN, 5 µm | 5 % | polymer-C8, not endc. | rs35.8tn. | 4 |
| Reprospher 300 C18, 1.8 µm | 7 % | endc. | rs32.9e. | 7 |
| Reprospher 300 C18, 2 µm | 7 % | endc. | rs32.9e. | 7 |
| Reprospher 300 C18-DE, 2.5 µm | 7 % | double endc. | rs325.9de. | 7 |
| Reprospher 300 C18-DE, 3 µm | 7 % | double endc. | rs33.9de. | 5 |
| Reprospher 300 C18-DE, 5 µm | 7 % | double endc. | rs35.9de. | 4 |
| Reprospher 300 C18-Aqua, 5 µm | 4 % | pol.Gr.+ endc. | rs35.9aq. | 4 |
| Reprospher 300 C18, 5 µm | 6 % | endc. | rs35.9e. | 4 |
| Reprospher 300 C18-TN, 5 µm | 10 % | polymer-C18, not endc. | rs35.9tn. | 4 |
| Reprospher 300 C18-TN, 30 µm | 10 % | polymer-C18, not endc. | rs330.9tn. | 2 |
| Reprospher 300 Phenyl-DE, 3 µm | 5 % | double endc. | rs33.pde. | 5 |

## Reprosil ® Gold-XBD (Maisch) 1.8 µm – 10 µm Particles

Porous spherical silica: 1.8 µm / 3 µm /5 µm /10 µm
Pore diameter: 100 A°
Surface area: 350 $m^2$/g
Ultrapure phases: Purity: 99,999
**Perfect for LC-MS separations.**

| | % Carbon | endcapping | Mat.No.: | Price group |
|---|---|---|---|---|
| Reprosil Gold 100 C18-XBD, 1.8 µm | 16.5 % | Extra Base Deactivated | G118.9x | 7 |
| Reprosil Gold 100 C18-XBD, 2.0 µm | 16.5 % | Extra Base Deactivated | G12.9x | 7 |
| Reprosil Gold 100 C18-XBD, 3 µm | 16.5 % | Extra Base Deactivated | G13.9x | 6 |
| Reprosil Gold 100 C18-XBD, 5 µm | 16.5 % | Extra Base Deactivated | G15.9x | 5 |
| Reprosil Gold 100 C18-XBD, 10 µm | 16.5 % | Extra Base Deactivated | G10.9x | 5 |

| | | | | |
|---|---|---|---|---|
| Reprosil Gold 100 C8-XBD, 1.8 µm | 10.5 % | Extra Base Deactivated | G118.8x | 7 |
| Reprosil Gold 100 C8-XBD, 2.0 µm | 10.5 % | Extra Base Deactivated | G12.8x | 7 |
| Reprosil Gold 100 C8-XBD, 3 µm | 10.5 % | Extra Base Deactivated | G13.8x | 6 |
| Reprosil Gold 100 C8-XBD, 5 µm | 10 .5% | Extra Base Deactivated | G15.8x | 5 |
| Reprosil Gold 100 C8-XBD, 10 µm | 10.5 % | Extra Base Deactivated | G10.8x | 5 |

## Equisil ® (Maisch) Alternative to Supelcosil + Hypersil ( Gold)

Porous spherical silica: 5 µm
Pore diameter: 120 A°
Pore volume: 0.65 ml / g
Spurface area: 180 $m^2$/g
**Alternative to Hypersi l / Supelosil / Pinnacle!**

| | % Carbon | endcapping | Mat.No.: | Price group |
|---|---|---|---|---|
| **Alternatives to Hypersil and Supelcosil-LC:** | | | | |
| Equisil Si, 5 µm | | | e25.00. | 3 |
| Equisil ODS, 3 µm | 10 % | endc. | e23.9e. | 4 |
| Equisil ODS, 3 µm | 10 % | endc. | e23.9e. | 4 |
| Equisil ODS, 5 µm | 10 % | endc. | e25.9e. | 3 |
| Equisil ODS, 10 µm | 10 % | endc. | e20.9e. | 3 |
| Equisil MOS, 3 µm | 6.5 % | not endc. | e23.80. | 4 |
| Equisil MOS, 5 µm | 6.5 % | not endc. | e25.80. | 3 |
| Equisil MOS, 10 µm | 6.5 % | not endc. | e20.80. | 3 |
| Equisil MOS-2, 3 µm | 6.5 % | endc. | e23.8e. | 4 |
| Equisil SAS, 5 µm | 3 % | C1- phase | e25.10. | 3 |
| Equisil APS, 3 µm | (NH2-Phase) | | e23.a0. | 4 |
| Equisil APS, 5 µm | (NH2-Phase) | | e25.a0. | 3 |
| Equisil CPS, 5 µm | (CN-Phase) | | e25.c0. | 3 |
| Equisil CPS-2, 3 µm | (CN-Phase, endc.) | | e23.ce. | 4 |
| **Alternatives to Hypersil-BDS , Supelcosil-DB and Pinnacle DB:** | | | | |
| Equisil BDS C18, 3 µm | 11 % | endc. | e23.9b. | 4 |
| Equisil BDS C18, 5 µm | 11 % | endc. | e25.9b. | 3 |
| Equisil BDS C8, 3 µm | 7 % | endc. | e23.8b. | 4 |
| Equisil BDS C8, 5 µm | 7 % | endc. | e25.8b. | 3 |
| Equisil BDS Phenyl, 5 µm | 5 % | endc. | e25.pb. | 3 |
| **Alternatives to Hypersil Gold:** | | | | |
| Equisil Gold C18, 3 µm | | endc. | e23.9g | 5 |
| Equisil Gold C18, 5 µm | | endc. | e25.9g | 4 |
| Equisil Gold C18, 10 µm | | endc. | e20.9g | 4 |
| Equisil Gold C8, 3 µm | | endc. | e23.8g | 5 |
| Equisil Gold C8, 5 µm | | endc. | e25.8g | 4 |
| Equisil Gold C8, 10 µm | | endc. | e20.8g | 4 |

## Reprobond (Maisch)

Porous spherical silica: 5 µm / 10 µm
Pore diameter: 120 A°
Surface area: 300 $m^2$/g
**Alternative to µBondapak!**

| | endcapping | Mat.No.: | Price group |
|---|---|---|---|
| Reprobond C18, 10 µm | endc. | rb20.9e. | 5 |
| Reprobond C18, 5 µm | endc. | rb25.9e. | 6 |
| Reprobond Phenyl, 10 µm | endc. | rb20.pe. | 5 |
| Reprobond NH2, 10 µm | | rb20.a0. | 5 |
| Reprobond CN, 10 µm | | rb20.ce. | 5 |

## Repropak (Maisch)

Porous silica: 4 µm
**Alternative to Novapak!**

| | endcapping | Mat.No.: | Price group |
|---|---|---|---|
| ReproPak C18, 4 µm | endc. | rp4.9e. | 5 |
| ReproPak C8, 4 µm | endc. | rp4.8e. | 5 |
| ReproPak Phenyl, 4 µm | endc. | rp4.pe. | 5 |

## ReproKrom (Maisch)

Porous silica with 100 A° pores.
**Alternative to Kromasil!**

| | endcapping | Mat.No.: | Price group |
|---|---|---|---|
| ReproKrom Si, 5 µm | | rk15.00. | 3 |
| ReproKrom Si, 10 µm | | rk10.00. | 2 |
| ReproKrom C18, 3 µm | endc. | rk13.9e. | 5 |
| ReproKrom C18, 5 µm | endc. | rk15.9e. | 3 |
| ReproKrom C18, 10 µm | endc. | rk10.9e. | 2 |
| ReproKrom C8, 5 µm | endc. | rk15.8e. | 3 |
| ReproKrom C8, 10 µm | endc. | rk10.8e. | 2 |

## Ultrasep® ES (Dr.Maisch, formerly from Sepserv / Berlin)

Porous, spherical silica.
**Extreme chemical purity. High Inertness. Enhanced hydrolytic resistance. Excellent packing properties. Long time stability. Remarkable Selectivity.**

Standard-Phases and Taylor-made Phases**!**

**Standard-Phases**

| | | |
|---|---|---|
| Ultrasep ES 100 Si, | Ultrasep ES 100 C18, | Ultrasep ES 100 C8, |
| Ultrasep ES 100 C1, | Ultrasep ES 100 Phenyl, | Ultrasep ES 100 NH2, |
| Ultrasep ES 100 CN, | Ultrasep ES 100 OH, | |

**Enviromental Analysis**

| | |
|---|---|
| Ultrasep ES PAH, | PAH- Analysis ( EPA and EFSA) |
| Ultrasep ES PAH-QC, | Quick PAH-Analysis |
| Ultrasep ES ALD | Aldehydes and Ketones |
| Ultrasep ES Pest | Pesticides (DIN) |
| Ultrasep ES Phenoxycarb | Herbicides |
| Ultrasep ES Phen | EPA- and BTXE-Phenols |
| Ultrasep ES Ex | Explosives - EPA |
| Ultrasep ES AZO | Azo Dyes |
| Ultrasep ES AP | Hydrocarbons in Diesel Fuels |
| Ultrasep ES Amin | Amines |

| | |
|---|---|
| Ultrasep ES DIISO | Diisocynates |

**Food stuff Analysis**

| | |
|---|---|
| Ultrasep ESD FS | Fruit acids |
| Ultrasep ES WAX FS | Fruit acids |
| Ultrasep ES FS | Fatty acids |
| Ultrasep ES Sacch | Mono- and Disaccharides |
| Ultrasep ES Vit W | Water soluble Vitamines |
| Ultrasep ES Vit F | Fat soluble Vitamines |
| Ultrasep ES Vit T-2 | Tocopherols |

**Ion Exchangers**

| | |
|---|---|
| Ultrasep ES SAX W | Anorganic ions, according to DIN |
| Ultrasep ES SAX W33 | Strong anion exchanger for Ascorbic acid |
| Ultrasep ES SCX75 | Alkaline Earth Ions |
| Ultrasep ES SCXPM | Strong Cation Exchanger, polymeric, for org. Acids |

**Biochemical, Clinical-Chemical and Pharmaceutical Analysis**

| | |
|---|---|
| Ultrasep ES Pharm-RP18e + RP8e | Pharmaceutica |
| Ultrasep ES MLD | (MLD=Monolayer dense), Pharmaceutica |
| Ultrasep ES PFP | Pentafluorphenyl-Phase, |
| Ultrasep ES Pharm, PFP | Nucleocompunds-Analysis |
| Ultrasep ESD Chol | Cholesterolesters |

**Shield-Phases with embedded -Groups:**

| | |
|---|---|
| Ultrasep ES Amid RP18A | Amid C18-Phase (Embedded Group) |
| Ultrasep ES Amid H RP18PA | Embedded Phase with Urea group |
| Ultrasep ES Chair | RP-Phase with pos. Charge (Cephalosporines) |
| Ultrasep ES-C10-Omega-COOH | RP-Phase with 2 Carboxylic groups |

**Other special columns**

| | |
|---|---|
| Ultrasep ES Aminotetraol | Stereoisomeres from org. N-Oxides, for Sugar-Analysis |
| Ultrasep ES RP8F | Fluoralkyl- (C8F17)-Phase , Alternative RP-selectivity |
| Ultrasep ES PEO | Polyethylenoxide-Phase for RP- and NP-Separations |
| Ultrasep ES RP18-M500 | Methyloctadecylsilica-Gel, 5 % C, |
| Ultrasep ES C30-DM | DiMethyl-C30, for Chlorophylls, etc. |

Production of Taylor-made Phases: Herstellung optimaler Trennsäulen: G.J.Eppert, I.Schinke, LCGC Europe, Band 16, 2003, Heft 10, 698 – 705, G.J.Eppert, P.Heitmann: GIT 54 (2010) Heft: 34-35

## Stability® (Maisch)

Porous spherical silica: 5, 10 µm
Pore diameter: 100, 300 A°
Surface area: 350, 100 $m^2/g$
**Phases with very special modifications!**

| Modifikation | endcapping | | Mat.No.: | Price group |
|---|---|---|---|---|
| Stability 100 C30, 3 µm | (polymer) | endc. | st13.30. | 8 |
| Stability 100 C30, 5 µm | (polymer) | endc. | st15.30. | 7 |
| Stability 100 C30-NE, 5 µm | (polymer) | not endc . | st15.3p. | 7 |
| Stability 100 C30-m, 5 µm | (monomer) | endc. | st15.3m. | 7 |
| Stability 100 BS-C13, 5 µm | (with basic Spacer) | endc. | st15.13. | 7 |
| Stability 100 BS-C17, 3 µm | (with basic Spacer) | endc. | st13.17. | 8 |
| Stability 100 BS-C17, 5 µm | (with basic Spacer) | endc. | st15.17. | 7 |

| | | | | |
|---|---|---|---|---|
| Stability 100 BS-C17, 10 µm | (with basic Spacer) | endc. | st10.17. | 7 |
| Stability 100 BS-C23, 5µm | (with basic Spacer) | endc. | st15.23. | 7 |
| | | | | |
| Stability 120 BS-C23, 5 µm | (with basic Spacer) | not endc. | st25.23. | 7 |
| Stability 120 BS-C23, 3 µm | (with basic Spacer) | not endc. | st23.23. | 8 |
| Stability 120 BS-C23, 1.5 µm | see under: *Gold-Turbo BS-C23* | | | |
| Stability 120 BS-C23-e, 5 µm | (with basic Spacer) | endc. | st25.23e. 8 | 7 |
| Stability 300 BS-C23, 5 µm | (with basic Spacer) | not endc . | st35.23. | 7 |
| | | | | |
| Stability 100 Amid-C25, 5 µm | (with Amid-Group) | endc. | st15.a25. | 6 |
| | | | | |
| Stability 100 Amid-C18, 3 µm | (mit Amid-Gruppe) | endc. | st13.a18. | 8 |
| Stability 100 Amid-C18, 5 µm | (with Amid-Group) | endc. | st15.a18. | 6 |
| | | | | |
| Stability 100 Amid-C16, 3 µm | (mit Amid-Gruppe) | endc. | st13.a16. | 8 |
| Stability 100 Amid-C16, 5 µm | (with Amid-Group) | endc. | st15.a16. | 6 |
| | | | | |
| Stability 120 Amid-C12, 5 µm | (with Amid-Group) | not endc. | st25.a12. | 7 |
| Stability 120 Amid-C12, 3 µm | (with Amid-Group) | not endc. | st23.a12. | 8 |
| Stability 120 Amid-C12, 1.5 µm | see under: *Gold-Turbo Amid-C12* | | | |
| | | | | |
| Stability ABZ-Amid-C18, 3 µm | (Altern. to Supelcosil ABZ) | endc. | st23.eps. | 7 |
| Stability ABZ-Amid-C18, 5 µm | (Altern. to Supelcosil ABZ) | endc. | st25.eps. | 6 |
| | | | | |
| Stability Polyamine, 3 µm | (for sugars) | polymer | st33.pa. | 8 |
| Stability Polyamine, 5 µm | (for sugars) | polymer | st35.pa. | 6 |
| | | | | |
| Stability 100 Alumina, 5 µm | | | st15.al. | 6 |

## Gold-Turbo® (Maisch)

Spherical silica for High Speed HPLC: **1.5 µm Particle.**
P orous and unporous Phases: 80 A°/ 100 A° / 120 A°
**Hardware for 100 ODS: 33 x 4.6 mm in *Gold*.**

**Porous Phases:**

| | % Carbon | endcapping | Mat.Nr.: | Price:33 x4.6 (4,3,2)mm |
|---|---|---|---|---|
| Gold-Turbo 100 Si, 1.5 µm | | | g12.00. | |
| Gold-Turbo 100 ODS, 1.5 µm | 11 % | not endc.! | g12.90. | |
| Gold-Turbo 100 ODS-H, 1.5 µm | 20 % | endc. | gt115.9h | |
| | | | | |
| Gold-Turbo 80 ODS-3, 1.5 µm | 12 % | endc. | g02.93 | |
| Gold-Turbo 120 BS-C23, 1.5 µm | (with basic Spacer) | not endc. | g22.23 | |
| Gold-Turbo Amid-C12, 1.5 µm | (with Amid-Group) | endc. | g22.a12 | |
| Gold-Turbo Fluosil, 1.5 µm | (Alkylfluoro Phase) | endc. | g22.fe | |
| Gold-Turbo 120 ODS, 1.5 µm | (like Equisil-ODS) | endc. | g22.eq | |
| **Not porous Phases:** | | | | |
| Gold-Turbo ESM C18, 1.5 µm | (Alternative to Micra C18) | endc. | g015.9e. | |

## Reprosil - Fluosil ® (Maisch) Fluorinated Phases

Porous spherical, fluorinated silicas: 2.2 µm, 3 µm and 5 µm

| | endcapping | Mat.No.: | Price group |
|---|---|---|---|
| Reprosil Fluosil C8, 3 µm (C8F13H4) | endc. | fl13.8e | 7 |
| Reprosil Fluosil C8, 5 µm (C8F13H4) | endc. | fl15.8e | 7 |
| Reprosil Fluosil C8-NE, 5 µ (C8F13H4) | nicht endc. | fl15.80 | 7 |

| | | | |
|---|---|---|---|
| Reprosil Fluosil RP8F, 5 µm (C8F17) | | fl15.8f | 7 |
| Reprosil Fluosil 60 PFP, 3 µm (Pentafluorphenyl) | endc. | fl03.pfp | 7 |
| Reprosil Fluosil 60 PFP, 5 µm (Pentafluorphenyl) | endc. | fl05.pfp | 6 |
| Reprosil Fluosil 120 PFP, 2.2 µm (Pentafluorphenyl-USP-L43) | endc. | fl122.pfp | 7 |
| Reprosil Fluosil 100 PFP, 3 µm (Pentafluorphenyl-USP-L43) | endc. | fl13.pfp | 7 |
| Reprosil Fluosil 100 PFP, 5 µm (Pentafluorphenyl-USP-L43) | endc. | fl15.pfp | 6 |
| Reprosil Fluosil 100 PFP, 10 µm (Pentafluorphenyl-USP-L43) | endc. | fl10.pfp | 6 |
| Reprosil Fluosil 120E, 5 µm, (Tridecafluoro-Dimethyl-Heptyl-Silan) | endc. | fl15.13 | |

## ReproPart (Maisch) — Alternative to Partisil

Porous silica:
**Alternative to Partisil!**

| | | | | |
|---|---|---|---|---|
| ReproPart ODS-3, 5 µm | (10 % C) | endc. | p05.93. | 6 |
| ReproPart ODS-3, 10 µm | (10 % C) | endc. | p00.93. | 6 |
| ReproPart SAX, 10 µm | Strong Anion Exchanger | | p00.sa. | 8 |
| ReproPart SCX, 10 µm | Strong Cation Exchanger | | p00.sc. | 8 |

## ReproShell ® (Maisch) — Core-Shell Silica

Coreshell RP-Phase with nonporous Core and porous Shell.
Particle size: 2.6 µm
Carbon loading: 5 %
pH-Stability: 2 - 10

**ReproShell C18, 2.6 µm, endcapped.**

ReproShell C18, 2.6 µm, 150 x 4.6 mm Art.Nr.: cs26.9e.s1546
ReproShell C18, 2.6 µm, 100 x 4.6 mm Art.Nr.: cs26.9e.s1046
ReproShell C18, 2.6 µm, 50 x 4.6 mm Art.Nr.: cs26.9e.s0546

ReproShell C18, 2.6 µm, 150 x 4 mm Art.Nr.: cs26.9e.s1504
ReproShell C18, 2.6 µm, 100 x 4 mm Art.Nr.: cs26.9e.s1004
ReproShell C18, 2.6 µm, 50 x 4 mm Art.Nr.: cs26.9e.s0504

ReproShell C18, 2.6 µm, 150 x 3 mm Art.Nr.: cs26.9e.s1503
ReproShell C18, 2.6 µm, 100 x 3 mm Art.Nr.: cs26.9e.s1003
ReproShell C18, 2.6 µm, 50 x 3 mm Art.Nr.: cs26.9e.s0503

ReproShell C18, 2.6 µm, 150 x 2 mm Art.Nr.: cs26.9e.s1502
ReproShell C18, 2.6 µm, 100 x 2 mm Art.Nr.: cs26.9e.s1002
ReproShell C18, 2.6 µm, 50 x 2 mm Art.Nr.: cs26.9e.s0502

## Reprosil -Chiral (Maisch)

(Same prices for 4.6 mm, 4.0 mm, 3.0 mm and 2.0 mm iD)

**Reprosil Chiral-NR ( Immobilized brush-type phases , covalently bonded )**

| | | |
|---|---|---|
| ReproSil Chiral-NR, 5 µm, Chiral separations in NP and RP-Modus (for aromatic compounds with O near Chiral-Centre) | ( PN:r15.nr) | 250 x 4.6 mm<br>150 x 4.6 mm<br>100 x 4.6 mm |
| ReproSil Chiral-NR, 8 µm, Chiral separations in NP and RP-Modus | ( PN:r18.nr) | 250 x4.6 mm |

| | | |
|---|---|---|
| | (for aromatic compounds with O near Chiral-Centre) | 150 x 4.6 mm<br>100 x 4.6 mm<br>250 x 8 mm<br>250 x 10 mm<br>250 x 20 mm |
| ReproSil Chiral-NR, 12µm, | Chiral separations in NP and RP-Modus ( PN:r112.nr) | 250 x4.6 mm |
| | (for aromatic compounds with O near Chiral-Centre) | 150 x 4.6 mm<br>100 x 4.6 mm<br>250 x 8 mm<br>250 x 10 mm<br>250 x 20 mm |
| ReproSil Chiral-NR, 15µm, | Chiral separations in NP and RP-Modus ( PN:r115.nr) | 250 x4.6 mm |
| | (for aromatic compounds with O near Chiral-Centre) | 150 x 4.6 mm<br>100 x 4.6 mm<br>250 x 8 mm<br>250 x 10 mm<br>250 x 20 mm |
| ReproSil Chiral-NR-R, 8 µm, | Chiral separations in NP and RP-Modus, ( PN:r18.nrr) | 250 x 4.6 mm |
| | (for aromatic compounds with O near Chiral-Centre, Inverse Elution order to Reprosil Chiral-NR) | 150 x 4.6 mm<br>100 x 4.6 mm<br>250 x 8 mm<br>250 x 10 mm<br>250 x 20 mm |
| ReproSil Chiral-NR-R, 12 µm, | Chiral separations in NP and RP-Modus, ( PN:r112.nrr) | 250 x 4.6 mm |
| | (for aromatic compounds with O near Chiral-Centre, Inverse Elution order to Reprosil Chiral-NR) | 150 x 4.6 mm<br>100 x 4.6 mm<br>250 x 8 mm<br>250 x 10 mm<br>250 x 20 mm |

**Reprosil Chiral-OM (Cellulose-carbamate-Phases, for RP and NP)**

| | |
|---|---|
| ReproSil Chiral-OM, 3 µm, | Alternative to Daicel OD-3 (PN:r63.om)<br>(USP-L40, Cellulose tris-3.5-dimethylphenylcarbamate mod. Silica) |
| ReproSil Chiral-OM-R, 3 µm, | Alternative to Daicel OD-3R (PN:r63.omr)<br>(USP-L40, Cellulose tris-3,5-dimethylphenylcarbamate mod. Silica) |
| ReproSil Chiral-OM, 5 µm, | Alternative to Daicel OD-H (PN:r65.om)<br>(USP-L40, Cellulose tris-3,5-dimethylphenylcarbamate mod. Silica) |
| ReproSil Chiral-OM-R, 5 µm, | Alternative to Daicel OD-RH (PN:r65.omr) RP-Mode<br>(USP-L40, Cellulose tris-3,5-dimethylphenylcarbamate mod. Silica) |
| ReproSil Chiral-OM, 10 µm, | Alternative to Daicel OD-H (PN:r60.om)<br>(USP-L40, Cellulose tris-3,5-dimethylphenylcarbamate mod. Silica) |

ReproSil Chiral-OM-R, 10 µm, Alternative to Daicel OD-RH (PN:r60.omr)
(USP-L40, Cellulose tris-3,5-dimethylphenylcarbamate mod. Silica)

ReproSil Chiral-OM, 20µm, Alternative to Daicel OD (PN:r620.om)
(USP-L40, Cellulose tris-3,5-dimethylphenylcarbamate mod. Silica)

**Reprosil Chiral-AM (Amylose-carbamate-Phases , for RP and NP)**

ReproSil Chiral-AM, 3 µm, Alternative to Daicel AD-3 (PN:r63.am)
(USP-L51, Amylose tris-3,5-dimethylphenylcarbamate mod. Silica)

ReproSil Chiral-AM-R, 3 µm, Alternative to Daicel AD-3R (PN:r63.amr)
(USP-L51, Amylose tris-3,5-dimethylphenylcarbamate mod. Silica)

ReproSil Chiral-AM, 5 µm, Alternative to Daicel AD-H (PN:r65.am)
(USP-L51, Amylose tris-3,5-dimethylphenylcarbamate mod. Silica)

ReproSil Chiral-AM-R, 5 µm, Alternative to Daicel AD-RH (PN:r65.amr)
(USP-L51, Amylose tris-3,5-dimethylphenylcarbamate mod. Silica)

ReproSil Chiral-AM, 10 µm, Alternative to Daicel AD (PN:r60.am)
(USP-L51, Amylose tris-3,5-dimethylphenylcarbamate mod. Silica)

ReproSil Chiral-AM-R, 10 µm, Alternative to Daicel AD-R (PN:r60.amr)
(USP-L51, Amylose tris-3,5-dimethylphenylcarbamate mod. Silica)

ReproSil Chiral-AM, 20 µm, Alternative to Daicel AD (PN:r620.am)
(USP-L51, Amylose tris-3,5-dimethylphenylcarbamate mod. Silica)

**Reprosil Chiral-AMS (Amylose Tris (S)-A-Methylbenzyl-Carbamate-Phase, for NP- and RP-Mode)**

ReproSil Chiral-AMS, 3 µm, (Alternative to Daicel AS-3) (PN:r63.AMS)

ReproSil Chiral-AMS-R, 3 µm, (Alternative to Daicel AS-3R) (PN:r63.AMSR)

ReproSil Chiral-AMS, 5 µm, (Alternative to Daicel AS-H) (PN:r65.AMS)

ReproSil Chiral-AMS-R, 5 µm, (Alternative to Daicel AS-RH) (PN:r65.AMSR)

ReproSil Chiral-AMS, 10 µm, (Alternative to Daicel AS) (PN:r60.AMS)

**Reprosil Chiral-CM (Phenyl-Carbamate-Phase )**

ReproSil Chiral-CM, 5 µm, Alternative to Daicel OC-H (PN:r65.cm)
(Tris (Phenylcarbamate)-Cellulose mod. Silica)

**Reprosil Chiral-JM (Cellulose-Methylbenzoyl-Phases , for RP and NP)**

ReproSil Chiral-JM, 3 µm, Alternative to Daicel OJ-3 (PN:r63.jm)
(or ReproSil Chiral-JM-R) (Tris (4-Methylbenzoyl)-Cellulose mod. Silica)

ReproSil Chiral-JM, 5 µm, Alternative to Daicel OJ-H (PN:r65.jm)
(or ReproSil Chiral-JM-R) (Tris (4-Methylbenzoyl)-Cellulose mod. Silica)

ReproSil Chiral-JM, 10 µm, Alternative to Daicel OJ (PN:r60.jm)
(or ReproSil Chiral-JM-R) (Tris (4-Methylbenzoyl) -Celullose mod. Silica)

**Reprosil Chiral-ZM (Cellulose-Phases , for RP and NP)**

ReproSil Chiral-ZM, 5 µm, Alternative to Daicel OZ-H (PN:r65.zm)
(or ReproSil Chiral-ZM-R) (Cellulose tris-3-Chloro-4-Methylphenylcarbamate mod. Silica)

ReproSil Chiral-ZM, 3 µm, Alternative to Daicel OZ-3 (PN:r63.zm)
(or ReproSil Chiral-ZM-R) (Cellulose tris-3-Chloro-4-Methylphenylcarbamate mod. Silica)

**Reprosil Chiral-ZA (Amylose-Phases , for RP und NP)**

ReproSil Chiral-ZA, 5 µm, (Alternative Epitomize 1K) (PN:r65.za)
(or ReproSil Chiral-ZA-R) (Amylose tris-3-Chloro-4-Methylphenylcarbamate mod. Silica)

ReproSil Chiral-ZA, 3 µm, (PN:r63.za)
(or ReproSil Chiral-ZA-R) (Amylose tris-3-Chloro-4-Methylphenylcarbamate mod. Silica)

**Reprosil Chiral-YM (Amylose-Phases , for RP und NP)**

| | | |
|---|---|---|
| ReproSil Chiral-YM, 5 µm,<br>(or ReproSil Chiral-YM-R) | Alternative to Daicel AY-H<br>(Amylose tris-5-Chloro-2-Methylphenylcarbamate mod. Silica) | (PN:r65.ym) |
| ReproSil Chiral-YM, 3 µm,<br>(or ReproSil Chiral-YM-R) | Alternative to Daicel AY-3<br>(Amylose tris-5-Chloro-2-Methylphenylcarbamate mod. Silica) | (PN:r63.ym) |

**Reprosil Chiral-BM (Cellulose-Benzoyl-Phases , for RP and NP)**

| | | |
|---|---|---|
| ReproSil Chiral-BM, 5 µm,<br>(or ReproSil Chiral-BM-R) | Alternative to Daicel OB-H<br>(Tris- (Benzoyl)-Celullose mod. Silica) | (PN:r65.bm) |
| ReproSil Chiral-BM, 10 µm,<br>(or ReproSil Chiral-BM-R) | Alternative to Daicel OB<br>(Tris (Benzoyl)-Cellulose mod. Silica) | (PN:r60.bm) |

**Reprosil -AGP ( 300 A° Silicagel with chiral AGP –Protein , USP-L41 )**

| | |
|---|---|
| ReproSil -AGP, 5 µm, | 100 x 4 mm (PN: r35.agp.s1004)<br>100 x 3 mm (PN: r35.agp.s1003)<br>150 x 3 mm (PN: r35.agp.s1503)<br>50 x 3 mm (PN: r35.agp.s0503)<br>Guards: 5 x 3 mm; 2 pieces (PN:r35.agp.v0003)<br>Guard holder ,direct (PN:81.00) |
| | 100 x 2 mm (PN:r35.agp.s1002)<br>150 x 2 mm (PN:r35.agp.s1502)<br>50 x 2 mm (PN:r35.agp.s0502<br>Guards: 5 x 2 mm; 2 pieces (PN:r35.agp.v0002)<br>Guard holder ,direct (PN:91.00) |

**Reprosil-HSA ( 300 A° Silicagel with chiral HSA-Protein )**

| | |
|---|---|
| ReproSil HSA, 5 µm, | 100 x 2 mm (PN:r35.hsa.s1002)<br>150 x 2 mm (PN:r35.hsa.s1502)<br>50 x 2 mm (PN:r35.hsa.s0502)<br>Guards: 5 x 2 mm; 2 pieces (PN:r35.hsa.v0002)<br>Guard holder ,direct (PN:91.00) |

Other **Chiral Phases**

| | |
|---|---|
| Nucleosil Chiral-2, 5 µm, 250 x 4 mm | (n15.dpg.s2504), 250 x 4 mm |

ReproSil Chiral-PS, 8 µm, Chiral separations in NP and RP-Modus ( PN:r18.ps) 250 x 4.0 mm
(for aromatic compounds with S or P, for example: Sulfoxides, Phosphine Oxides, Phosphonates, Thiophosphin Oxides, Phosphin Selenides, Phosphine Boranes)

ReproSil Chiral-OH, 8 µm, Chiral separations in NP-Modus (PN:r18.oh) 250 x 4.0 mm
( Aromatic Alkohols with OH near chiral centre, Aryl Carbinols)

ReproSil Chiral-AA, 8 µm, Chiral separations in NP and RP-Modus (PN:r18.aa) 250 x 4.0 mm
(for all Amino acids, L-Form eluts first)

ReproSil Chiral-TAG, 8 µm Chiral separations in NP and RP-Modus (PN:r18.tag) 250 x 4.0 mm
(Teicoplanin Aglycon: for Aminoalkohols, N-blocked Amino Acids, a-Hydroxy Acids, Oxazolidinons, Hydantoins, Imides, Aminoacids, USP-L63)

Reprosil Chiral-TG, 5 µm RP-Phase withTergurid, for 250 x 4.0 mm
chiral FMOC- and Dansyl-Aminoacid (r15.tg.s2504)

ReproSil Chiral-CA, 5 µm Chiral compounds in NP-Modus ( PN:r15.ca) 250 x 4.0 mm
(Pirkle Phase, Specially for compounds with a **Ca**rboxylic-Group)

ReproSil Chiral-CA, 8 µm Chiral compounds in NP-Modus ( PN:r18.ca) 250 x 4.0 mm
(Pirkle Phase, Specially for compounds with a **Ca**rboxylic-Group)

Reprosil Chiral-Beta-CD, 5 µm USP-L45 (Dansyl-Aminoacids, Barbiturates, Propranolol
Sulfonamide, Prostaglandines ( r15.bcd.s2504) 250 x 4 mm

Reprosil Chiral-Gamma-CD, 5 µm (r15.gcd.s2504) 250 x 4 mm

Reprosil Chiral-D-PhenylGlycin,5µm USP-L36, N-(3,5-Dinitrobenzoyl)-D-Phenylglycin. „ Brush-Type“ Phase.
Altern. to Nucleosil Chiral-2, USP-L36, Typ. Eluent: Heptane / IPA / TFA
(For Herbicides + Pharmaca (Alcohols, Carbon. acids , Esters, Sulfoxides)
Like Fenoprop-Methyl, Mecoprop-Methyl, Supidimid)
(PN: r15.DPG.s2504) 250x4 mm
( 250 x 10 mm, 250 x 20 mm)

Reprosil Chiral-D-PhenylGlycin, 3µm USP-L36, N-(3,5-Dinitrobenzoyl)-D-Phenylglycin. „ Brush-Type“ Phase.
Typ. Eluent: Heptane / IPA / TFA
( Herbicides + Pharmaca (Alcohols, Carb. acdis, Ester, Sulfoxides)
Fenoprop-Methyl, Mecoprop-Methyl, Supidimid)
(PN: r13.DPG.s2504) 150x4 mm

Reprosil Chiral-L-PhenylGlycin,5µm USP-L36, N-(3,5-Dinitrobenzoyl)-L-Phenylglycin. „ Brush-Type“ Phase.
Typ. Eluent: Heptane / IPA / TFA ,
Altern. to Nucleosil Chiral-3, Antipode to D-PhenylGlycin
(Herbicides + Pharmaca (Alkohols, Carbon. Acids , Ester, Sulfoxides)
Fenoprop-Methyl, Mecoprop-Methyl, Supidimid)
(PN: r15.LPG.s2504) 250x4 mm

Reprosil Chiral-L-Leucin,5µm N-(3,5-Dinitrobenzoyl)-L-Leucin, „Brush-Type“ Phase.
Typischer Eluent: Heptan / IPA / TFA
(PN: r15.LL.s2546) 250x4.6 mm

Reprosil Chiral-l-Prolin, 5 µm Davankov-Ligand exchange, Aminoacids, Hydantoine, Succinimide, Gluthetimide, Barbiturate, Sulfoxide ( r15.pr.s2504) 250x4 mm

Reprosil L-Hydroxy-Prolin, 5 µm Alternative to Nucleosil Chiral-1, USP-L32
Ligand exchange, Eluent: 2-10 mM Coppersulfate , 20-60C°
(For DL-Atrolactinacid, DL-Mandelic acids, DL-lactic acid, DL-Asparagin; DL-Serin, DL-Phenylalanin, DL-Threonin, DL-Prolin, DL-Histidin, DL-Valin, DL-Tyrosin, DL-Tryptophan), (r15.hp.s2504) 250x4mm

***Chiral-Phases from other suppliers***

| | | | |
|---|---|---|---|
| Chirobiotic-TAG, 10 µm | Chiral separations in NP and RP-Modus (Chiral Selector:Teicoplanin Aglycon) | (PN:ch0.tag) | 250 x 4.6 mm |
| Nucleocel Delta-S, 5 µm (Macherey + Nagel) | | (m5.del.s2546) | 250 x 4.6 mm |
| | | (m5.del.s1546) | 150 x 4.6 mm |
| Nucleocel Delta-RPS, 5 µm (Macherey + Nagel) | | (m5.delr.s2546) | 250 x 4.6 mm |
| | | (m5.delr.s1546) | 150 x 4.6 mm |
| CelluCoat, 10 µm (Eka Nobel) | | (k10.od.s2546) | 250 x 4.6 mm |
| CelluCoat, 25 µm (Eka Nobel) | | (k25.od.s2546) | 250 x 4.6 mm |
| AmyCoat, 10 µm (Eka Nobel) | | (k10.am.s2546) | 250 x 4.6 mm |
| AmyCoat, 25 µm (Eka Nobel) | | (k25.am.s2546) | 250 x 4.6 mm |
| Chiral-columns from Regis Technologies: | | | |
| Whelk0-01 10/100 (R,R)-Kromasil | | PN:786 515 | 250 x 4.6 mm |
| Whelk0-01 10/100 (S,S)-Kromasil | | PN:786 615 | 250 x 4.6 mm |
| Whelk0-01 16/100 (S,S)-Kromasil | | PN:786 351 | 250 x 4.6 mm |
| Ulmo 10/100 (R,R)-Kromasil | | PN:787 400 | 250 x 4.6 mm |
| Dach- DNB 10/100 (R,R)-Kromasil | | PN:788 401 | 250 x 4.6 mm |
| Sumichiral OA (Covalently bonded chiral phases) | | | 250 x 4.6 mm |

**Preparative Phases:**

| | | | |
|---|---|---|---|
| Chiralpak IA, 20 µm (Daicel) | | (dai.ia.s2546) | 250 x 4.6 mm |
| Chiralpak IC, 20 µm (Daicel) | | (dai.ic.s2546) | 250 x 4.6 mm |
| Chiralpak AD, 20 µm (Daicel) | | (dai.ad.s2546) | 250 x 4.6 mm |
| Chiraspher, 25 µm (Merck) | For Betablocker | (m25.csp.s2546) | 250 x 4.6 mm |
| Chiradex, 20 µm (Merck) | beta-Cyclodextrin -Phase | (m20.cd.s2546) | 250 x 4.6 mm |

**Guards: 10 x 4 mm, 5er Pack ( Direct Guard-Holder 81.10)**

## ReproSil® M ixed-Mode Phases (Maisch)

Porous spherical silicas
Mixed mode phases:
C18 + Amino, C18 + Cyano, C18 + Phenyl, C18 + Acid groups.

**With 2 different modifications on the same silica:**

| | % Carbon | endcapping | Mat.No.: | Price group |
|---|---|---|---|---|
| Reprosil Amino-C18, 5 µm | (C18- with NH2-Groups) | | r15.18a | 7 |
| Reprosil Cyano-C18, 5 µm | (C18-with CN-groups) | | r15.c9 | 7 |
| Reprosil Phenyl-C18, 5 µm | (C18-with Phenyl- groups) | | r15.p9 | 7 |
| Reprosil C18-Acid, 5 µm | (C18-with Acid- groups) | | r15.9ac | 7 |
| Reprosil C18-Acid, 10 µm | (C18-with Acid- groups) | | r15.9ac | 6 |

## Special phases: ReproSil® Chiral, OPA, FMOC, PAH, Pestizid, Dabs, SEC, DIBS (Maisch)

Porous spherical silicas: 3 µm or 5 µm

| Dimension: 250 x 4 mm | Applications | Mat. No.: |
|---|---|---|
| ReproSil PAH-EPA, 5 µm | 16 PAHs (EPA) | pah5. |
| ReproSil PAH-V, 5 µm | 16 PAHs (EPA, longer RT's)) | v35.pah. |
| ReproSil Pestizid-3 | Pestizides | pe3. |
| ReproSil FMOC | FMOC-Amino acids | fmoc. |
| ReproSil OPA, | OPA-Amino acids (150 x 4.6 ) | opa. |
| ReproSil DABS | DABS-Amino acids | dabs. |
| ReproSil FLEC | FLEC-Amino acids (Chiral) | flec. |
| ReproSil 100 CAT, 7 µm | ( mono- + divalent Cations in 1 run, Silica-phase) | r17.cat. |
| (Repromer 100 CAT, 7 µm | ( mono- + divalent Cations in 1 run, Polymer Phase) | RM17.cat. |

## Reprosil SEC (Maisch) Aqueous Size Exclusion Chromatogr.

**SEC Phases on Silica-Basis**

Optimal Injections: (300 x 8 mm): 20 – 100 µg sample in 1 – 20 µl.

ReproSil 50 SEC — SEC for Peptides — (Alternative to Synchropak GPC-Peptides )
MG-Area: 500 - 10 000 D

| | |
|---|---|
| 300 x 4.6 mm | PN: r05.sec.s3046 |
| 300 x 8 mm | PN: r05.sec.s3008 |
| Guard: 23 x 8 mm | PN: r05.sec.s0308 |

ReproSil 125 SEC — SEC for Peptides — (Alternative to G2000SW )
MG-Bereich: 5000 - 100 000 D

| | |
|---|---|
| 300 x 4.6 mm | PN: r15.sec.s3046 |
| 300 x 8 mm | PN: r15.sec.s3008 |
| Guard: 23 x 8 mm | PN: r15.sec.s0308 |

ReproSil 200 SEC — SEC for Proteins — (Alternative to G3000 SWXL)
MG-Area: 10 000 – 500 000 D

| | |
|---|---|
| 300 x 4.6 mm | PN: r25.sec.s3046 |
| 300 x 8 mm | PN: r25.sec.s3008 |
| Guard: 23 x 8 mm | PN: r25.sec.s0308 |

ReproSil 200 SEC-2 — SEC für Proteine — (Alternative zu G3000 SWXL)
MG-Bereich: 10 000 – 500 000 D

| | |
|---|---|
| 300 x 4.6 mm | PN: r25.sec2.s3046 |
| 300 x 8 mm | PN: r25.sec2.s3008 |
| Vorsäule: 23 x 8 mm | PN: r25.sec2.s0308 |

ReproSil 300 SEC — SEC für Proteine — (Alternative zu G3000 SWXL)
MG-Bereich: 10 000 – 1 000 000 D

| | |
|---|---|
| 300 x 4.6 mm | PN: r35.sec.s3046 |
| 300 x 8 mm | PN: r35.sec.s3008 |
| Vorsäule: 23 x 8 mm | PN: r35.sec.s0308 |

ReproSil 4000 SEC — SEC for Proteins — (Alternative to G4000 SWXL)
MG-Area: 20 000 – 5 000 000 D

| | |
|---|---|
| 300 x 4.6 mm | PNr45.sec.s3046 |
| 300 x 8 mm | PN: r45.sec.s3008 |
| Guard:23 x 8 mm | PN: r45.sec.s0308 |

## Repromer OH (Dr. Maisch) Aqueous SEC

**SEC Phasen on Methacrylat-Polymer Basis (USP-L37 / USP-L38).**

Alternatives to: HEMA-Bio (Tessek), OHpack (Shodex), PL-Aquagel-OH (Agilent), Polysep P3000/4000/5000 (Phenomenex), Suprema (PSS) , TSK-G2500/3000/4000/5000 PW, Ultrahydrogel (Waters).

(Max. Flow: 1 ml/min, pH-range: 2-10, Eluent: Water with salts / Buffers, MeOH, ACN
(Temperature: 10 - 80 C°, Storage under 0.05 % NaN3, Avoid drying)

For SEC of neutral and anionic Polymers (PEO, PEG, Pullulan, Polyarylamid, Hyaluronic acid, Polyacrylic acid, Dextransulfats, Heparin, Pektin, Polyvinylalcohol, etc.)

**Prices for 10µm:**
**300 x 8 mm: 1040,- Euro**
**250 x 8 mm: 940,- Euro**
**30 x 8 mm: 250,- Euro**

| | | | |
|---|---|---|---|
| Repromer OH-2500 | < 20 000 D | 300 x 8 mm | PN: RM0.OH25.s3008 |
| | | 250 x 8 mm | PN: RM0.OH25.s2508 |
| | | 30 x 8 mm | PN: RM0.OH25.s0308 |
| Repromer OH-3000 | < 80 000 D | 300 x 8 mm | PN: RM0.OH3.s3008 |
| | | 250 x 8 mm | PN: RM0.OH3.s2508 |
| | | 30 x 8 mm | PN: RM0.OH3.s0308 |
| Repromer OH-4000 | 1 - 300 KD | 300 x 8 mm | PN: RM0.OH4.s3008 |
| | | 250 x 8 mm | PN: RM0.OH4.s2508 |
| | | 30 x 8 mm | PN: RM0.OH4.s0308 |
| Repromer OH-5000 | 2.5 - 1 000 kD | 300 x 8 mm | PN: RM0.OH5.s3008 |
| | | 250 x 8 mm | PN: RM0.OH5.s2508 |
| | | 30 x 8 mm | PN: RM0.OH5.s0308 |

## ReproGel GPC (Maisch) for (non aqueous) GPC

Typical-Dimensions: 300 x 8 mm (or 600 x 8 mm) iD.
Columns come under THF

**Prices for**
**5 µm: ( 300 x 8 mm)** **Guard column: 20 x 8 mm: 250,-Euro**
**10µm: (300 x 8 mm)**
**5 µm: (250 x 20 mm)**
**10 µm: (250 x 20 mm)**

(Refill: minus 50,-Euro)

| For (non aqueous) GPC: | Daltons | |
|---|---|---|
| Repro-Gel GPC, 5 µm, 50 A° | < 1 000 | rg5.050. |
| Repro-Gel GPC, 5 µm, 100 A° | > 3000 | rg5.100. |
| Repro-Gel GPC, 5 µm, 500 A° | > 20 000 | rg5.500. |
| Repro-Gel GPC, 5 µm, 1000 A° | 1 000 - 40 000 | rg5.103. |
| Repro-Gel GPC, 5 µm, 10 000 A° | 4 000 - 500 000 | rg5.104. |
| Repro-Gel GPC, 5 µm, 100 000 A° | 10 000 - 2 000 000 | rg5.105. |
| Repro-Gel GPC, 5 µm, 1 000 000 A° | 200 000 - 10 000 000 | rg5.106. |
| Repro-Gel GPC, 5 µm, linear | 1 000 - 1 000 000 | rg5.lin. |

GPC phases in 3 µm possible!

## Repromer + Reprosil Carbohydrates (Maisch) for Carbohydrates

### 1.) Spherical Polymer Phases with Polystyrene-divinylbenzene (PSDVB) Matrix:

**For sugars, Alcohols and org. Acids:** (Polymers eluate in front of monomers!)

( Alternatives to: HC-75 (Waters), PL-HiPlex (Polymer Labs), Rezex (Phenomenex), Aminex 87 (Bio-Rad), Chrompack Org.Acid /Carbohydrates (Varian), Nucleogel-Sugar (MN), Supelcogel (Supelco), Carbosep (Shodex), Polyspher ( Merck), Metacarb (Metachem).

Typical column-dimensions: 250 x 8 mm oder 300 mm x 8 mm iD. On request also with 7.8 mm iD possible. Price group 6: Price Example:. 300 x 4.6 mm

| | Eluent: | Mat.No: | 250 x 8 mm | 300 x 8 mm | 300 x 4.6 mm |
|---|---|---|---|---|---|
| Repro-Gel H, 9 µm | 9 mM Sulfuric acid | su9.h0 | | | |
| Repro-Gel Ca, 9 µm | Water at 80 C° | su9.ca. | | | |
| Repro-Gel Na, 9 µm | Water at 80 C° | su9.na. | | | |
| Repro-Gel K, 9 µm | Water at 80 C° | su9.k0. | | | |
| Repro-Gel Pb, 9 µm | Water at 80 C° | su9. pb. | | | |

Short columns: 150 x 8 mm; Guards: 20 x 8 mm; **Refill: minus**

**-Analytical Dimensions in Price group 6:**
For example: 250 x 4 mm ( Refill minus )
Guards: 5er Pack: 10 x 4 mm, Guard holder PN: 81.10

**-Deashing Tandem Set:**
**Kit complete with 5 cation-exchange guards and 5 anion-exchange guards + guard holder :**
Set: 5 Guards Reprogel H+, 12 µm, 20 x 4.6 mm + 5 Guards ReproGel AX, 15 µm, 20 x 4.6 mm + Guard-Holder

### 2.) Repromer RCX-30: (Alternative to Metrosep Carb-1 and CarboPak PA1)

Anion-exchange column based on Polystyrene / Divinylbenzene polymer.
For separation of mono-, di- and ologosaccharides, as well as sugar alcohols.
Typical eluents are: NaOH and Na-Acetate.
Repromer RCX-30, 7 µm, 250 x 4 mm: PN: rm37.rcx.s2504

### 3.) Special Amino-Phase on Silicagel-Base for Sugars: (Monomers eluate in front of Polymers!)

Reprosil Carbohydrate, 5 µm (AminoSilica, 80 A° Poren, 4 % C)
250 x 4.6 mm (oder 4 or 3 mm iD) PN.: r15.ch.s25xx
(Typical Eluent: ACN / Wasser (70/30), Detection: RI)

## Repromer (Maisch) Ion exchanger- and RP-columns

-Polymer Phases with Polystyrene-Divinylbenzene matrix (PSDVB).
-pH stable from 1 - 14
-For Biocompounds (Peptides und Proteins) and other small basic compounds
-RP-Phases + Ion-exchangers

**RP-Phases:** (Alternatives to PLRP-S from Polymer Lab and Hamilton phases.)

| | | | |
|---|---|---|---|
| Repromer 100 RPS, 5 µm | 100 A° Pores | RM15.rps | Price group: 6 |
| Repromer 100 RPS, 8 µm | 100 A° Pores | RM18.rps | Price group: 6 |
| Repromer 100 RPS, 10 µm | 100 A° Pores | RM10.rps | Price group: 6 |
| Repromer 100 RPS, 15 µm | 100 A° Pores | RM15.rps | Price group: 6 |
| Repromer 300 RPS, 5 µm | 300 A° Pores | RM35.rps | Preisgruppe: 6 |

| | | | |
|---|---|---|---|
| Repromer 300 RPS, 8 µm | 300 A° Pores | RM38.rps | Price group: 6 |
| Repromer 300 RPS, 10 µm | 300 A° Pores | RM30.rps | Price group: 6 |
| Repromer 1000 RPS, 8 µm | 1000 A° Pores | RM68.rps | Price group: 6 |
| Repromer 1000 RPS, 10 µm | 1000 A° Pores | RM60.rps | Price group: 6 |

**100 A° Pores, ion exchanger for small compounds:**

| | | | |
|---|---|---|---|
| Repromer AXS, 7 µm | (Anion-Exchange, with Supressor) | RM17.axs | Price group: 7 |
| Repromer AX, 5 µm | (Anion-Exchange, 100A°) | RM15.ax | Price group: 7 |
| Repromer AX, 10 µm | (Anion-Exchange, 100A°) | RM10.ax | Price group: 6 |
| Repromer SCX, 10 µm | (Cation-Exchange, 100A°) | RM10.scx | Price group: 6 |

Repromer CAT, 7 µm (mono- + dival. Cations in 1 run, Eluent: 2 mM Cupric sulfate) RM17.cat. Price group : 7

**1000 A° Pores, ion exchanger for peptides + proteins:** (Alternative to Vydac 300 VHP)

| | | | |
|---|---|---|---|
| Repromer 1000 AX, 10 µm | (Anion-Exchange, 1000A°) | RM60.ax | Price group: 6 |

**For Sugars / Sugaralcohols at high pH** (Alternative to Metrosep Carb-1 and CarboPak PA1)

| | | | |
|---|---|---|---|
| Repromer 30 RCX, 7 µm | (300 A° Pores, for complex mixtures | RM37.rcx | Price group: 7 |
| Repromer 10 RCX, 7 µm | (100 A° Pores, sugars up to DP7) | RM17.rcx | Price group: 7 |

Other polymeric phases on request.

## *Phases from othe suppliers*

## Fluofix II® (Wako)

*2013: Standard Fluofix is no more available! Replaced by Fluofix II 120E.*

Particle size: 5 µm
Pore diameter: 120 A°
Surface area: 300 $m^2/g$
Modification: withTridecafluoro-Dimethyl-Heptyl-Silane

**Original Fluofix columns:**

| | |
|---|---|
| Fluofix-II 120E, 5 µm, 250 x 4.6 mm: | Art.Nr.: 236-63383 |
| Fluofix-II 120E, 5 µm, 150 x 4.6 mm: | Art.Nr.: 239-63373 |

**Fluofix columns packed by Dr. Maisch**
Guards: 5 x 4 mm (5 pieces)
Guard holder Stand-alone: PN: 82.00

| | |
|---|---|
| Fluofix-II 120E, 5 µm, 250 x 4.6 mm: | Art.Nr.: 1EW2.s2546 |
| Fluofix-II 120E, 5 µm, 150 x 4.6 mm: | Art.Nr.: 1EW2.s2546 |
| Fluofix-II 120E, 5 µm, 250 x 3 mm: | Art.Nr.: 1EW2.s2503 |
| Fluofix-II 120E, 5 µm, 150 x 3 mm: | Art.Nr.: 1EW2.s1503 |
| Fluofix-II 120E, 5 µm, 250 x 2 mm: | Art.Nr.: 1EW2.s2502 |
| Fluofix-II 120E, 5 µm, 150 x 2 mm: | Art.Nr.: 1EW2.s1502 |
| Fluofix-II 120E, 5 µm, 100 x 2 mm: | Art.Nr.: 1EW2.s1002 |

Other dimensions on request.

# Reprosil-Pur Basic-C18

ReproSil-Pur Basic-C18 is a new phase with an outstanding performance and stability:

Typical features are:

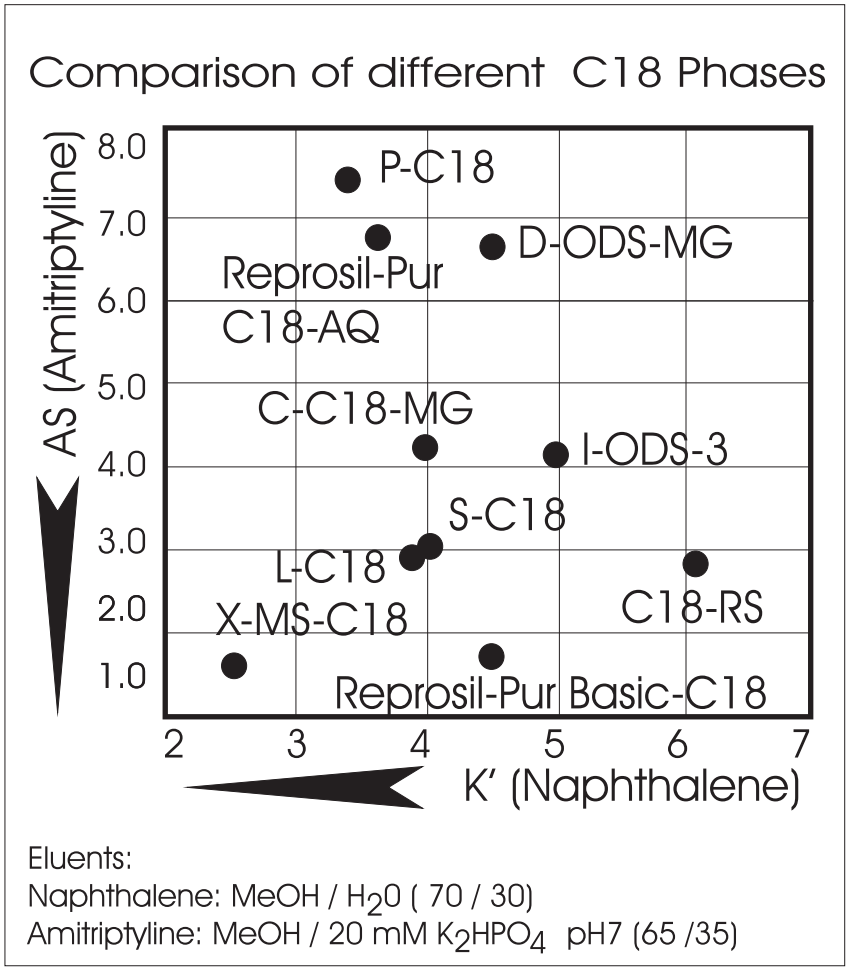
1.) Octadecyl monolayer phase
bonded to spherical silica particles
-with pore size of 100 A°,
-a surface area of 450 $m^2$/ g and
-a pore volumne of 1.1 ml/g.

2.) Impurities:
AL < 1 ppm,
Fe < 1 ppm,
Ti < 1 ppm,
Zr < 1 ppm

3.) *Double bound endcapping*

4.) pH -stability from 1.5 to 10,
because of the unique stable
endcapping

5.) Perfect peak symmetry even with
strong bases

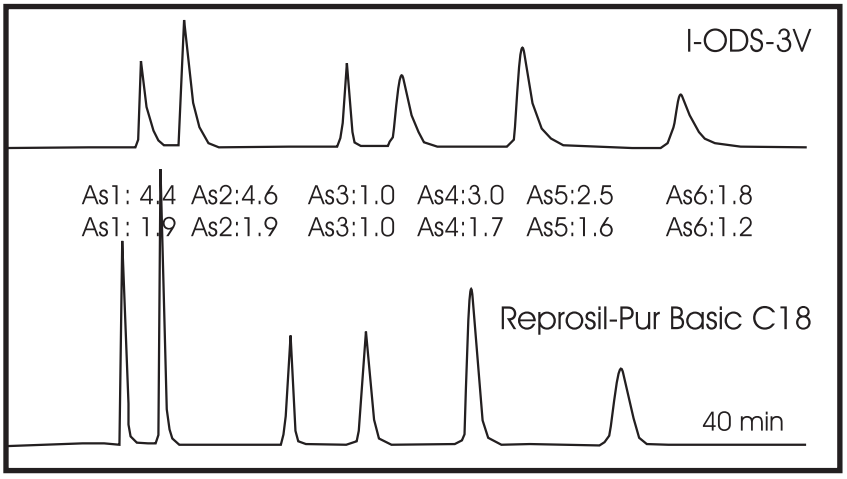



Eluents:
Naphthalene: MeOH / $H_20$ ( 70 / 30)
Amitriptyline: MeOH / 20 mM $K_2HPO_4$ pH7 (65 /35)

## Comparison of I-ODS-3V und Reprosil-Pur Basic-C18

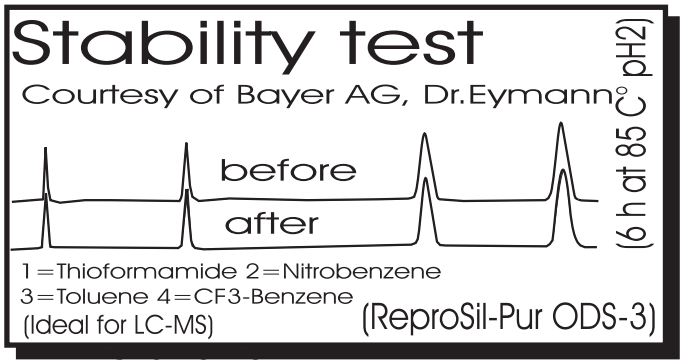
Sample of basic
compounds:

1.) Desipramine
2.) Nortriptyline
3.) Acenaphthene (I.S.)
4.) Imipramine
5.) Amitriptyline
6.) Trimipramine

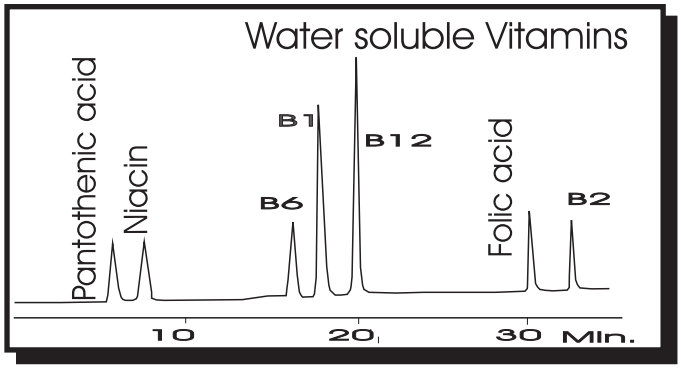



Column Size: 150 x 4.6 mm
Eluent: MeOH / 20 mM $K_2HPO_4$ / $KH_2PO_4$, Buffer-pH7 (70/30)
Flow rate: 1.2 ml / min.

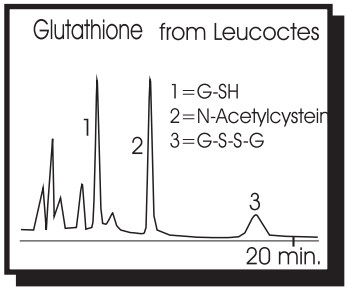
# ReproSil-Pur ODS-3




Stability test of Bayer-AG.
Good columns tolerate this drastic treatment.

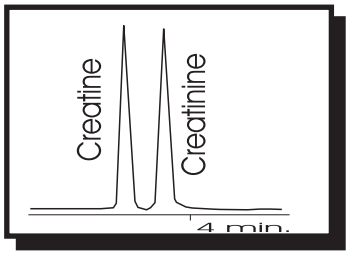



Column: ReproSil-Pur ODS-3, 5 µm (250 x4.6mm)
Eluent: A: 20 mM KH2PO4 pH-6,6
B: 20 mM KH2PO4 pH-6,6 / ACN (80/20)
Gradient: 0-5 min.: 0 %B; 5 - 25 min.: 0 - 75 %B;
25-30 min. 75-100 % B; 30-35 min.: 100 %B;
Flow rate: 1 ml/min., Detection: 254 nm



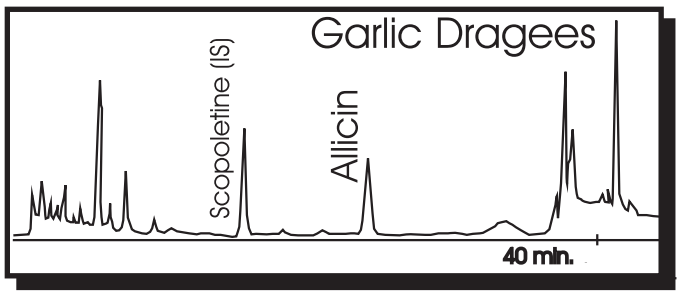

## Glutathione

ReproSil-Pur ODS-3,
5 µm, (250 x 4.6mm)
Eluent:
10mM Na2PO4 pH=2,7
+ 50 µM Na-Octylsulfate,
2% ACN, Flow rate:1 ml/min.

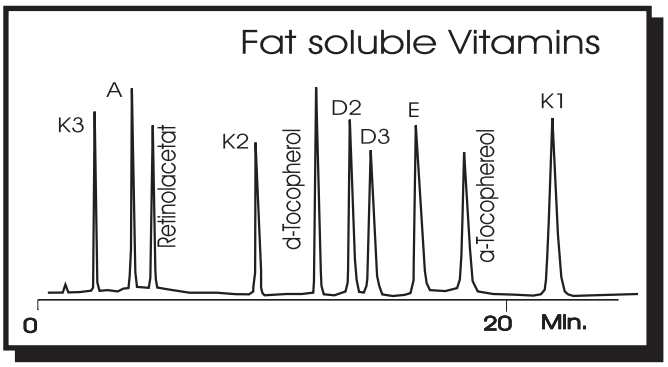



## Creatine/Creatinine

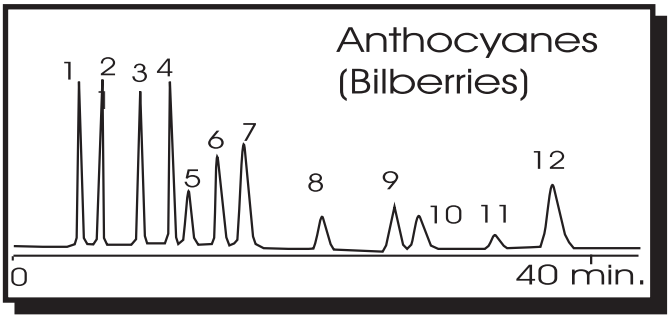
ReproSil-Pur ODS-3,
5 µm(150 x 4 mm)
Eluent: 1 mM Tert-Butyl-NH4Cl
in H20 Flow rate: 0,8 ml/min.
Detection: 235 nm



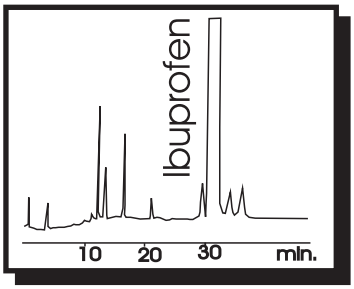

ReproSil-Pur ODS-3, 5 µm, (250 x 4 mm)
Gradient: A=H20pH2 (H3PO4) / MeOH (70/30), B=MeOH,
Flow rate: 0,8 ml/min, Detection:254 nm




ReproSil-Pur ODS-3, 5 µm (150 x 4.6 mm)
Eluent:100% ACN
Flow rate: 1 ml/min. Detection: 280 nm
Sample: Fa. Dr. Ehrenstorfer, Augsburg, Germany

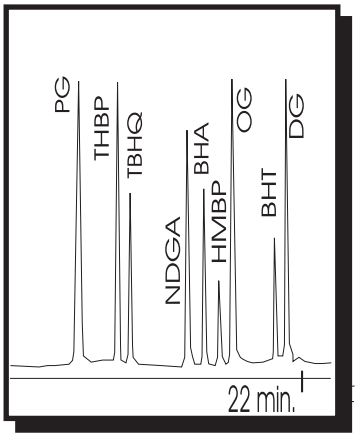



Column: ReproSil-Pur ODS-3, 5 µm(250x4.6mm)
Eluent: H20/CH3CN/HCOOH (81:9:10)
Detection: 546 nm, Flow rate:1 ml/min., Sample:
1=Delphinidin-3-galactoside, 2=Delphinidin-3-glucoside,
3=Delphinidin-3-rutinoside, 4=Cyanidin-3-glucoside,
5=Cyanidin-3-galactoside,6=Cyanidin-3-arabinoside,
7=Petunidin-3-glucoside, 8=Peonidin-3-galactoside,
9=Peonidin-3-glucoside, 10=Malvidin-3-galactoside,
11=Peonidin-3-arabinoside, 12=Malvidin-3-glucoside




## Ibuprofen
## Purity control

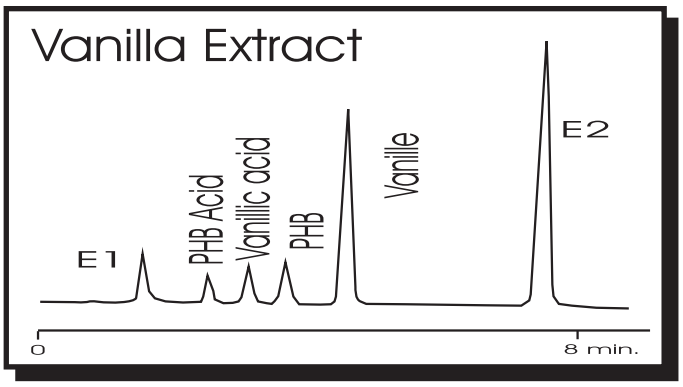
ReproSil-Pur 120 ODS-3, 5 µm
(150 x 2 mm)
Eluent: A=$H_20$ B=ACN
Gradient: in 10 min. linear
from 15% to 34% B,
then isocratic up to 45 min.
Flow rate: 0,6 ml/min. Detection:
254 nm



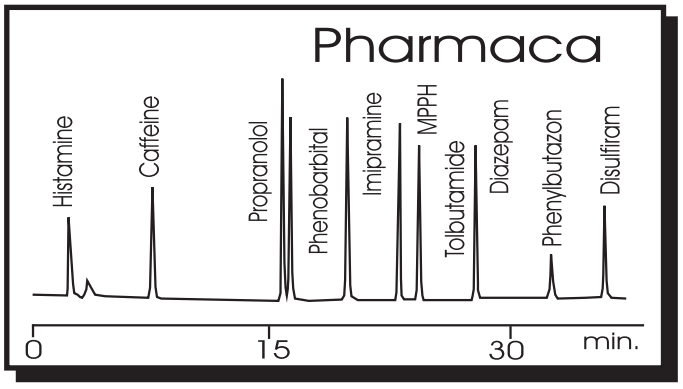

## Antioxidants
(from butter)

ReproSil-Pur ODS-3, 5 µm
(250 x 3 mm)
Eluent: A=Acetic Acid 5%
B=MeOH/ACN (1:1).
Gradient: from 40% B to
90% B in 10 min., then isocratic
for
12 min. Flow rate: 0,5 ml/min.,
Detection: 280 nm, Injection: 10 µl,
Temperature: RT

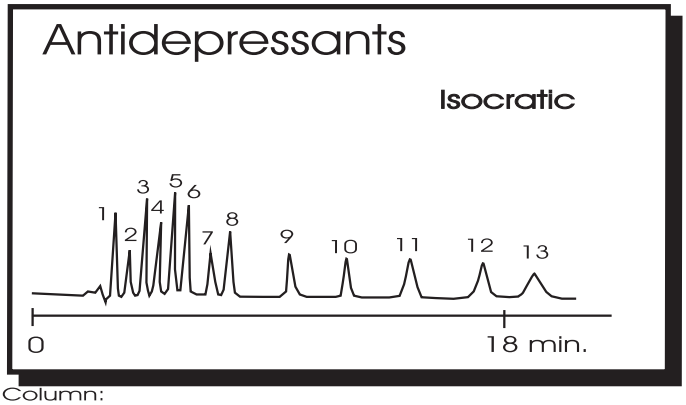
# ReproSil-Pur ODS-3



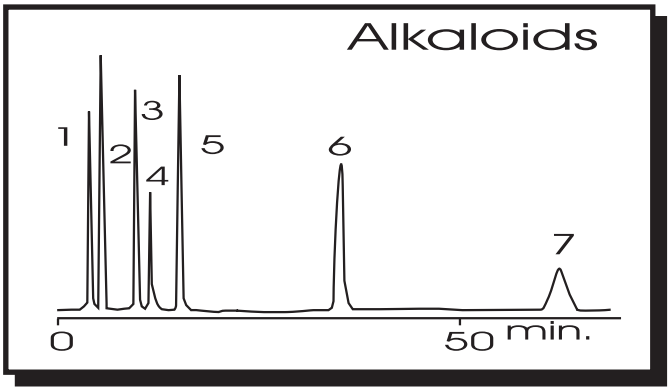

Column: ReproSil-Pur ODS-3, 3 µm
53 x 3 mm, Flow rate: 0,5 ml/min.
Detection: 254 nm, Injection: 3 µl
Gradient: A=ACN, B= Water
in 15 min.: from 10% A to 30% B



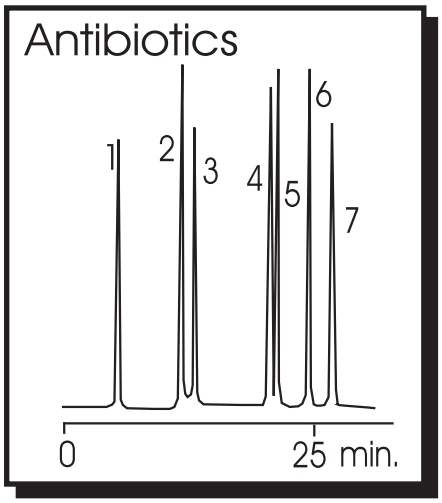

Column:
ReproSil-Pur ODS-3, 5 µm (250 x 4.6mm)
Eluent:
A: 2.5 l water+25 ml TEAP (Fluka) pH=3.2
B: ACN / A (70/30, V/V)
Flow rate: 1 ml/min. Temperature: 40 C°
Lin. Gradient: 20 % - 100% B in 30 min.



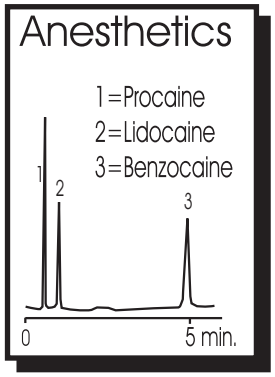

Column:
ReproSil-Pur ODS-3, 5 µm (250 x 4.6 mm)
Flow rate: 1 ml/min. Temperature: 45 C°
Sample:
1=Desmethylvenlafaxine 2=Desmethylmirtazepine
3=Milnacipram 4=Venlafaxine 5=Mirtazapine 6=IS
7=Desmethylcitalopram 8= Citalopram 9= Paroxetine
10=Fluvoxamine 11=Norfluoxetine 12=Fluoxetine
13=Sertraline



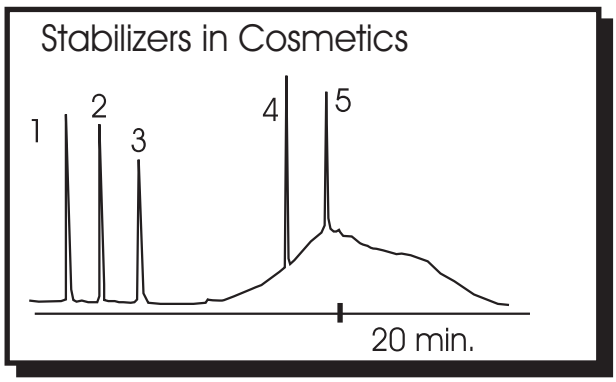

Column: ReproSil-Pur ODS-3, 5 µm
(125 x 4 mm), Flow rate: 0,5 ml/min.
Eluent:
A: 20 mM K-Hydrogensulfate / ACN (82/18)
B: 20 mM K-Dihydrogensulfate / ACN (60/40)
Gradient: 0-100% in 30 mins., then at 100%
Sample: 1=Scoplamine 2=Atropine Sulfate
3=Quinine 4=Sparteine Sulfate 5=Cinchonine
6=Papaverine 7=Narcotine




ReproSil-Pur ODS-3, 3 µm (125 x 4 mm)
Eluent A: 50 mM Ammoniumphosphat /
ACN (9/1) B: 50 mM Ammoniumphosphate /
ACN (1/1)Gradient: in 25 min. to 55 % B,
then isocratic
Sample: 1=Ampicillin, 2=Oxytetracycline
3=Tetracycline, 4=Chloramphenicol,
5=Oxolinic Acid, 6=Doxorubicine,
7=Nalidixic Acid

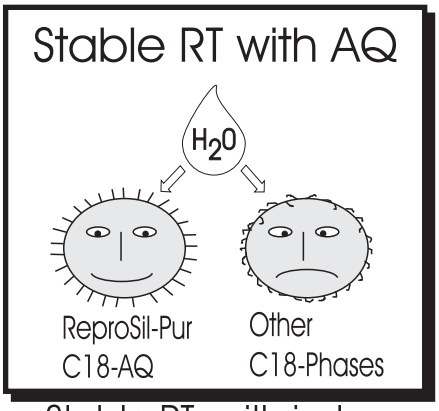



ReproSil-Pur ODS-3,
3 µm, (53 x 4 mm),
Eluent:
Triethylammonium-
acetate (=,05%,
pH=4) / ACN (80/20)
Flow rate: 1 ml/min.



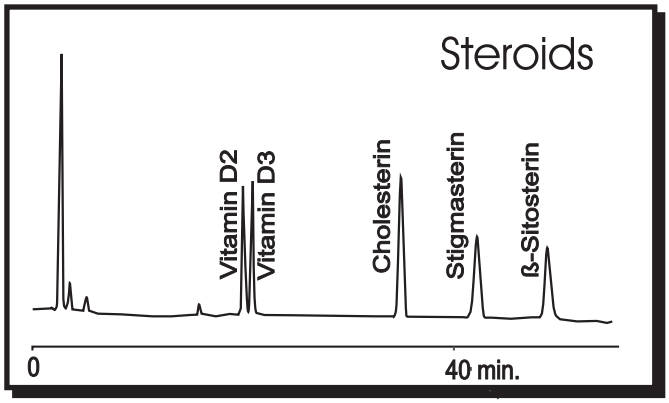

ReproSil-Pur ODS-3, 5 µm (150 x 4.6 mm
Eluent: Gradient A: Water B:MeOH
8 min.: at 50 % MeOH, then in 8 min.
onto 90%MeOH and 6 min. at 90% MeOH
Flow: 0,8 ml/min. Detection: 217 nm
Sample:
1.) Hydrochinon 2.) Hydrochinonmethylether
3.) Ethoxyphenat 4.) 4-Benzyloxyphenol
5.) Phenothiazinum

# ReproSil-Pur C18-AQ

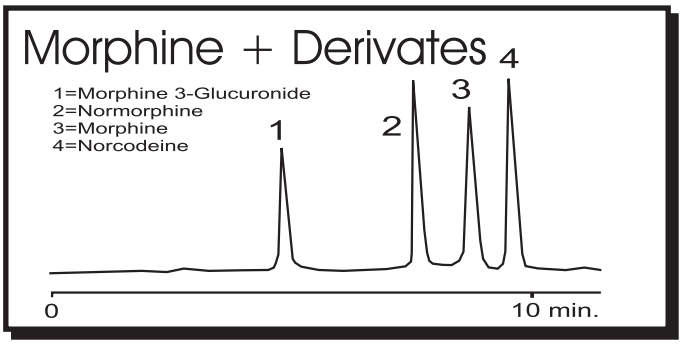



Stable RTs due to special endcapping!

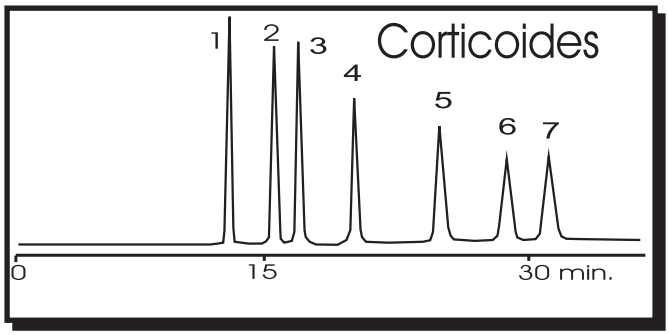
Stable RTs with just pure water as eluent!



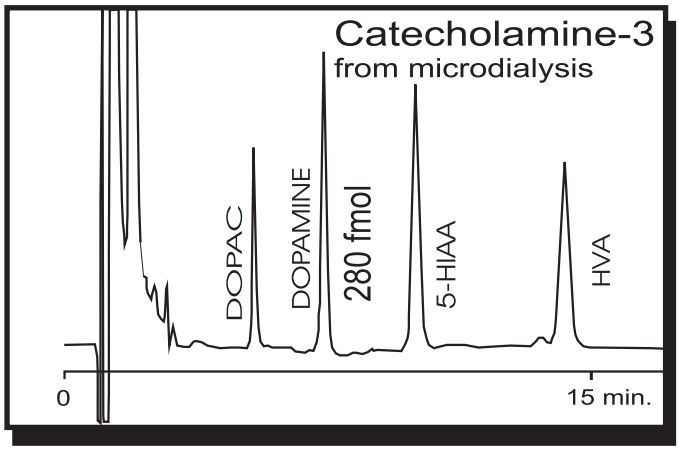

ReproSil-Pur C18-AQ, 5 µm (250x4 mm)
Eluent: MeOH/H20 (99/1) / ACN (90/10)
Flow rate: 1.5 ml/min. Detection: 214 nm



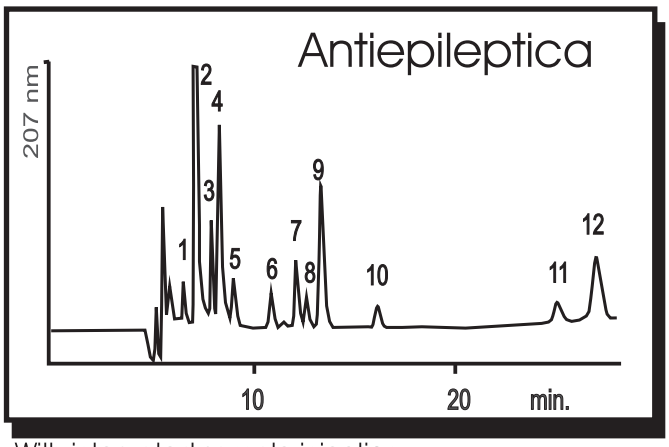

Column: ReproSil-Pur C18-AQ, 5 µm (250x3mm)
Eluent: 20 mM KH2PO4 (pH3) / ACN (95/5)
Det.: Fluorimetr., Flow rate: 0,4 ml/min




Column: ReproSil-Pur C18-AQ, 5 µm (250 x 4.6 mm)
Eluent: Tetrahydrofuran / MeOH / Water (25:3:72)
Det.: 247 nm, Temp.: 20 C°, Flow rate:1 ml/min.
Sample: 1=Prednison, 2=Prednisolon, 3=Cortisol, 4=Flucortisol
5=Methylprednisolon, 6=Triamcicolon (Volon), 7=Dexamethason




Column: ReproSil-Pur C18-AQ, 5 µm (150x4 mm)
Eluent: 1000 ml Water: Na-Acetate-Trihydrate 7.465gr.
Na2-EDTA 3.7 mg + Octanesulfonic acid sodium salt monohydrate 108,3 mg+ 110 ml MeOH, pH=4.1 with 100% Acetic acid. Flow rate: 1 ml/min.
Detection: electrochemical

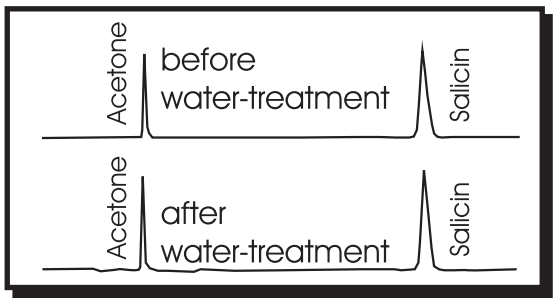



With integrated sample injection:
Guard: ReproSil DIBS, 12 µm (13x4 mm)
Column: ReproSil-Pur C18-AQ, 5 µm (250x3 mm)
Probe: 40 µm, Pump A: 0,2 M K2PO4 + 1%MeOH
Pump B: 50 mM KH2PO4 / MeOH/ACN (300/125/75)
Sample (serum): with added metabolites:
1=PEMA (5,2 ng/ml), 2=Ethosuximide (153,8 ng/ml), 3=Primidone (6,4 ng/ml), 4=Lamotrigine (10,4ng/ml), 5=Carbamazepindiol (1,6 ng/ml), 6=10-OH-Carbamazepine, 7=Phenobarbital (6,8 ng/ml), 8=Desmethylmesuximide (2,6 ng/ml), 9=Carbamazepinepoxide (9,8 ng/ml), 10=Oxycarbamazepine, 11=Phenytoine (3,9 ng)ml), 12=Carbamazepine (10,2 ng/ml)

# ReproSil-Pur C18-AQ

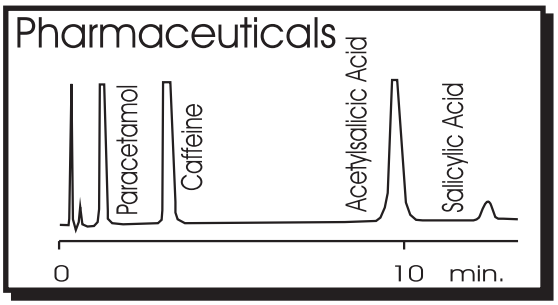
## Proof for the Stability of C18-Phase:

### Treatment with water



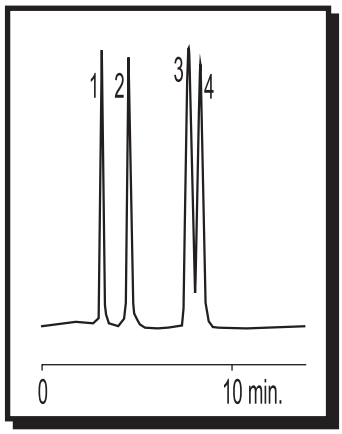

Test Eluent: MeOH/H20 (10/90)
Equilibration time: 20 min.; Treatment with pure H20, to be left over night.
Stable RTs even with high water content.

### Stable RTs for more than 1000 Injections

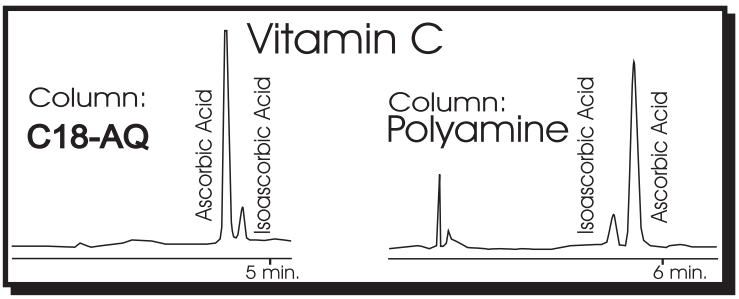



Courtesy of Dr. Rentschler GmbH

Column: ReproSil-Pur C18-AQ, 5 µm (125 x 4mm)
Eluent: ACN / MeOH / Acetic acuid / Water (40/80/51/900)
Flow rate: 1.5 ml/min. Detection: 275 nm Temperature: 30 C°
Injection: 10 µl



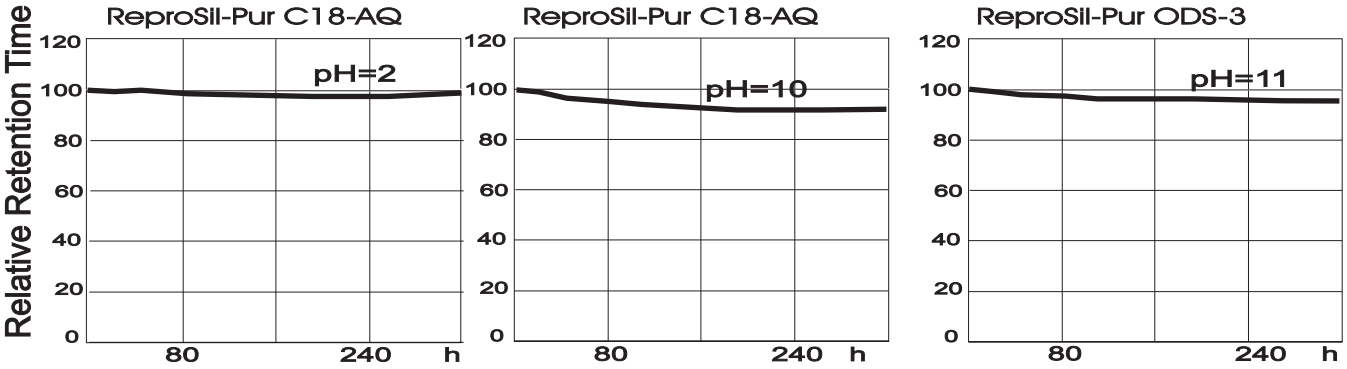

Native Amino Acids
Column: ReproSil-Pur C18-AQ,
5 µm (150 x 4.6 mm)
Eluent: H20
Temperature: 40 C°
Flow rate: 0,6 ml/min.
Detection: RI
1=Alanine
2=Valine
3=Isoleucine
4=Leucine



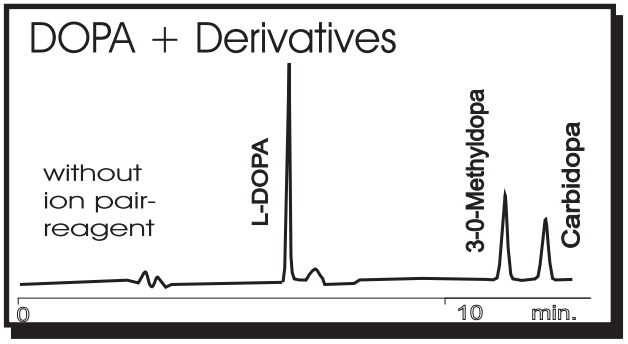

ReproSil-Pur C18-AQ, 5 µm,( 250x4 mm)
Eluent: 0,25 %ige Phosphoric acid, Flow: 1ml/min., Tem.:30C°, Injection: 20 µl, Det.: 214 nm
Stability Polyamine, 5 µm (250 x 4 mm)
Eluent: 50 mM Ammoniumdihydrogenphosphate / ACN (35/65)
Flow rate: 1,5 ml/min. Temp.:30C°, Injection: 20 µl, Det.: 214 nm

## pH-Stability : 1 to 10

Modified silicas are most stable between pH 2 - 7.
The rule is: The longer the carbon-chain, the more stable the phases.

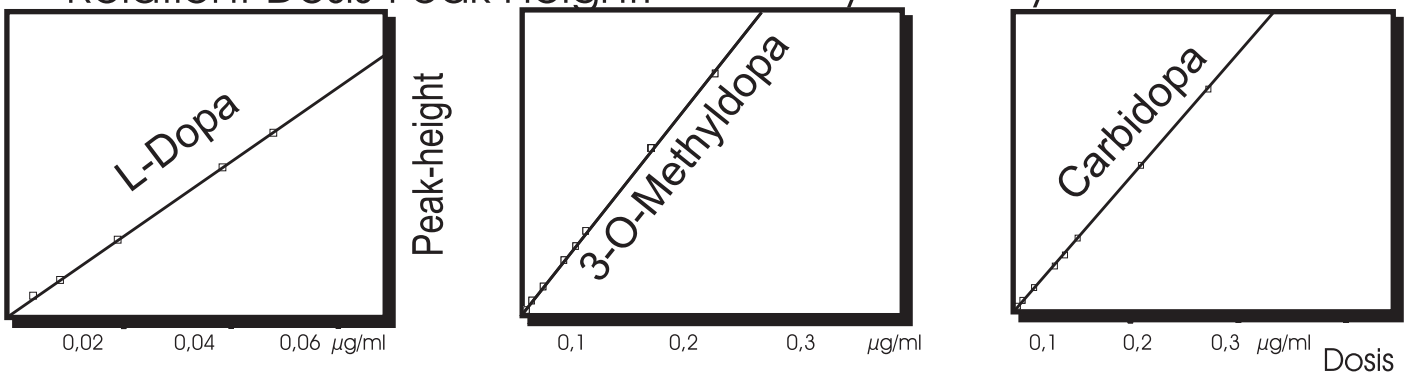


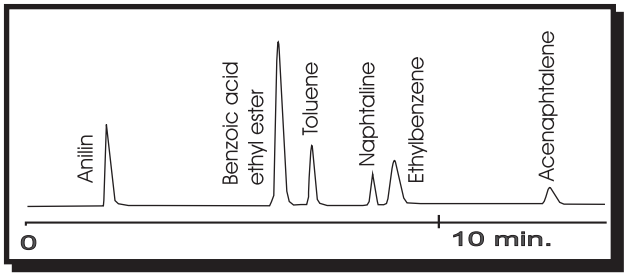
# ReproSil-Pur C18-AQ



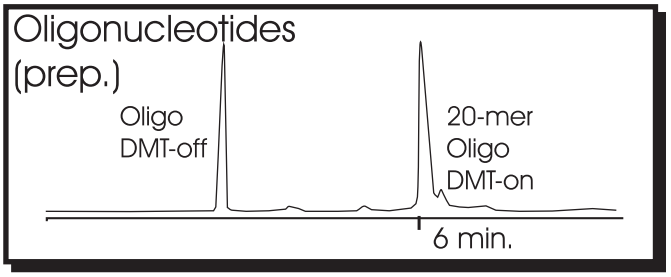

Column:
ReproSil-Pur C18-AQ, 3 µm
(150x4 mm)
Eluent: 50 mM NaH2PO4
(pH 2.4) / MeOH (90/10)
Flow rate: 0,7 ml/min.
Detection: Electrochemical.

## Relation: Dosis-Peak-Height: Linearity of Analysis:

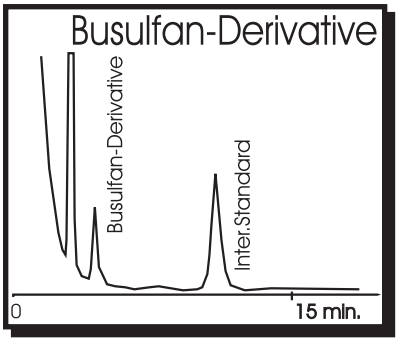


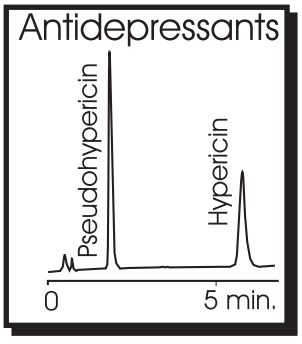

Column: ReproSil-Pur C18-AQ, 5 µm
(250x4 mm) Eluent: ACN / 1% Phosphoric acid (65/35)
Flow rate: 1 ml/min., Detection: 254 nm



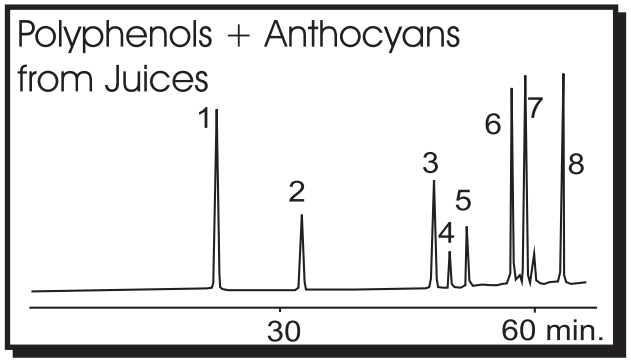

Column:ReproSil-Pur C18-AQ, 5 µm
(100 x 8 mm)+ Guard (30x8mm)
Eluent: 0,1 M TEAA / ACN Gradient: Start: 15/85
in 13 min. to 30/70




ReproSil-Pur C18-AQ,
3 µm (40x3 mm)
Eluent: 36% MeOH / H20
(20/80)
Flow: 0,8 ml/min.
Det.: 280 nm
Courtesy of Prof. Jacob,
Uni Klinikum Großhadern

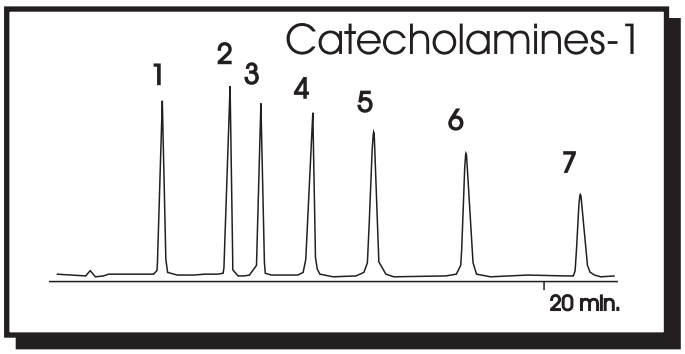



Column:
ReproSil-Pur C18-AQ,
5 µm,(125x4 mm)
Eluent:100g NaH2PO4/H3PO4
Buffer, pH=2,1 + 306 g MeOH +
85 g Ethylacetate
Flow rate: 1,7 ml/min.
Detection: 590 nm

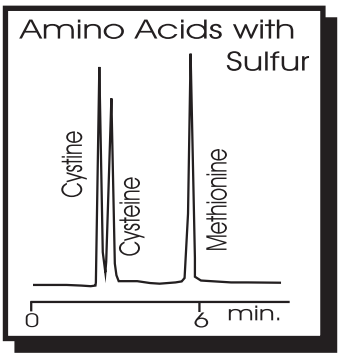



Column: ReproSil-Pur C18-AQ, 10 µm (250x4.6mm)
Eluent: A: H20/85% o-Phosphoric acid (99,5/0,5)
B: ACN / H20 / 85% o-Phosphoric acid (50/49,5/0,5)
Gradient: 0-5 min. 0% B; 5-45 min.- 0-25%B; 45-65 min.
25-80%B; 65-70 min. 80-100 %B
Flow rate :1 ml/min. Temp.: 25 C°, Det.: 280 nm and 525nm,
Sample: 1=Gallic Acid, 2=Protocatechinic Acid
3=Chlorogenic Acid, 4=Delphinidin-3-rutinoside
5=Cyanidin-3-rutinoside, 6=p-Cumaric Acid
7=Ferulic Acid, 8=Phloridzin

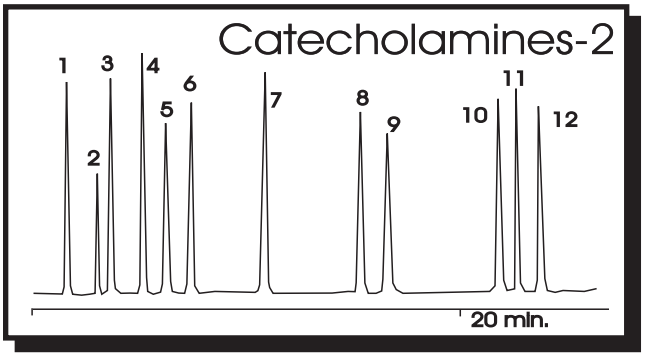
# ReproSil-Pur C18-AQ



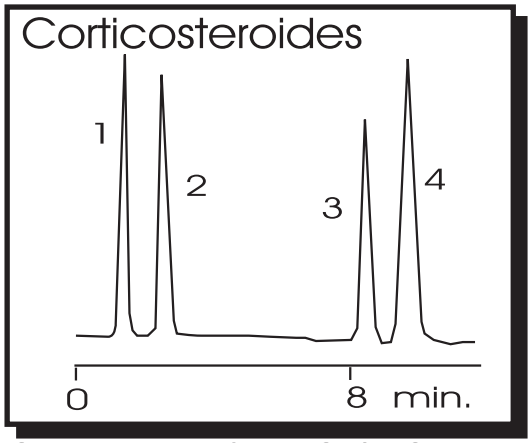

Column: ReproSil-Pur C18-AQ, 5 µm (150 x 4 mm)
Sample:
1=Noradrenaline, 2=3,4-Dihydroxyphenyl acetic Acid,
3=3,4-Dihydroxyphenylalanine, 4=Dopamine, 5=Epinin,
6=Homovanillic acid, 7=3-O-Methyldopa
Eluent:
6,9g NaH2PO4 + 37 mg EDTA + 150 mg Na-Octansulfonate
+ 60 ml ACN + 5 ml THF auf 1000 ml H2O
Temperature: Ambient, Detection: Electrochemical




Column:
ReproSil-Pur C18-AQ,
5 µm
250 x 4.6 mm,
Eluent: Water
Flow rate: 1 ml/min.
Detection: 210 nm



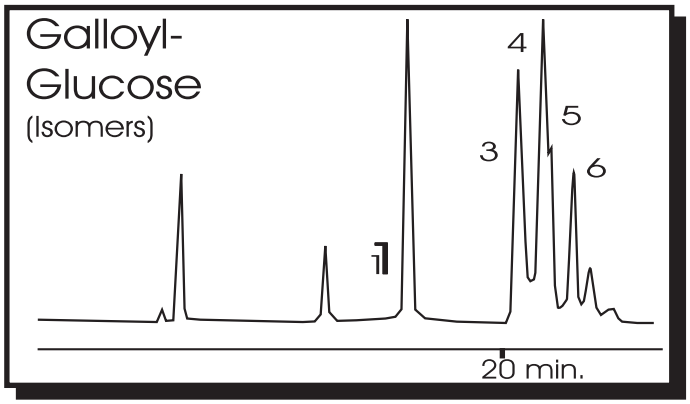

Column:
ReproSil-Pur C18-AQ, 5 µm (250 x 4 mm)
1=Noradrenaline, 2=Adrenaline, 3=D/L-3,
4-Dihydroxymandelic Acid, 4=3,4-Dihydroxy-
phenylalanine, 5=Dopamine, 6=Tyrosine,
7=D/L-Methoxy-4-Hydroxymandelic Acid,
8=Phenylalanine, 9=4-Hydroxy-3-Methoxyphenyl-
glycol, 10=5-Hydroxyindole-3-acetic Acid,
11=Vanillic Acid, 12=Homovanillic Acid
Eluent:
A=100 mM Na-Phosphate, pH=3.0 B=ACN,
Gradient: 20 min. 1% B, then 15 min. 15% B
Detection: 210 nm, Injection: 50 - 200 µl/ml



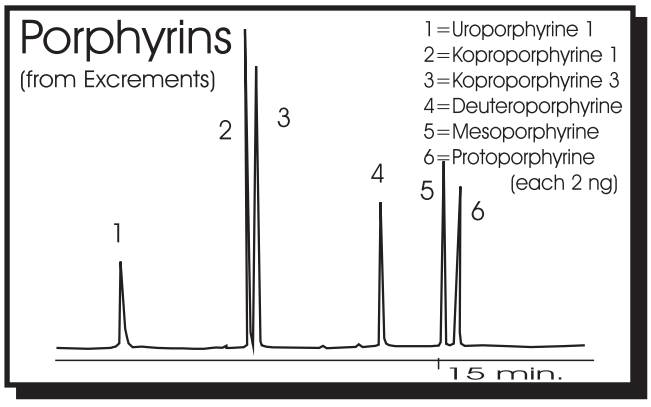

Column: ReproSil-Pur C18-AQ, 5 µm
125 x 4 mm, Eluent: H20/ MeOH (4/6)
Flow rate: 0,8 ml/min.
1=Cortisone 2=Hydroxycortisone
3=Corticosterone, 4=Cortisone Acetate

# ReproSil-Pur RP18-NE

NE= not endcapped!



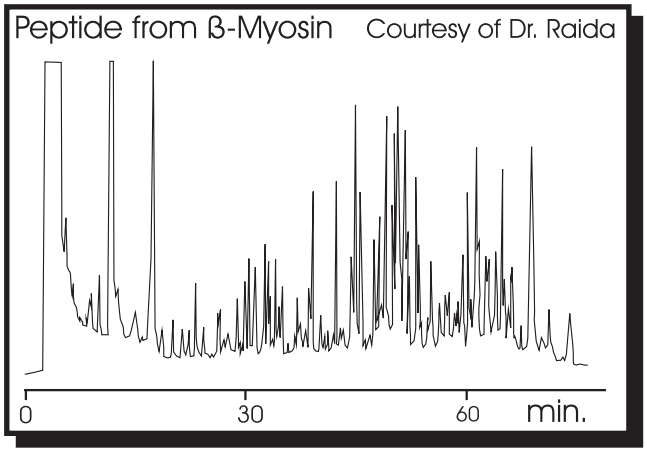

Column: ReproSil-Pur RP18-NE, 5 µm (250x4 mm),
Flow rate: 0,7 ml/min., Detection: 280 nm
Eluent: A=0.05 % H3PO4 B: ACN, Gradient



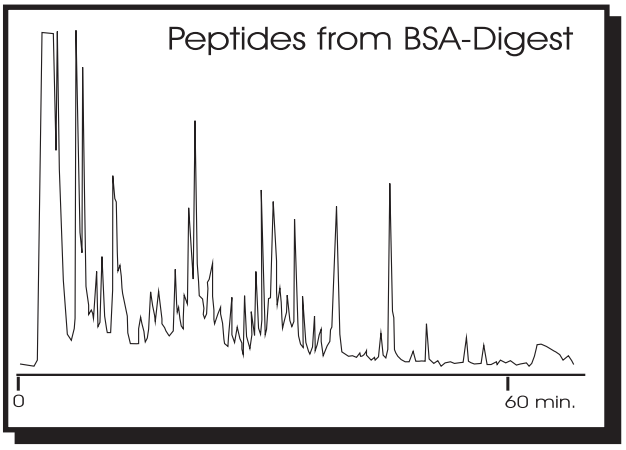

Column: ReproSil-Pur RP18-NE, 5 µm (125x4mm),
Flow rate: 1ml/min. Detection: 405/630nm Fluorimetr.
Eluent: A=10mm KHPO4, pH5.4 B=5mM Tetrabutyl-
ammoniumphosphate pH-7.3 in MeoH, Gradient

# Peptides and Proteins

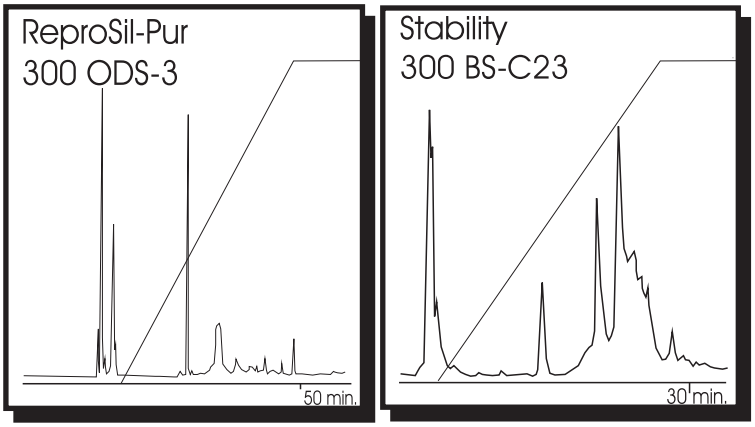
Peptide from ß-Myosin
(More than 100 peptides)
(Endoproteinase-Lys-C Digest)
Column: ReproSil-Pur 120 C18-AQ,
3 µm (100 x 1 mm iD) Eluent: A= $H_2O$ B=ACN
Gradient: 0,5 % increase/min. Flow rate: 20 µl/min.,
Detection: 220 nm



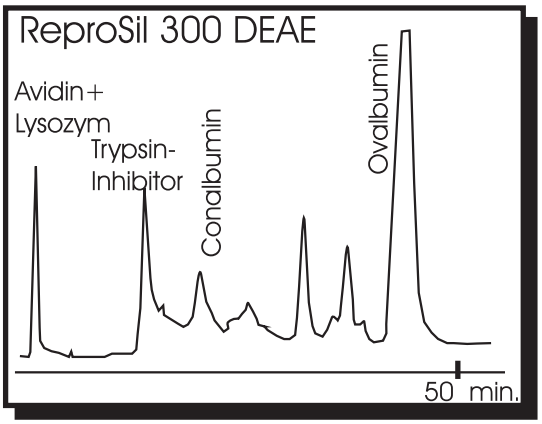

Peptides from BSA-Digest
(Trypt. Digest)
Column: Stability BS C23, 5 µm (100 x 1 mm iD)
Eluent: A= 0,06% TFA B=0,05 % TFA in ACN
Gradient: 1% B - 60% B in 120 min. then 5 min. to
95 % B, Flow rate: 20 µl/min., Detection: 215 nm



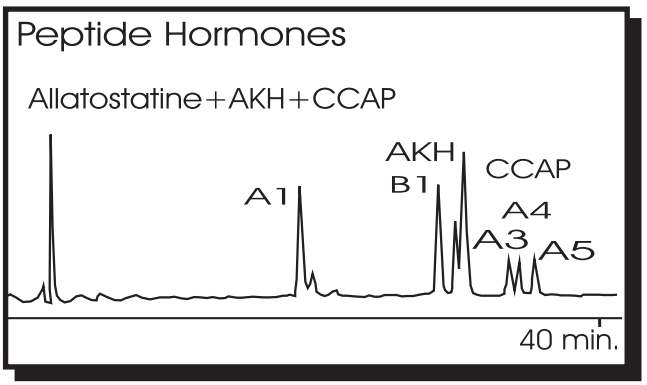

Mixture of Proteins from endothelial. Cell Culture



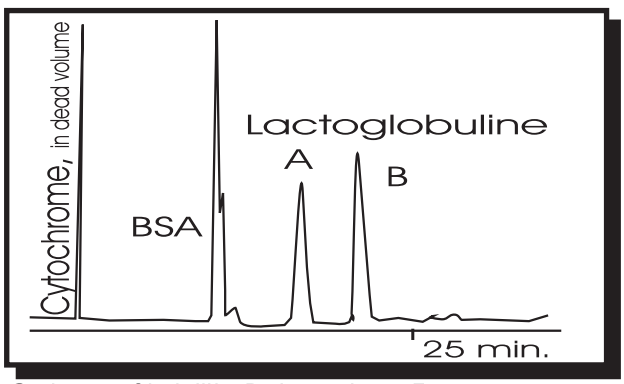

Eluent: Gradient 5% ACN / 0,1 % TFA to 95 % ACN / 0,1 % TFA
ReproSil-Pur 300 ODS-3 5 µm, 250 x 4 .6mm
Flow rate:1 ml/min.
Stability 300 BS-C23, 5 µm 125 x 3 mm,
Flow rate: 0,4 ml/min.




ReproSil 300 DEAE, 5 µm (250 x 4.6 mm)
Eluent:
A=50mM TrisHCl pH7.5 B=A+0,5 M NaCL
0-30% B in 30 min., Flow rate: 1 ml/ min.
Det.: 220 nm, Sample: Fresh egg white.




Column: ReproSil-Pur 300 ODS-3, 5 µm
(250x3 mm) Eluent: A: 0,115% TFA in Water B: 0,1%
TFA in ACN Gradient: 0- 40 min., 15% - 27% B
(0,3% / min.) Flow rate: 0,4 ml/min.,
Detection: 214 nm



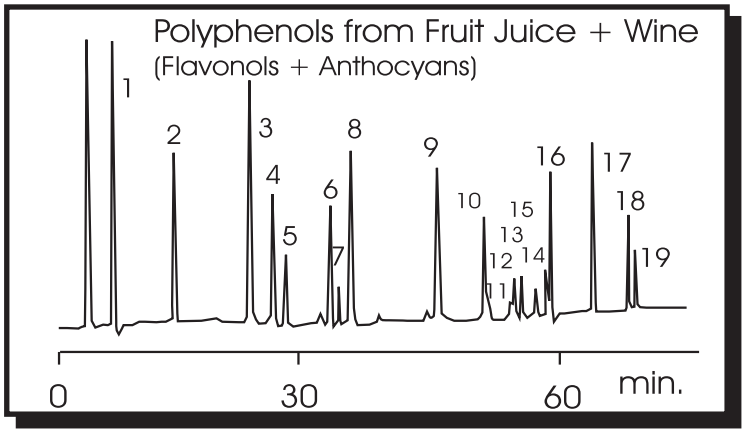

Column:Stability Polyamine, 5 µm
(53 x 4.6 mm) Eluent: A=20 mM TRIS-pH7,
B=1M NH4OAc-pH7 Gradient: 0 - 100% B in 20 min.
Detection: 280 nm, Flow rate: 1 ml/min.

# Fluofix + Fluosil

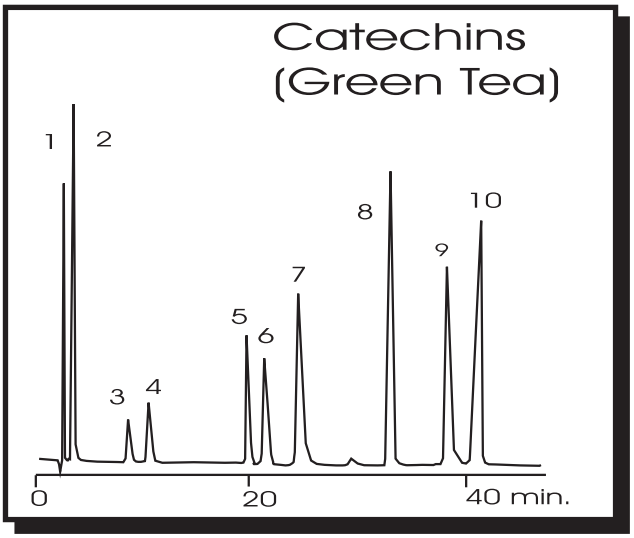
Fluofix is a fluorocarbonaceous , silane-bonded silica-gel phase for HPLC modified with: "Tridecafluoro-(4,4-Dimethyl heptyl" silane.

Advantages of Fluofix: 1.) Group separation of mixtures of basic and acidic compounds
2.) Precise separation of geometric isomers
3.) Iseparation of fluorinated or chlorinated compounds
4.) More stable than C4 or C8 phases

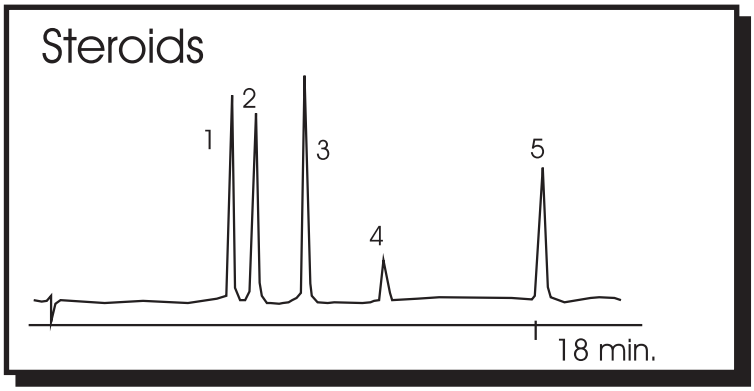

Eluent:
MeOH/H20 (65/35)
Flow rate: 1 ml/min.
Dimension:
150 x 4.6 mm
Temperature: 40 C°
Detection: 254 nm




Column: Fluofix 120E, 5 $\mu$m ( 250 x 4.6mm)
Flow rate: 1 ml/min.
Gradient: A: water / 85% o-Phosphoric acid (99,5 / 0,5, v/v)
B: ACN / Water / 85% o-Phopsphoric acid (50/49,9/0,5)
0-5 min.: 0% B, 5-45 min.: to 25% B, 45-64 min.: to 80 % B, 65-70 min.: to 100% B, until 84,9 min. 100% B.
Sample: 1=Gallic Acid, 2=Protocatechinic Acid, 3=Tyrosol, 4=(+)Catechine, 5=Procyanidin B2, 6=Coffee Acid, 7=Chlorogenic Acid, 8=(-)Epicatechine, 9=p-Cumaric Acid, 10=Ferulic Acid, 11=Quercetin-3-galactoside, 12=Quercetin-3-rutinoside, 13=Quercetin-3-glucoside, 14=Quercetin-3-arabinoside, 15=Phloridzin, 16=tr-Resveratrol, 17=Quercetin, 18=Kaempherol, 19=Phloretin

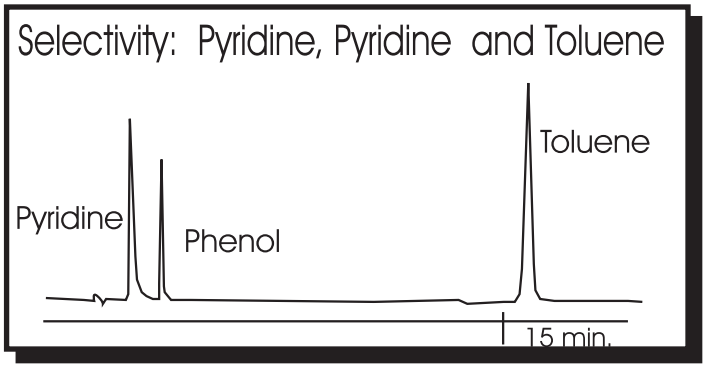



Column: Stability Fluosil, 5 $\mu$m
250 x 2 mm, Flow rate: 0.3 ml/min.
Temperature: 25 C°, Injection: 10 $\mu$m
Eluent: A: 0,1 % H3Po4 (85%)/ 49,9 % water / MeCN (v/v/v), B: 0,1 % H3Po4 (85%) in water
Sample: 1=Pyrogallol, 2=Gallic Acid, 3=EGC 4=Catechine, 5=Theobromine, 6=Epicatechine 7= Epigallocatechingallate, 8=Caffeine, 9=Epicatechingallate, 10=p-OH-Bs-methylester (IS)

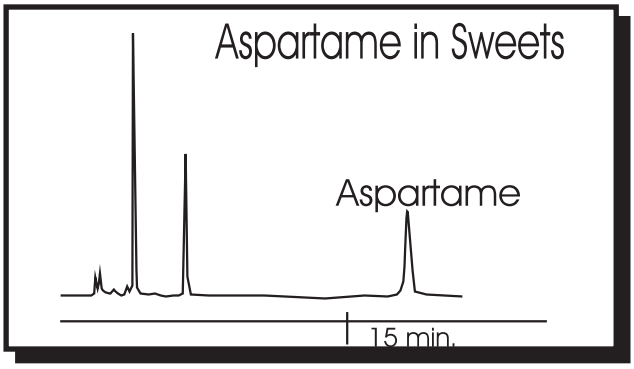



Column: Stablity Fluosil 3 $\mu$m, 100 x 2 mm
Eluent: A: Water (0,05% TFA)
B: ACN (0,04% TFA)
Gradient:
Sample:
1.) Prednisone 2.) Prednisolone
3.) Deltoxenol 4.) Hydrocortisone acetate
5.) Deltacortinene acetate

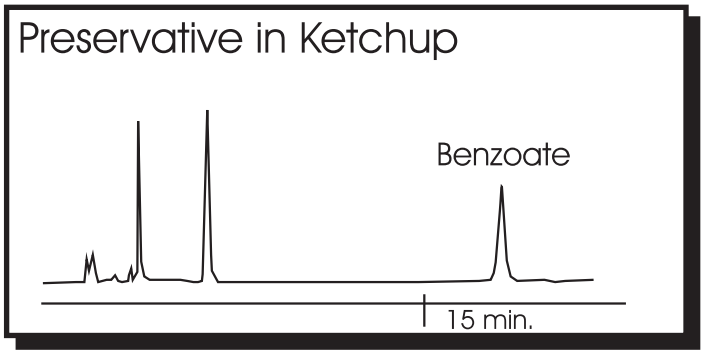
# ReproSil 100 C18



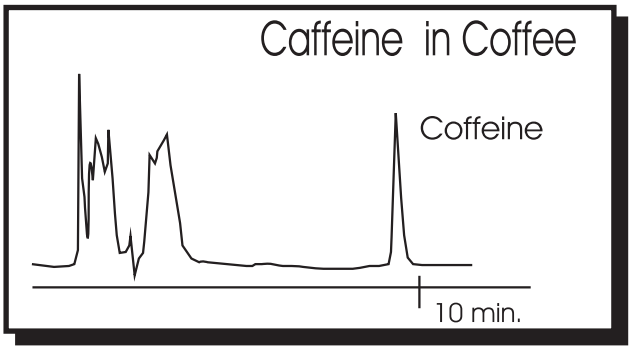

ReproSil 100 C18, 5 µm, 250 x 4 mm
Eluent. 25 mM NaPO4 / 50 % ACN
Flow: 1 ml/min. Det. UV 254 nm



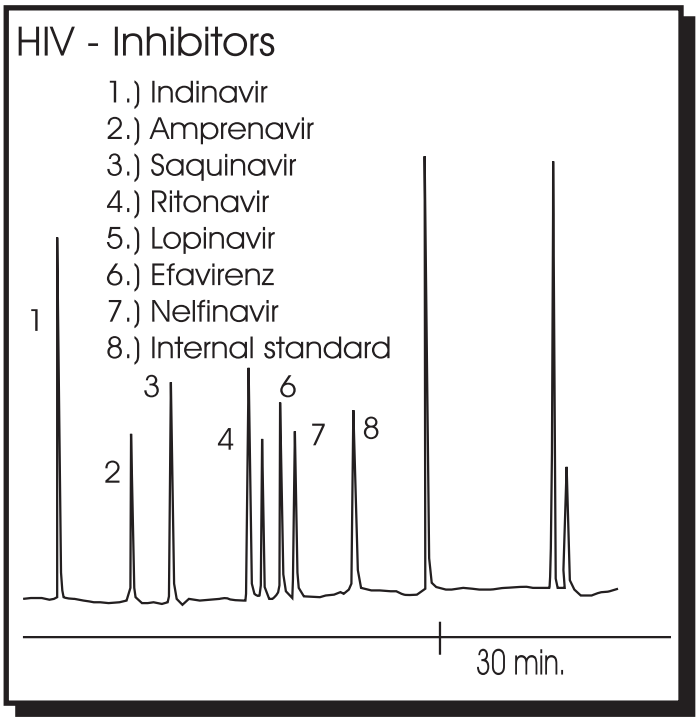

ReproSil 100 C18, 5 µm, 250 x 4 mm
Eluent: Water / MeOH / phosphoric acid
(40:59,5:0.5) Flow: 0.8 ml/min. Det.:203 nm



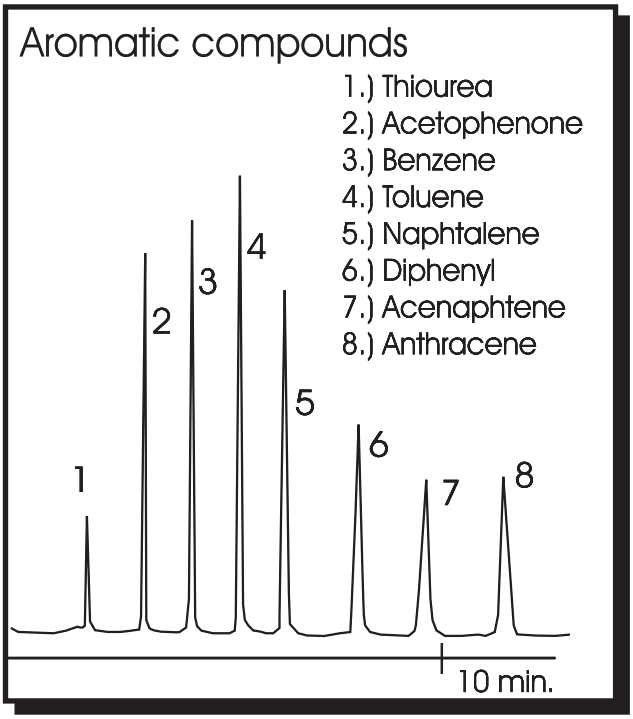

ReproSil 100 C18, 5 µm, 250 x 4 mm
Eluent: MeOH / Acetate buffer 40:60
Flow: 1 ml/min. Det.:UV 230 nm Temp.:35 C°
Sample: 10 µl Ketchup extract




ReproSil 100 C18, 5 µm, 250 x 4 mm
Eluent: MeOH / Acetate buffer 32:68
Flow: 0.8 ml/min. Det.:270 nm Temp:35 C°
Sample: 10 µl coffee extract




ReproSil (Stability)100 C18, 5 µm, 250 x 4.6 mm
Eluent: 50 mM Phophate buffer pH=5.65 / ACN
Gradient: from 36 % to 64 % ACN in 25 min.
then 19 min. at 80% ACN.

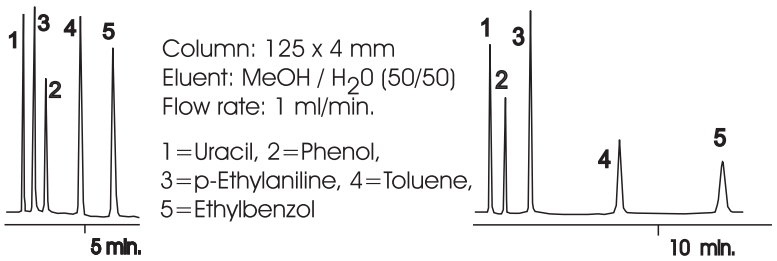



ReproSil 100 C18, 5 µm, 250 x 4 mm
Eluent: ACN / water 70:30
Flow: 1 ml/min. Det. UV 254 nm

# Stability BS-C23 (BS-C17, BS-C13)

BS-C23: A unique RP-phase with positive charge under a C18 C-chain.
BS-C17: A unique RP-phase with positive charge under a C12 C-chain.
BS-C13: A unique RP-phase with positive charge under a C-8 C-chain.

Stability BS-C23 Engelhardt-Test ReproSil C18



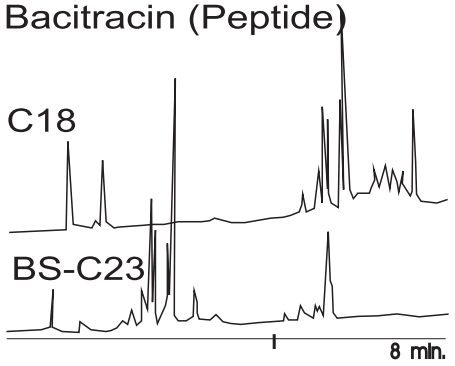

Column: 125 x 4 mm
Eluent: MeOH / $H_20$ (50/50)
Flow rate: 1 ml/min.

1=Uracil, 2=Phenol,
3=p-Ethylaniline, 4=Toluene,
5=Ethylbenzol

Comparison of different Selectivities

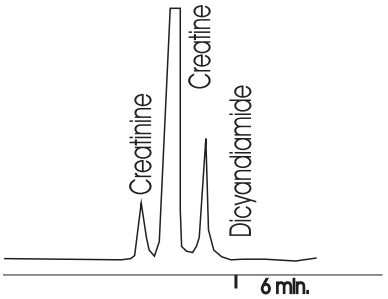
Different Selectivtiy!

Bacitracin (Peptide)



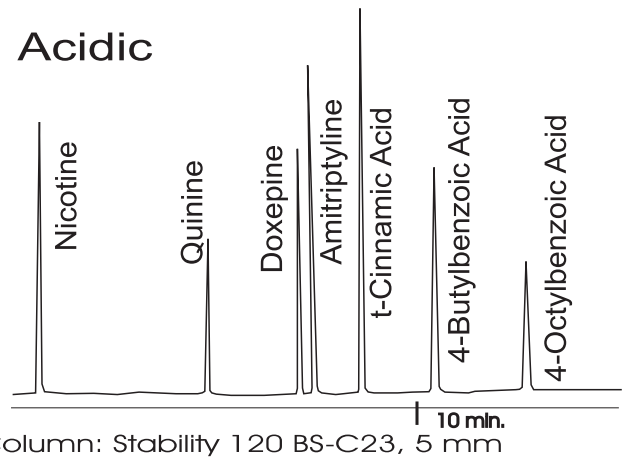

Column: Stability 120 BS-C23,
(100 x 4.6 mm) Eluent: A=0,1% TFA,
B=0,1% TFA in ACN Gradient: 15 - 40%
in 10 min., Flow rate: 1 ml/min.
Detection: 230 nm

C8-phases show two peaks only!



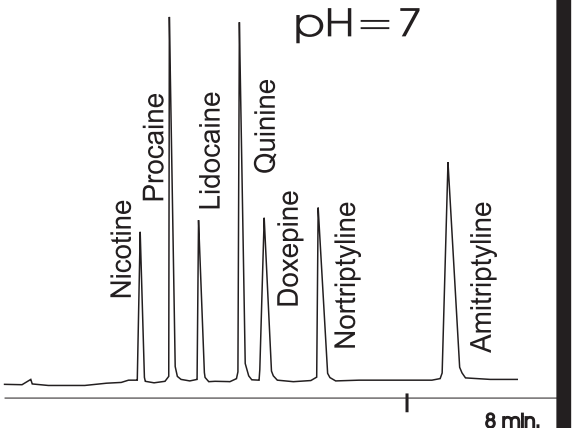

Column: Stability 100 BS-C23
(250 x 3 mm)
Eluent: $KH_2PO_4$ (2 g./ L), 0,4 ml/min.
Detection: 210 nm

Acidic



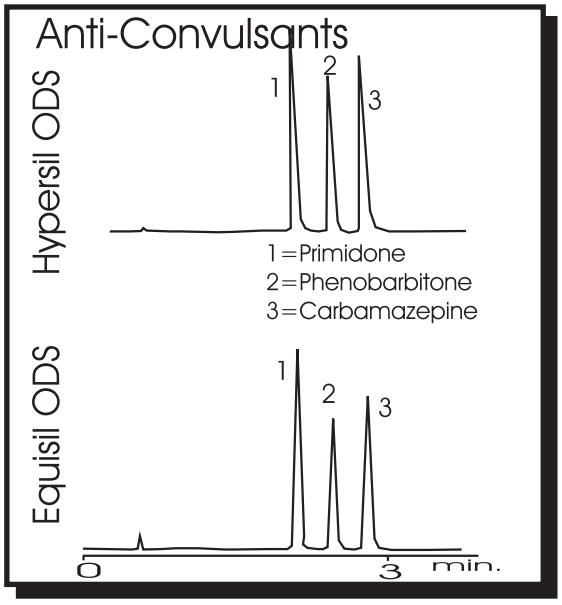

Column: Stability 120 BS-C23, 5 mm
(100 x 4.6 mm) Eluent: A=0,1 % TFA,
B=0,1% TFA in ACN, Gradient:
5 - 100% B in 10 min., Flow rate: 1 ml/min.

pH=7

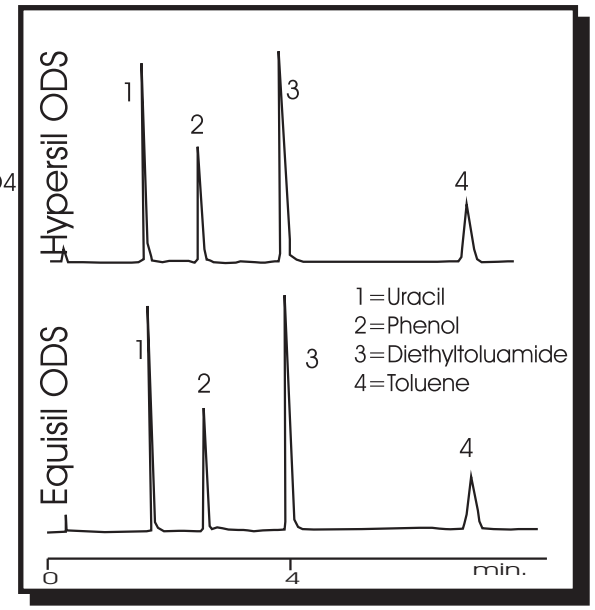


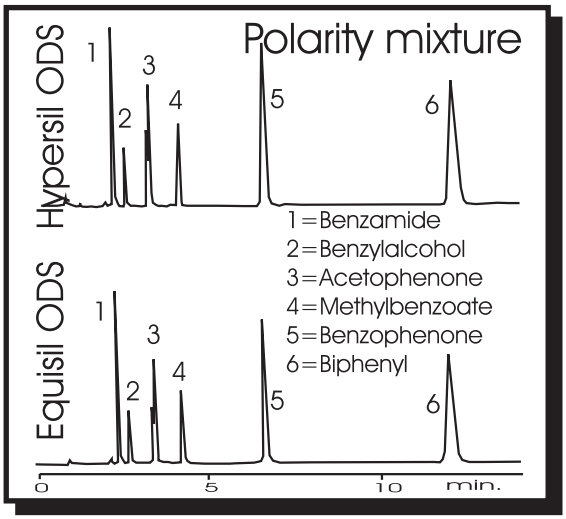

Column: Stability 120 BS-C23, 5 $\mu$m,
(150 x 4.6 mm) Eluent: MeOH /
20 mM $KH_2PO_4$ pH=7 (65/35)

# Equisil, an alternative for Hypersil

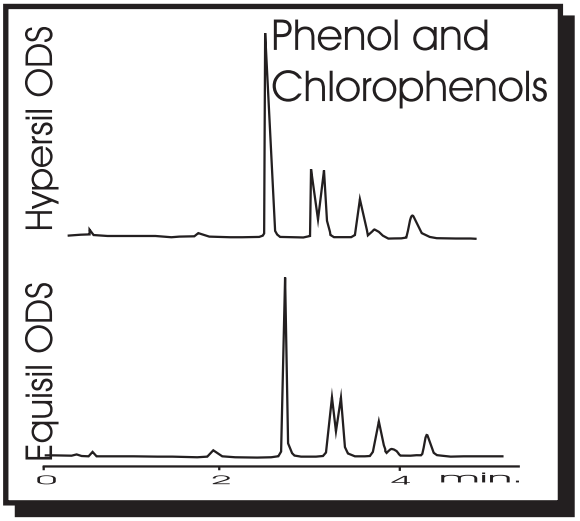


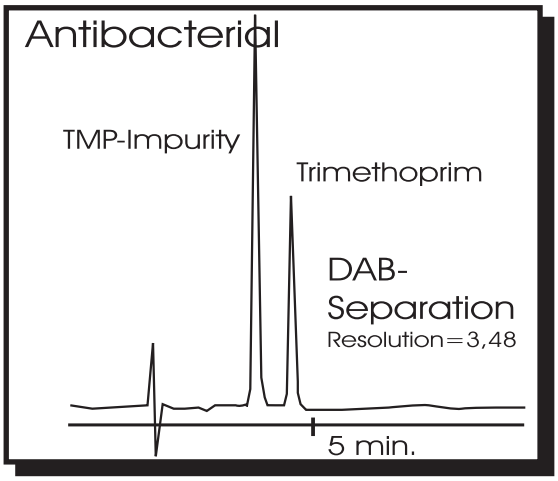

Columns:
150 x 4.6 mm
Eluent:
MeCN / 50 mM KH2PO4
50/50, pH3,
Flow rate:1 ml/min



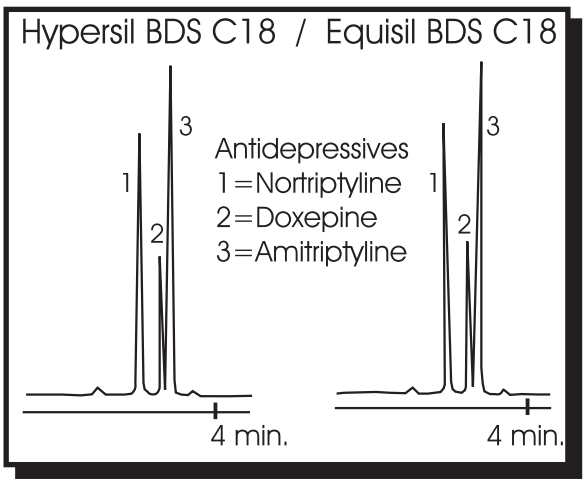




Columns:
150 x 4.6 mm
Eluent:
MeCN / 50 mM
KH2PO4
50/50, pH3,
Flow rate:1 ml/min



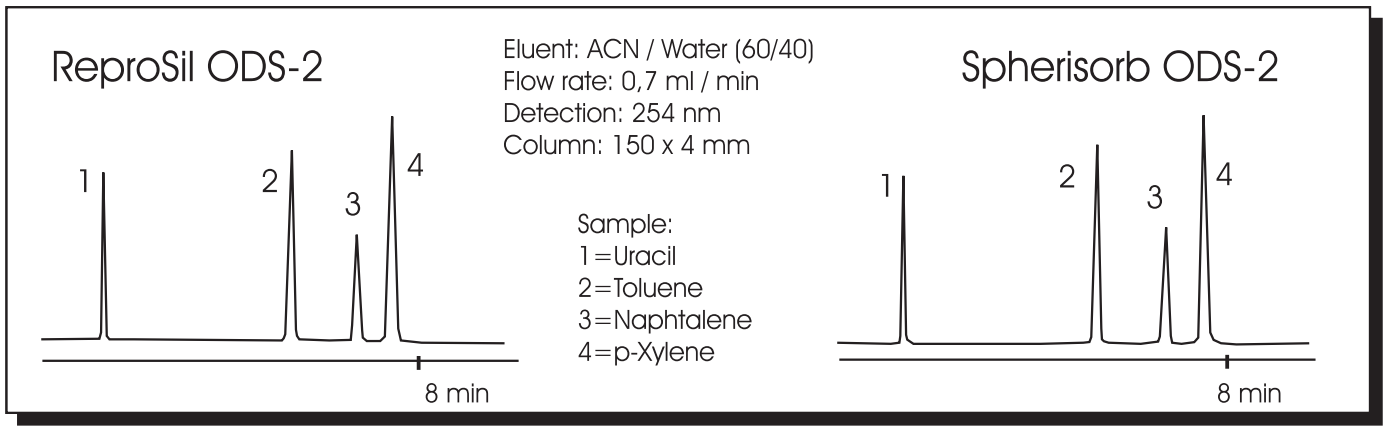

Column:
Equisil BDS C18, 5 µm, 250 x 4 mm,
Eluent:30% MeOH / NACIO4 (1.4 g/l)
pH=3.6, adjust. With phosphoric acid
Flow rate:1.3 ml/min.

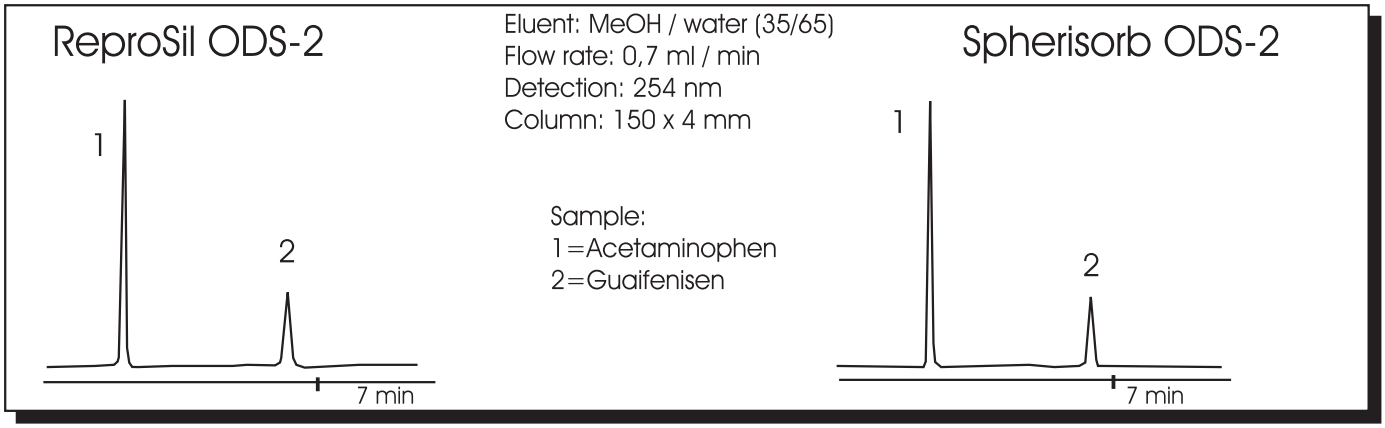


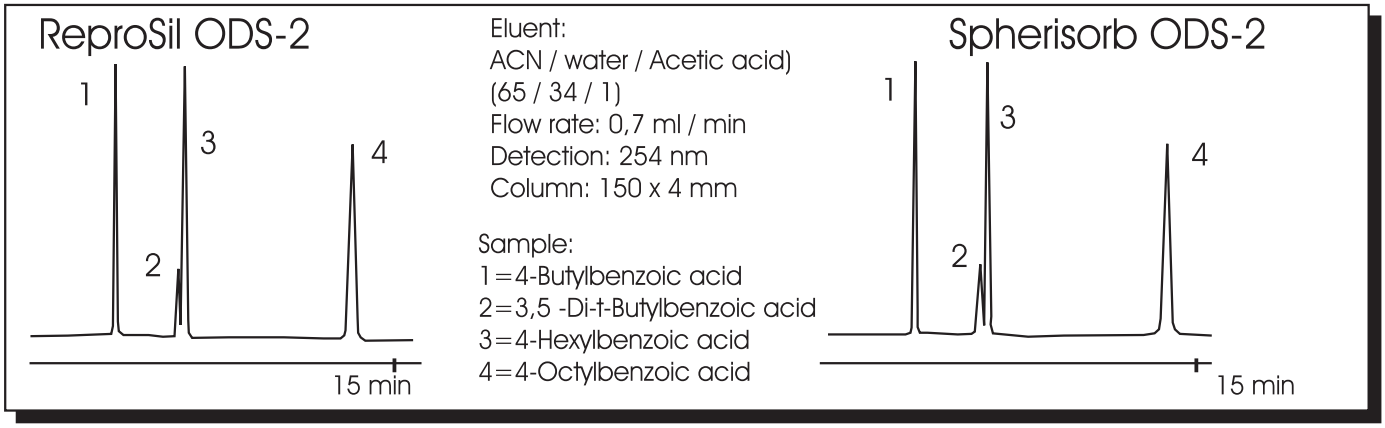

Eluent: 50% ACN / 50% 50 mM KH2PO4,
pH=3, Flow: 1 ml/min.
Column-dimension: 150 x 4.6 mm,
Particle size: 5 µm

# ReproSil ODS-2, an alternative for Spherisorb ODS-2

ReproSil (80) ODS-2 has the same chemical and physical parameters as Spherisorb ODS-2:
Pore size: 80 A°, surface area: 220 $m^2$/gr., Carbon loading: 12 %
As shown in the chromatograms:
ReproSil ODS-2 offers a convenient alternative for Spherisorb ODS-2.



# ReproSil 100 Chiral-NR ( OH, CA, PS)

ReproSil Chiral-NR is designed for chiral separations in **N**ormal- and **R**eversed phase mode. It has a similar broad chiral generality comparable with polysaccharide-derived chiral stationary phases.
The chiral selector, an aromatic compound, is covalently bound to the ultrapure Reprosil 100 Silica. Due to the 100A° pores and the big surface area of 350 $m^2/g$ the phase has an excellent preparative capacity. With a 250 x 10 mm column one can separate 50 – 250 mg / injection and with a 250 x 20 mm column 250 – 1000 mg/ injection.
The phase is stable in all commonly used eluents, including aqueous systems. Typical eluents in the normal-phase mode are mixtures of Hexane and 2-Propanol, in the reversed phase mode the typical eluents are MeOH / water mixtures. The best pH-range is between 2 und 7, and the columns are stable up to 300 bar.
The peak shape of acids can be improved with 0,1 % acetic acid, the peak shape of bases with 0,1 % TEA. With 0,01% Ammonium Acetate a good peak shape can be achieved both with acids and with bases. ReproSil Chiral-NR allows the separation of underivatized racemates like: Amides, Epoxides, Esters, Carbamates, Ethers, Aziridines, Phosphonates, Aldehydes, Ketones, Carboxylic acids, Alcohols and Ureas.
Aromatic rings and a Oxygen atom ( Carbonyl, hydroxyl function) very near to the chiral centre are important for the chiral recognition.

**Examples for Separations:**
The most commonly used column dimension is 250 x 4.6 mm with a flow of 1,5 ml / min.
**Normal Phase:**

| | |
|---|---|
| Abscisic acid: | Eluent: Hexane / IPA (85/15) + 0,1 % Acetic acid |
| Anisoin: | Eluent: Hexane / IPA (80/20) + 0,5 % Acetic acid |
| Benzoin: | Eluent. Hexane / IPA (80/20) + 0,5 % Acetic acid |
| Bupivacaine: | Eluent: Hexane / IPA (80/20) + 0,1% TEA |
| Bromacil: | Eluent: Hexane / IPA (98/2) |
| Cycloprofen: | Eluent: Hexane / IPA (80/20) + 0,1 % Ammonium acetate |
| Cyclophosphamid: | Eluent: Hexane / Ethanol (95/5) |
| Chlormezanone: | Eluent: Hexane / IPA (60/40) |
| 2,2'-Diamino-1,1'Binaphthyl | Eluent: Heptane / Ethanol ( 90 / 10) |
| Dihydrotertabenazine: | Eluent: Hexane / IPA (60/40) + 0,1 % TEA |
| Fenoprofen: | Eluent: Hexane / IPA (98/2) + 0,1 % Acetic acid |
| Hydrobenzoin: | Eluent: Hexane / IPA (95/5) |
| Ibuprofenol: | Eluent: Hexane / IPA (99/1) |
| Ibuprofen: | Eluent: Hexane / IPA (90/10) + 0,01 % Ammonium acetate |
| Indapamide: | Eluent: Hexane / IPA (50/50) |
| Ketamine: | Eluent: Hexane / IPA (99/1) + 0,1 % TEA |
| Ketorolac: | Eluent: Hexane / IPA (98/2) + 0,1 % TFA |
| Ketopropfen: | Eluent: $CH_2Cl_2$ / Hexane / Ethanol (47/47/6) + 0,01 M Amm. Acetate |
| Lorazepam: | Eluent: Hexane / IPA (70/30) + 0,1 % Acetic acid |
| Loxoprofen: | Eluent: Hexane / Ethanol (85/15) + 0,01 M Ammonium acetate |
| 2-Methyl-1-Indanone: | Eluent: Hexane / IPA (99/1 |
| Mecoprop: | Eluent: Hexane / IPA (99/1) + 0,1 % Acetic acid |
| Metolazone: | Eluent: Hexane / Ethanol (55/45) |
| α-Methoxyphenyl-Acetic acid: | Eluent: Hexane / Ethanol (90/10) + 0,01 % Ammonium acetate |
| N-(1-(4-Bromo-Phenyl)-2-methylene-3-oxo-Butyl) –4-Methyl-Benzenesulfonamide: | Heptane / Ethanol (90/10) |
| Nadolol: | Eluent: Hexane / Ethanol (78/22) + 0,01 M Ammonium acetate |
| Naproxen: | Eluent: Hexane / IPA (60/40) + 0,1 % Acetic acid |
| Nicardipine: | Eluent: Hexane / IPA (73/27) + 0,1 % Acetic acid |
| Nirvanol: | Eluent: Hexane / IPA (80/20) |
| Ofloxacin: | Eluent: $CH_2Cl_2$ / Hexane / Ethanol (43/43/14) + 0,01 M Amm. acetate |

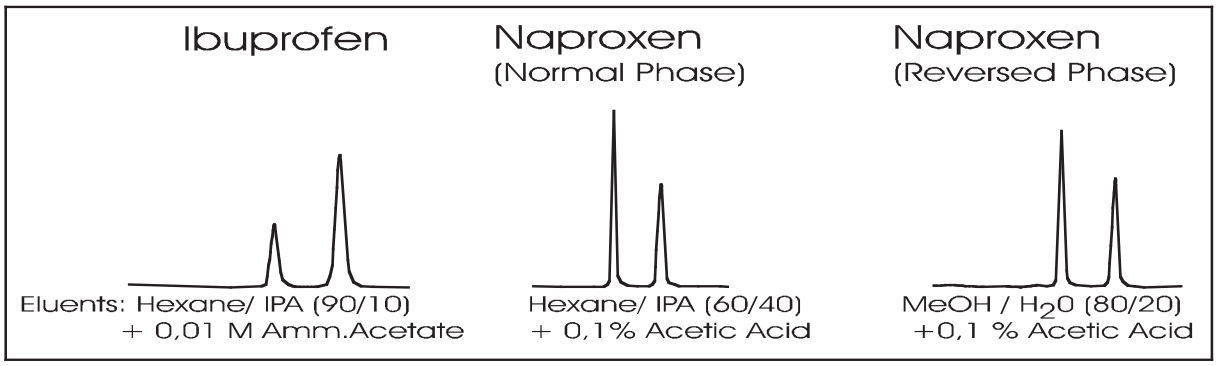
| | |
|---|---|
| Oxazepam: | Eluent: Hexane / IPA (75/25) + 0,01 % Ammonium acetate |
| Permethrin: | Eluent : Hexane + 0,2 % IPA |
| 2-Phenylcyclopropan-Carboxylat: | Eluent: Hexane / IPA (99/1) |
| Proglumide: | Eluent: Hexane / IPA (75/25) + 0,1 % Acetic acid |
| Propafenone: | Eluent: $CH_2Cl_2$ / Hexane / 0,01 M Ammonium acetate (47/47/6) |
| Resmethrin: | Eluent: Hexane |
| Styrene-Oxid: | Eluent: Hexane / IPA (99/1) |
| Stilbene Oxid: | Eluent: Hexane / Ethanol ( 90 / 10) |
| Sulfinpyrazone: | Eluent: Hexane / Ethanol (75/25) + 0,15 M Ammonium acetate |
| Temazepam: | Eluent: Hexane / IPA (80/20) + 0,1 % Acetic acid |
| Terfenadine: | Eluent: Hexane / Ethanol (97/3) + 0,01 m Ammonium acetate |
| Tiaprofenic acid: | Eluent: Hexane / IPA (80/20) + 0,1 % Acetic acid |
| Tolperisone: | Eluent: Hexane / IPA (99/1) + 0,1 % TEA |
| Trolox: | Eluent. Hexane / IPA (95/5) + 0,1 % Acetic acid |
| Vanilmandelic acid: | Eluent: Hexane / Ethanol (85/15) + 0,01 M Ammonium acetate |
| Warfarin: | Eluent: Hexane / IPA (65/35) + 0,1 % Acetic acid |
| Zopiclone: | Eluent: $CH_2Cl_2$ / Ethanol (95/5) + 0,01 M Ammonium acetate |

## Reversed-Phase:

| | |
|---|---|
| Isradipine: | Eluent: MeOH / $H_20$ (63/37) |
| Kynurenine: | Eluent: MeOH / $H_20$ (65/35) + 0,1 % Acetic acid |
| Mandelic acid: | Eluent: $H_20$ + 0,1 % Acetic acid |
| Naproxen: | Eluent: MeOH / $H_20$ (80/20) + 0,1 % Acetic acid |
| Nimodipine: | Eluent: MeOH / $H_20$ (65/35) |
| p-Chloro-Warfarin: | Eluent: MeOH / $H_20$ (85/15) + 0,1 % Acetic acid |
| Warfarin: | Eluent: MeOH / $H_20$ (70/30) + 0,1 % Acetic acid |

**Method development for Normal-Phase Separations:**
1.) Start off with a mixture of Hexane / IPA (50/50).
2.) If the RT is too short, add less IPA; if the RT is too long, add more IPA.
3.) Peak-Tailing
with acids: use 0,1 % Acetic acid,
with bases: use 0,1 % TEA.
You can improve the peak shapes in both cases with 0,01 % Ammonium acetate.
4.) The method can be further optimized by replacing Hexane with Heptane and / or IPA with Ethanol.

**Examples:** Reprosil Chiral-NR, 8 µm, 250 x 4.6 mm, Art.No.: r18.nr.s2546



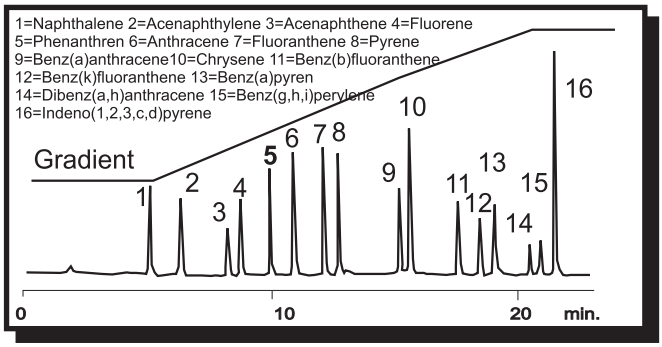

## Other chiral phases from Reprosil family are:

-**Reprosil Chiral-OH** – for chiral aromatic compounds with **OH** at the chiral centre, like Aryl Carbinols.
-**Reprosil Chiral-CA** - for chiral aromatic compounds with a **C**arboxylic **A**cid group, like Ibuprofen, Etodolac.
**-Reprosil Chiral-PS** – for chiral aromatic compounds with **P** or **S,** like Sulfoxides, Phosphines, Phosphonates.

# Environmental Analysis

## Analysis of 16 PAHs (EPA 610)

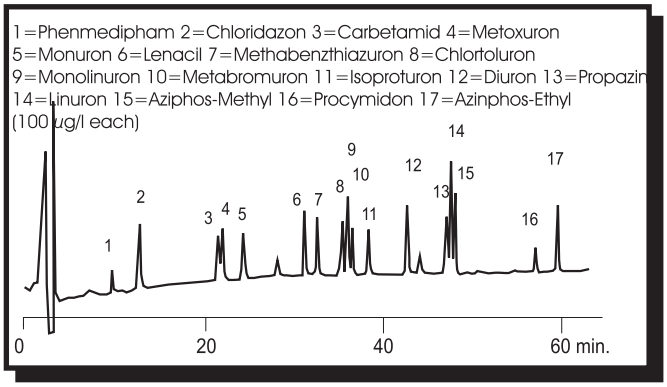
Column: ReproSil PAH-EPA, 5 µm 250 x 4 mm)
Eluent: A=H20 B=ACN, Gradient: 0 min. 50% B, 5 min. 50% B,
15 min. 85% B, 20 min. 100% B, 25 min. 100% B,
Opt. temperature: 20-30 C°, Detection: Fluor. or UV at 254 nm




## Pesticides

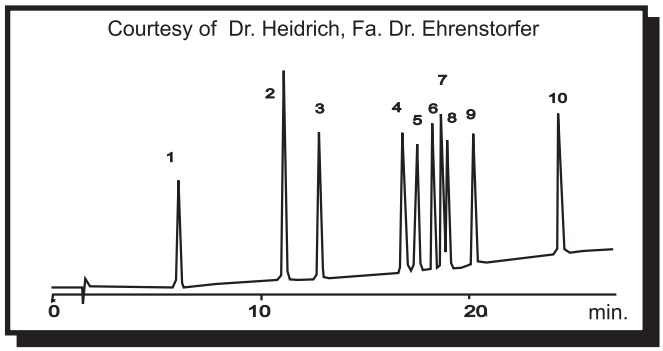
### Column: ReproSil Pestizid III, 5 µm (250 x 4 mm)

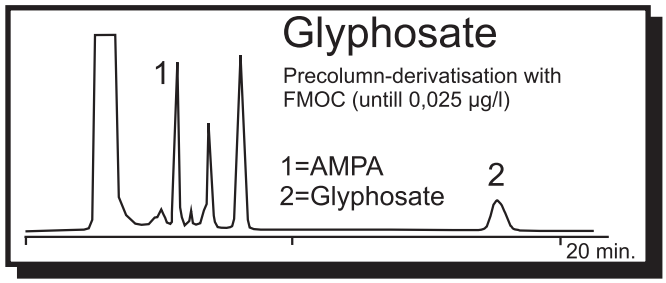
Eluent: A=85% 1 mM NH4-Acetate + 15% ACN B=95% ACN + 5% NH4-Acetate
Gradient: 0 min. 0% B, 55 min. 55% B, 75 min. 100% B
Flow rate: 0.9 ml/min. Detection: 230 nm Injection: 50 µl




## Pesticides (Urea-Derivates)

Column: ReproSil-Pur C18-AQ, 5 µm (250 x 3 mm)
Eluent: A=H20 (0,5% H3PO4) B=ACN
Gradient: 4:1 to 1:4 in 30 Min. Flow: 0.5 ml/min. Injection: 5 µl
Detection: 243 nm
1=Fenuron 2=Metoxuron 3=Monolinuron 4=Chlortoluron 5=Isoproturon
6=Fluometuron 7=Monuron 8=Diuron 9=Metobromuron 10=Linuron

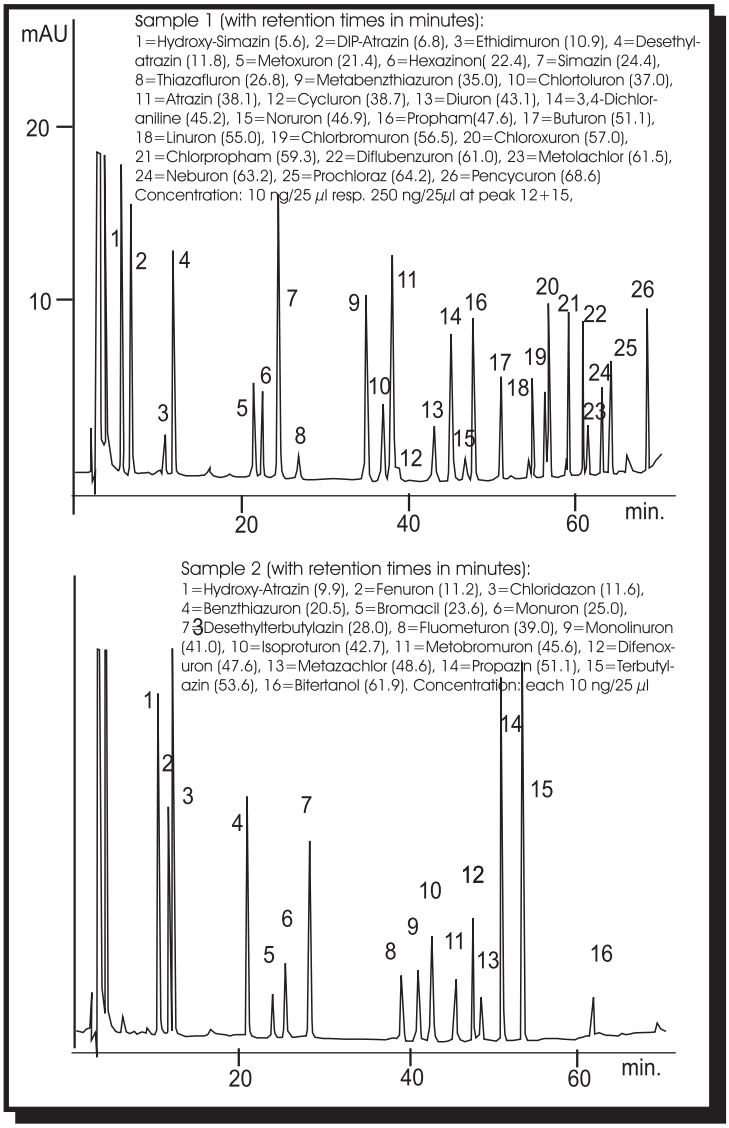



Column: Equisorb NH2, 5 µm
Eluent: K-Phosphate-buffer, pH=5.8 / ACH (55/45)
Flow: 1 ml/min. Det.: Fluoresc.: 260/310 nm (exc./ em.)

## Analysis of 42 Pestizides

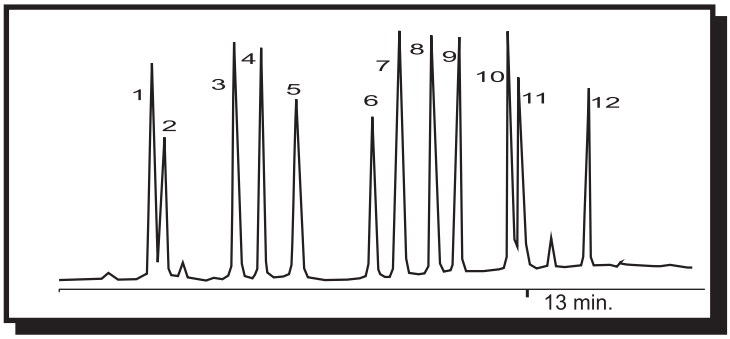
Column: ReproSil-Pestizide III, 5 µm (250 x 3 mm) + Guard (5 x 3 mm)
Eluent: A=1 mM NH4-Acetate B= ACN Gradient: 0 min. 20% B, 40 min.
35% B, 80 min. 90% B, Temperature: 40 C°, Flow rate: 0,5 ml/min
Detection: 230 nm Injection: 50 µl (in H20/ACN 80/20)




Courtesy of Mr. Riebs and Mr. Dr. Heusinger, Chemische Landesuntersuchungsanstalt Freiburg

## Carbamates

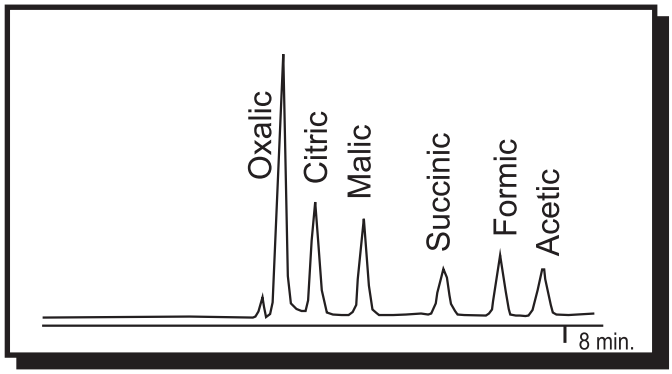
Column: ReproSil-Pur ODS-3, 5 µm (150 x 4,6 mm)
Eluent: A=H20 B=ACN
Gradient:0 -3,5 min. (ACN/H20, 40/60) isocratic
3.5 min. - 10.5 min: from 40% to 90% ACN
10.5 min, - 13.5 min. ACN/H20 (90/10) isocratic
Flow rate: 1 ml / min. Injection: 20 µm Detection: 210 nm



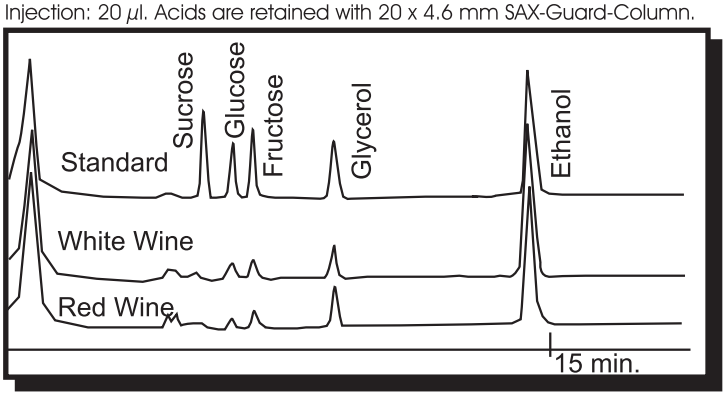

Sample:
1=Aldicarb Sulphone 2=Methomyl 3=Carbetamide 4=Aldicarb
5=Thiodicarb 6=Pirimicarb 7=Carbaryl 8=Thiram 9=3,4,5-Trimethacarb
10=Phenmedipham 11=Diethofencarb 12=Fenoxycarb

# Sugars, Acids and Alcohols

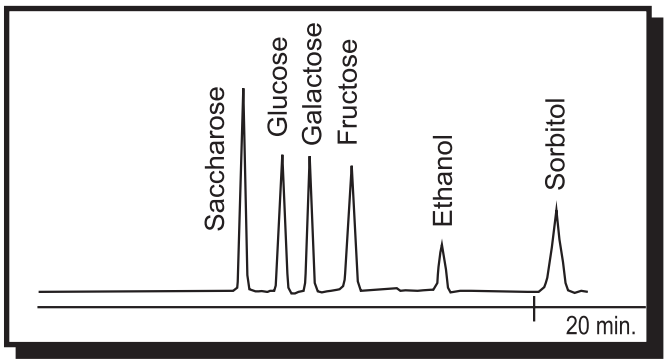
**Organic acids:** Repro-Gel H, 9 µm (250 x 8 mm)
Eluent: 9 mM Sulfuric Acid, Flow rate: 1 ml/min., Det.: 210 nm



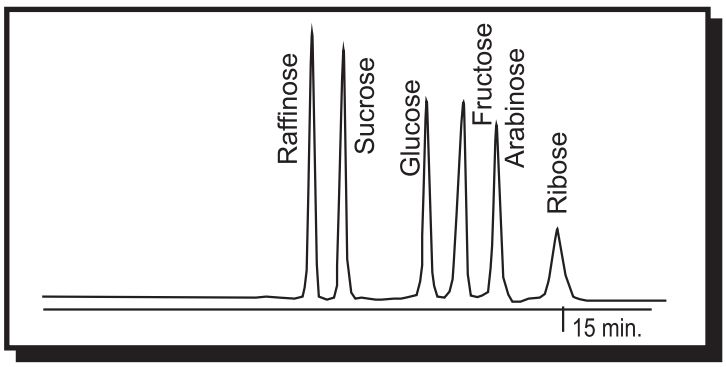

**Red Wine:** Repro-Gel H, 9 µm (250 x 8 mm)
Eluent: Water, Flow rate: 0,7 ml/min. Temperature: 25 C°,
Injection: 20 µl. Acids are retained with 20 x 4.6 mm SAX-Guard-Column.



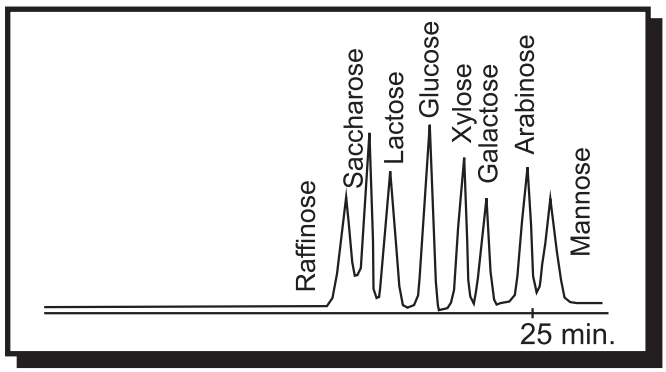

**Sugars and Alcohols:** Repro-Gel-Ca, 9 µm (250 x 8 mm)
Eluent: H20, Flow rate: 0,5 ml/min. Temperature: 80 C°,
Detection: RI, 35 bar



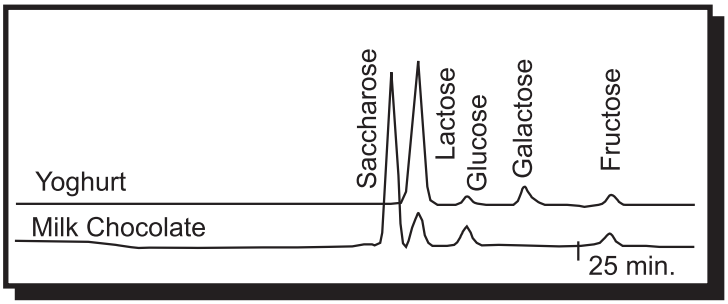

**Sugars:** Repro-Gel-Na, 9 µm (250 x 8 mm)
Eluent: Water, Flow rate: 0,5 ml/min., Temperature: 80C°, Detection: RI,
Pressure: 45 bar




**Sugars:** Repro-Gel-Pb, 9 µm (250 x 8 mm,)Eluent: H20, Flow rate: 0,3 ml/min., Temperature: 80 C°, Detection: RI, Pressure: 25 bar

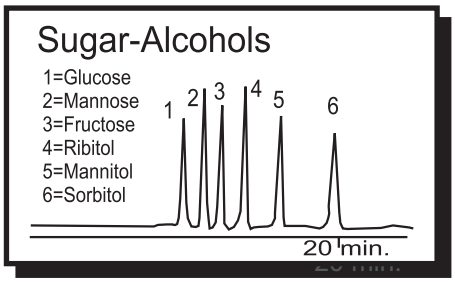


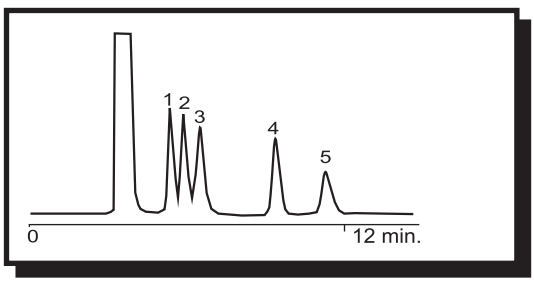

**Lactose:** Repro-Gel-Ca, 9 µm (250 x 8mm)
Eluent: water, Flow rate: 0,3 ml/min., Temperature: 80 C° Detection: RI




**Sorbitol and Sugars:** Stability Polyamin, 5 µm (NH2 on Silical)
(250 x 4,6 mm), Eluent: ACN/H20 (80/20), Flow rate: 1 ml/min., Detection: UV-DA

Repro-Gel-Ca,
9 µm, 250 x 8 mm
Flow rate: 0,5 nml/min
Teperature.: 80 C°
Detection: RI
Injection: 20 µl

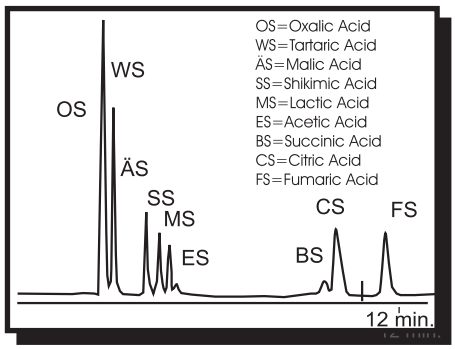


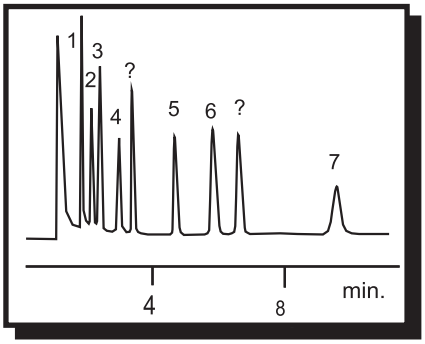




Sample:
1=Fructose
2=Sorbitol
3=Glucose
4=Saccharose
5=Maltose

Organic Acids
( on C18-AQ Phase)

ReproSil-Pur C18-AQ
5 µm, 200 x 4.6 mm
Eluent: 200 mmol/L
(20 g 85% H3PO4/l)
Temperature: 20 C°,
Detection: 230 nm




Sugars

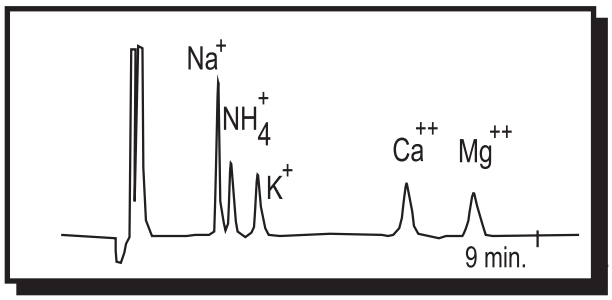
Column: ReproSil Polyamin,
3 µm (60 x 4 mm)
Flow rate: 0,8 ml/min
Eluent: ACN/H20 (80/20)
Detection: Diodenarray oder RI
Sample: 1=Rhamnose ,2=Xylose
3=Fructose, 4=Glucose,
5= Sucrose, 6=Maltose,

# Miscellaneous

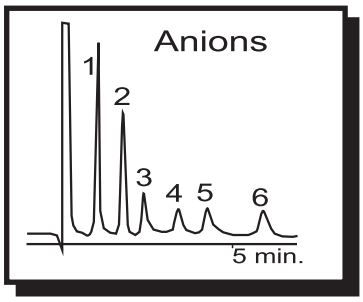
## Anions and Cations

Simultaneous Analysis of 1- and 2-val. Cations

Column: ReproSil Cat, 5µm (or 7 µm) (125 x 4.6 mm)
Eluent: 5.0 mM Citric Acid + 0.5 mM 2,6 Pyridinedicarboxylic Acid
or 0.6 mM Ascorbic Acid + 3.3 mM Phosphoric Acid pH 2,7

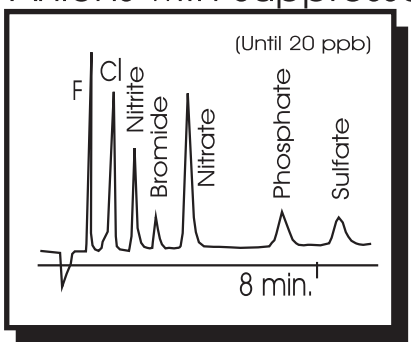



## Anions with indirect UV



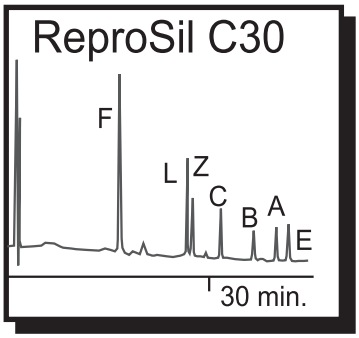

Column: ReproGel AX, 10 µm
(150 x 4 mm)
Eluent: mM K-Hydrogen-
Phthalat (pH 6.0)
Flow rate: 1.2 ml, Injection: 100 µl
Detection: Indirect, UV at 280 nm,
Sample:
1=Fluoride 2=Chloride 3=Nitrite
4=Bromide 5=Nitrate 6=Sulfate
(10 ppm each)

## Anions with Suppressor



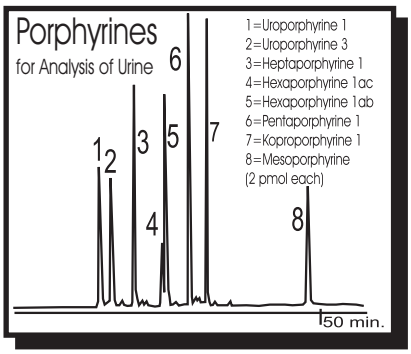

Column:
ReproGel AXS
150 x 4 mm
Eluent:1,7 mM Natrium-
Bicarbonate/1,8 mM
Na-Carbonate/ 0,1 mM
Na-Thiocyanate
Temperature: RT
Flow rate: 2ml/min.
Injection: 100 µl

## ReproSil C30




### Carotinoids + Chlorophylle

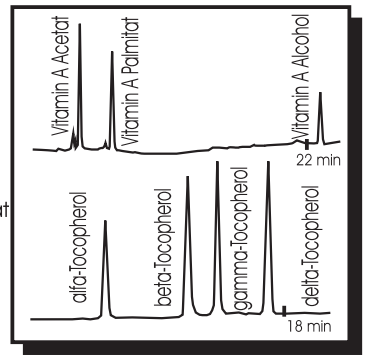
ReproSil 100 C30, 5 µm
250 x 3 mm
Flow: 0.9 ml/min.
Eluent: A: Water/ACN (50/50)
B:MeOH / Aceton (60/40)
Gradient:
Sample. F=Fucoxanthin
L=Lutein, Z=Zeaxanthin
C=Canthaxanthin, B=Chlorophyll B
A=Chlorophyll A, E=Echinenone




## Stability C18-NE, 5 µm

125 x 3 mm
Flow rate: 0,7 ml/min.
Eluent: A: 40mM KH2PO4
pH5,4, B: 12,5 mm Tetra-
butylammoniumphosphat
pH7.3 in MeOH
Gradient:

Courtesy of Prof. Jacob,
Uni Klinikum Großhadern



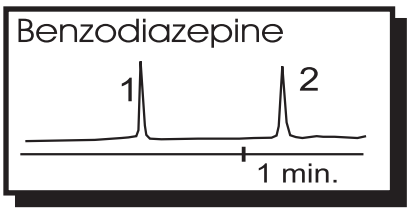

### Vitamin A-deriv. + Tocopherols

ReproSil 100 CN, 5 µm
250 x 4 mm
Flow: 1.5 ml/min
Detection:
Fluoresc. (Tocopherols)
295 / 330 nm
UV 325 nm (Vitamin A-deriv.)
Eluent:
A: n-Hexane
B: tert-Butylmethylether
Gradient:
in 23 min from 98/2 to 80/20)

# High Speed-HPLC with Gold Columns

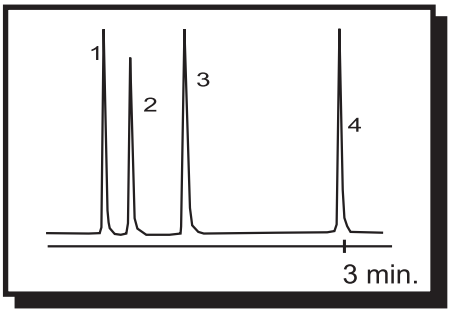
Benzodiazepine

1=Clonazepam
2=Diazepam



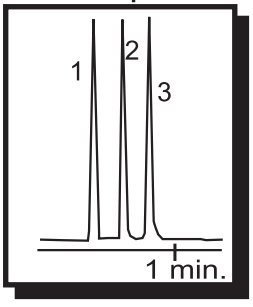

Column:
Gold-Turbo 100 ODS, 1.5 µm,
33 x 4.6 mm,
Eluent: ACN / 0,1 % TFA (35/65)
Flow: 1,5 ml / min.

Intermediates of Neurokinin-1 Receptor Antagonist Synthesis




Column:
Gold-Turbo Amid-C12, 1.5 µm, 33 x 4.6 mm,
Eluent: Gradient A: Water/ 5% ACN B: ACN
Flow: 2 ml / min.
Courtesy of M. Althaus, Hoffmann-La Roche

Antiarythmics + Antidepressants



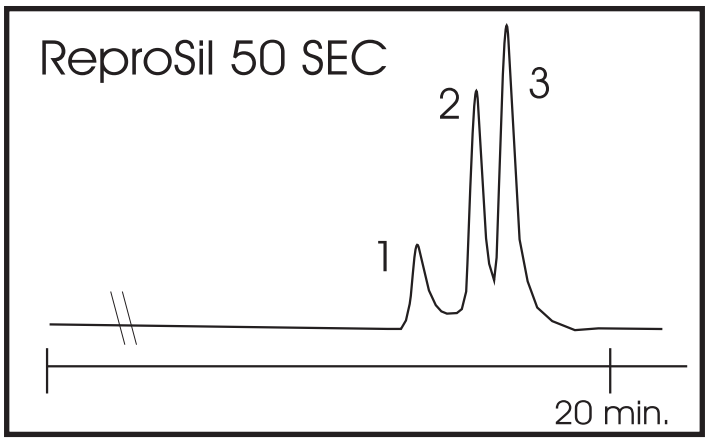

1.) Procaine
2.) Diphen-
hydramine
3.) Amitriptyline

Column:
Gold-Turbo ODS-MS, 1.5 µm,33 x 4.6 mm,
Eluent: 50 % ACN / 50 % 50 mM KH2PO4,
pH=3 Flow: 1 ml / min.

# ReproSil SEC - for Size Exclusion

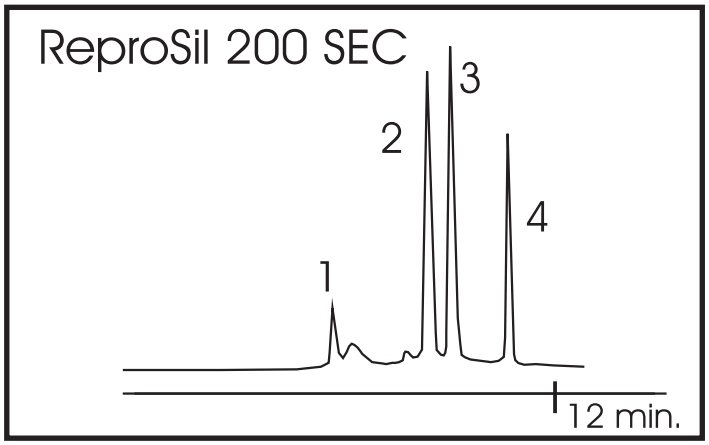
Reprosil SEC phases are designed for the Gel Filtration Chromatography (GFC) of proteins, peptides and other org. polymers in aqueous systems. In GFC elution order is a function of molecular weight, the largest molecules eluting first and the smallest last.
The Silica-based Reprosil SEC packings are available with 3 different pore sizes:

| Packing: | Pore size: | Molecular weight range of Proteins: | Molecular weight range of Linear Molecules: (denaturated proteins, peptides, other org. Polymers) |
|---|---|---|---|
| Reprosil 50 SEC - | 50 A° | 8 000 - 30 000 D | 500 - 10 000 D |
| Reprosil 200 SEC - | 200 A° | 10 000 - 500 000 D | 2 000 - 70 000 D |
| Reprosil SEC 4000 - | 450 A° | 20 000 - 5 000 000 D | 4 000 - 500 000 D |

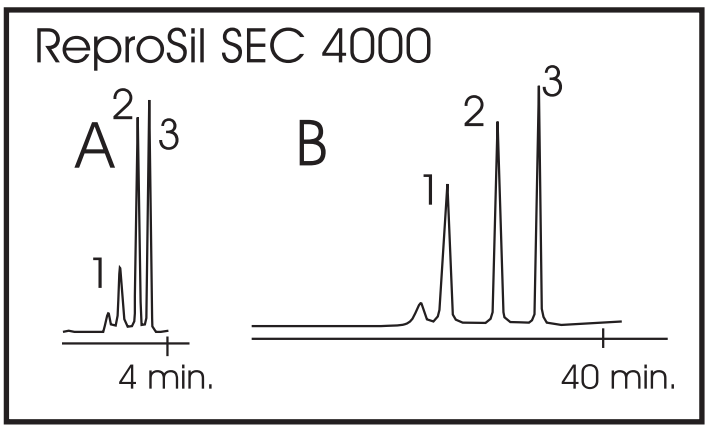



Column:
Reprosil 50 SEC, 5 µm ( 300 x 8 mm)
Flow: 0,5 ml / min
Eluent:
50 mM $KH_2PO_4$ + 100 mM KCL, pH 6,5

Peptide Sample:
1 = MW: 3894 D
2 = MW: 1593 D
3 = MW: 826 D




Column:
Reprosil 200 SEC, 5 µm ( 300 x 8 mm)
Flow: 1 ml / min
Eluent:
50 mM $KH_2PO_4$ + 150 mM KCL, pH 7.0
Sample:
1 =T hyroglobulin (MW - 670 KD)
2 = Ovalbumin (MW - 44 KD)
3 = Myoglobulin (MW - 17 KD
4 = Phenylalanine

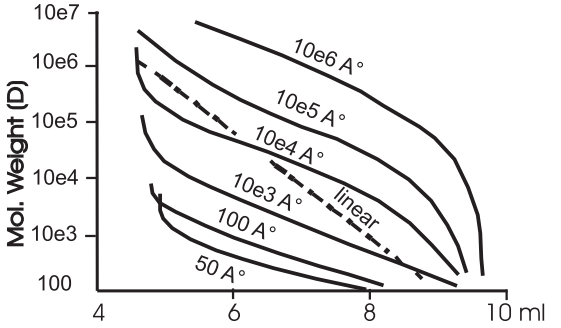



Column:
Reprosil SEC 4000, 5 µm
A.) 250 x 4.6 mm, Flow: 1 ml / min
B.) 750 x 4.6 mm, Flow: 0,33 ml / min
Eluent:
50 mM $KH_2PO_4$ + 150 mM KCL, pH 7.0
Sample:
1= Thyroglobulin (MW - 670 KD)
2= Ovalbumin (MW - 44 KD)
3= Phenylalanine

# GPC - Gel Permeation Chromatography

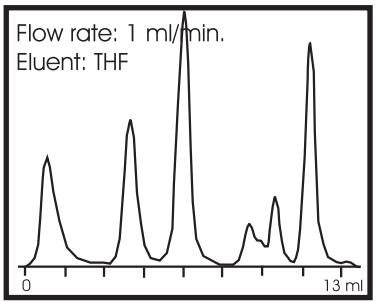
Reprogel PS GPC columns are packed with *Polystyrol/Divinylbenzene Copolymer* packings with 3, 5 or 10 µm particles.
Typical theoretical plate numbers/m are :
for 3 µm:110 000/m, for 5 µm: 70 000/m and for 10 µm: 50 000/m.
The particles are totally spherical and pressure stable up to l160 bars.
Column dimensions are: 300 x 8 resp. 600 x 8 mm and 30 x 8 mm for guards.
The optimal flow rate is 1 ml/min.

Calibration Curves of Repro-Gel-PS-GPC




Elution Volume in ml (300 x 8mm Column)

Separation of Polystyrols




Column: ReproGel-GPC-PS linear

Reprogel PS-GPC Columns:

| Pore size | Daltons | | | Exclusion Limit | Mat.No.: |
|---|---|---|---|---|---|
| 50 A° | | < | 1 000 | 3 000 | (050.) |
| 100 A° | | > | 3 000 | 5 000 | (100.) |
| 500 A° | | > | 20 000 | 20 000 | (500.) |
| $10^3$ A° | 1 000 | - | 40 000 | 70 000 | (103.) |
| $10^4$ A° | 4 000 | - | 500 000 | 700 000 | (104.) |
| $10^5$ A° | 10 000 | - | 2 000 000 | 4 000 000 | (105.) |
| $10^6$ A° | 200 000 | - | 10 000 000 | > 10 000 000 | (106.) |
| Linear | 1 000 | - | 1 000 000 | > 2 000 000 | (lin.) |

Eluents:
Benzene, Chlorierte Aliphate, Chinolin, Cyclohexan, o-Dichlorbenzol, Dimethylformamid, Dimethylacetamid, Dimethylsulfoxid, Dioxan, Ethylacetate, Hexafluorisopropanol, HFIP/CHCi3, m-Kresol, Methylethylketon, N-Methylpyrolidinon, Tetrahydrofuran, Toluene, Trichlorbenzol, Xylol

*Ordering numbers: Particle size +Mat. No. (=Porosity)+ Column (New=s, Refill=r) + Dimensions*

***example*** a): 5 µm and 100 A° and new column 300 x 8 mm
order no.: Rg5.100.s3008

***example*** b): 10 µm and $10^3$ A° and Refill 300 x 8 mm
order no.: Rg0.103.r3008

***example*** c): 3 µm and 50 A° and new Column 600 x 8 mm
order no.: Rg3.050.s6008

# USP-List (Dr. Maisch HPLC-Phases ):

| Code | Spezification | Dr. Maisch Phases |
|---|---|---|
| USP-L1 | Octadecyl silane / C18, RP18, ODS) chemically bonded to porous or ceramic silica microparticles, 1.8 untill 10 µm | Reprosil 100 C18 ( XBD)<br>Reprosil-Pur C18-AQ<br>Reprosil-Pur ODS-3<br>Reprosil Gold C18<br>Reprosil Saphir C18<br>Reprosil 80 ODS-2<br>Reprosil-Pur Basic C18 (HD)<br>Reprospher C18 (DE)<br>Equisil ODS<br>Equisil BDS C18<br>Reprobond C18<br>Repropack C18 |
| USP-L3 | Porous silica microparticles 5-10 µm | Reprosil 100 Si<br>Reprosil-Pur Si<br>Reprosil 80 Si<br>Reprospher Si<br>Equisil 120 Si |
| USP-L7 | Octyl silane (C8, RP8, MOS) chemically bonded to totally porous silica particles, 1.8 – 10 µm | Reprosil 100 C8<br>Reprosil-Pur C8<br>Reprosil Gold C8<br>Reprosil -Pur Basic C8 (HD)<br>Reprosil 80 C8<br>Reprospher C8 (DE)<br>Equisil BDS C8 |
| USP-L8 | An essentially monomolecular layer of aminopropylsilane (NH2, APS) ) chemically bonded to totally porous silica gel support, 3-10 µm | Reprosil 100 NH2<br>Reprosil-Pur NH2<br>Reprosil 80 NH2<br>Reprospher NH2<br>Equisil APS |
| USP-L9 | Irregular or spherical, totallyporous silica gel having a chemically bonded, strongly acidic cation-exchange coating (SCX) | Reprosil 80 SCX<br>Reprosil Saphir SCX |
| USP-L10 | Nitrile groups (CN) chemically bonded to porous silica particles 3-10 µm | Reprosil 100 CN<br>Reprosil-Pur CN<br>Reprosil 80 CN<br>Reprospher CN ( DE)<br>Equisil CPS |
| USP-L11 | Phenyl groups chemically bonded to porous silica particles, 3-10 µm | Reprosil 100 Phenyl<br>Reprosil-Pur Phenyl<br>Reprosil 80 Phenyl<br>Reprospher Phenyl (DE)<br>Equisil Phenyl |
| USP-L13 | Trimethylsilane (C1, SAS)) chemically bonded to porous silica particles 3-10 µm | Reprosil-Pur C1<br>Reprosil 80 C1<br>Equisil SAS |
| USP-L14 | Silica gel having chemically bonded, strongly basic quaternary ammonium-anion exchange coating, 5-10 µm | Reprosil 80 SAX |
| USP-L15 | Hexyl silane (C6, Hexyl) chemically bonded to totally porous silica, 3-10 µm | Reprosil 80 C6 |

| | | |
|---|---|---|
| USP-L16 | Dimethyl silane (C2) chemically bonded to porous silica particles, 3-10 µm | Reprosil Gold 120 C2<br>Reprosil Gold 300 C2 |
| USP-L17 | Strong cation-exchange resin consisting of sulfonated cross-linked styrene-divinylbenzene copolymer in the H+ Form, 7-11 µm | Reprogel H+, 9 µm |
| USP-L18 | Amino and cyano groups chemically bonded to porous silica particles, 3-10 µm | Reprosil PAC |
| USP-L19 | Strong cation-exchange resin consisting of sulfonated cross-linked styrene-divinylbenzene copolymer in the calcium, 9 µm | Reprogel Ca++ |
| USP-L20 | Dihydroxypropane (OD, Diol)groups chemically bonded to porous silica particles, 5-10 µm | Reprosil 100 Diol<br>Reprosil-Pur Diol<br>Reprosil 80 Diol |
| USP-L21 | A rigid, spherical styrene-divinylbenzene-copolymer, 5-10 µm | Repromer 100 RPS<br>Repromer 300 RPS<br>Repromer 1000 RPS |
| USP-L22 | A cation-exchange resin made of porous polystyrene gel with sulfonic acid groups, about 10 µm in size | Reprogel SCX |
| USP-L26 | Butyl silane (C4) chemically bonded to totally porous silica particles, 5–10 µm | Reprosil 100 C4<br>Reprosil-Pur C4<br>Reprosil Gold C4<br>Reprospher C4 (DE) |
| USP-L32 | A chiral ligand-exchange packing L-Proline copper complex covalentyl bonded to irregularly shaped silica, particles, 5-10 µm | Reprosil Chiral-L-Prolin |
| USP-L34 | Strong cation-exchange resin consisting of sulfonated cross-linked styrene-divinylbenzene copolymer in the lead form, 9 µm | Reprogel Pb, 9 µm |
| USP-L37 | Polymethacrylate gel packing having the capacity to separate proteins by molecular size over a range of 2 000 – 40 000D | Repromer OH-60, 10 µm |
| USP-L38 | Methacrylate based size exclusion packing for water soluble samples | Repromer OH, 10 µ |
| USP-L40 | Cellulose tris-3,5-dimethylphenylcarbamate coated porous silica particles, 5-20 µm | Reprosil Chiral-OM |
| USP-L41 | Immobilized alfa-1-acid glycoprotein on spherical silica particles, 5 µm | Chiral-AGP |
| USP-L43 | Pentafluorophenyl groups chemically bonded to silica particles, 5 -10 µm | Reprosil Fluosil PFP |
| USP-L47 | High capacity anion-exchange microporous substrate, fully, Functionalized with trimethylamine groups, 8 µm | PRPX-110<br>RCX-10<br>RCX-30 |
| USP-L51 | Amylose-tris-3,5-dimethylphenylcarbamate coated, porous, spherical silica particles, 5-10 µm | Reprosil Chiral-AM |
| USP-L58 | Strong cation-exchange resin consisting of sulfonated cross linked copolymer in the Na+ Form, 7-11 µm | Reprogel Na+ |
| USP-L60 | Spherical, porous silica gel, surface has been covalently modified with alkylamid-groups with endcapping | Reprosil ABZ-Amid C18 |
| USP-L62 | C30-silane bonded phase on a fully spherically silica , 3-15 µm | Stability C30 |

# References for HPLC-columns from Dr. Maisch GmbH

ReproSil 100 C18, 3 m, 250 x 1 mm
Characterisation of human circulating TIG2 as a lignad for the orphan receptor ChemR23.
Meder, W. et al.; FEBS Letters, 555 (2003) 495-499.

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Waldenstedt, L. et al.; Animal Feed Science and Technology, 108 (2003) 119-132.

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Human hemoglobin-derived peptides exhibit antimicrobial activity: a class of host defense peptides.
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Molecular cloning and expression of structural domains of bothropasin, a P-III metalloproteinase from the venom of *Bothrops jararaca*.
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Peripheral and central antihyperalgesic effects of diclofenac in a model of human inflammatory pain.
Burian, M. et al.; Clinical Pharmacology & Therapeutics, 74 (2003) 113.
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12891221&dopt=Abstract

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Cisplatin tumor concentrations after intra-arterial cisplatin infusion or embolization in patients with oral cancer.
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Analysis of pentacyclic triterpenic acids from frankincense gum resins and related phytopharmaceuticals by high-performance liquid chromatography. Identification of lupeolic acid, a novel pentacyclic triterpene.
Büchele, B. et al; Journal of Chromatography B, 791 (2003) 21.

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Analysis of 12 different pentacyclic triterpenic acids from frankincense in human plasma by high-performance liquid chromatography and photodiode array detection.
Büchele, B. et al; Journal of Chromatography B, 795 (2003) 355-362.

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Biosynthesis of the dimeric ellagitannin, cornusiin E, in *Tellima grandiflora*.
Niemetz, R. et al.; Phytochemistry, 64 (2003) 109-114.

ReproSil-Pur 120 C18-AQ, 3 m, 250 x 1mm
Angiotensin II receptor – Independent antiflammatory and antiaggregatory properties of Losartan – Role of the active metabolite EXP3179
Krämer, Chr., et al.; Circulation Research, 90 (2002) 770.
http://circres.ahajournals.org/cgi/reprint/90/7/770.pdf

ReproSil-Pur 120 C18-AQ, 5 m, 125 x 2mm
Quantification of sirolimus by liquid chromatography – tandem mass spectrometry using on-line solid-phase extraction.
Vogeser, M. et al.; Clinical Chemistry and Laboratory Medicine, 40 (2002) 40.
http://www.degruyter.de/journals/cclm/pdf/401_40.pdf

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Sensitivity of larval and adult crickets (*Gryllus bimaculatus*) to adipokinetic hormone.
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Bioverfügbarkeit von Carotinoiden und deren Metabolisierung in Serum und Retina, Anwendung von HPLC-NMR- und HPLC-APCI-MS-Kopplung.
Glaser, Tobias; Dissertation, München, 2001.
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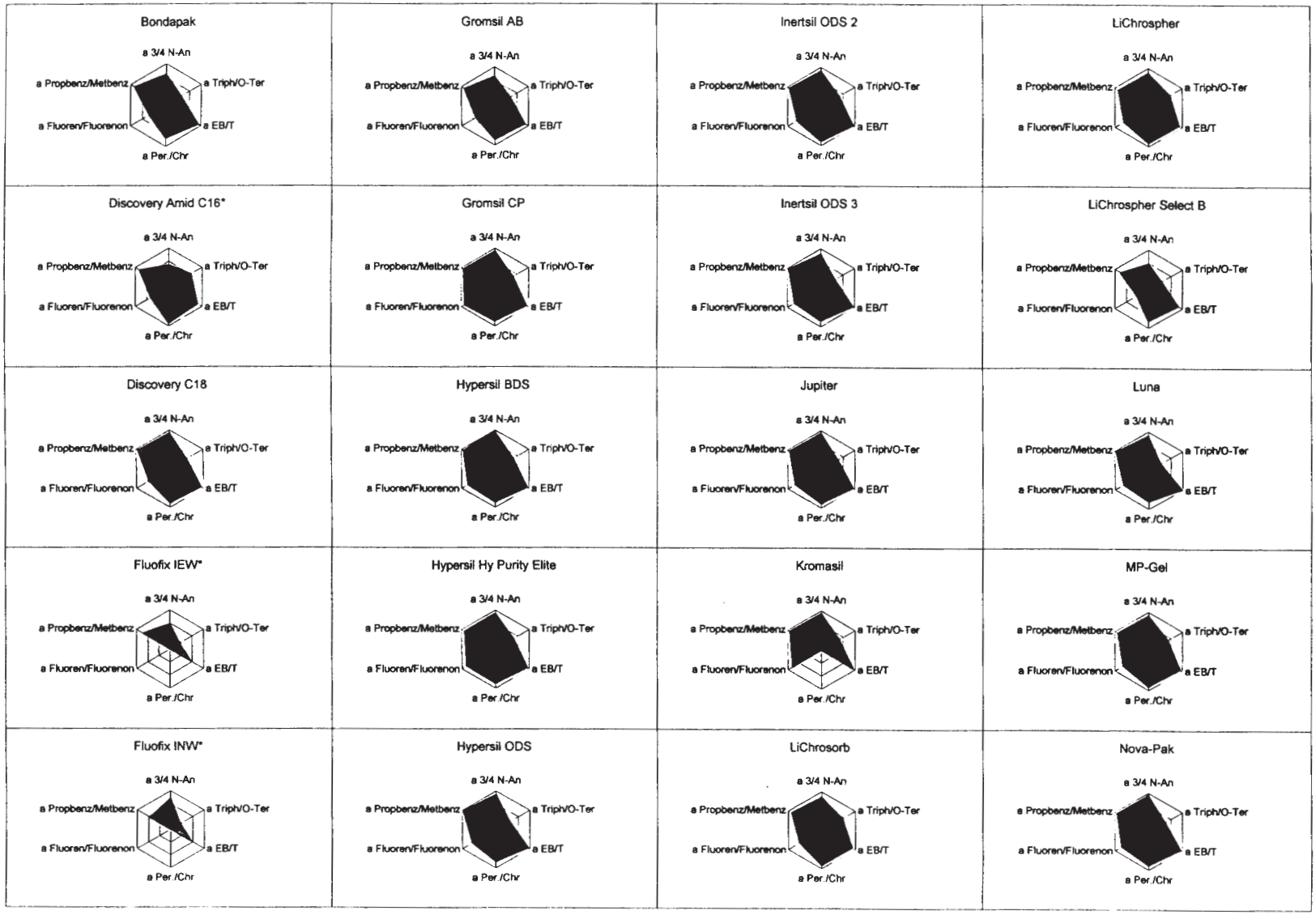
# Hexagons, a simple and fast method to compare different HPLC-phases.

Conditions: With aromatic compounds and MeOH / water as eluents.




The rule is: Similar hexagonal diagrams indicate similar phases
(From independent study by Dr. S. Kromidas, see page 35)

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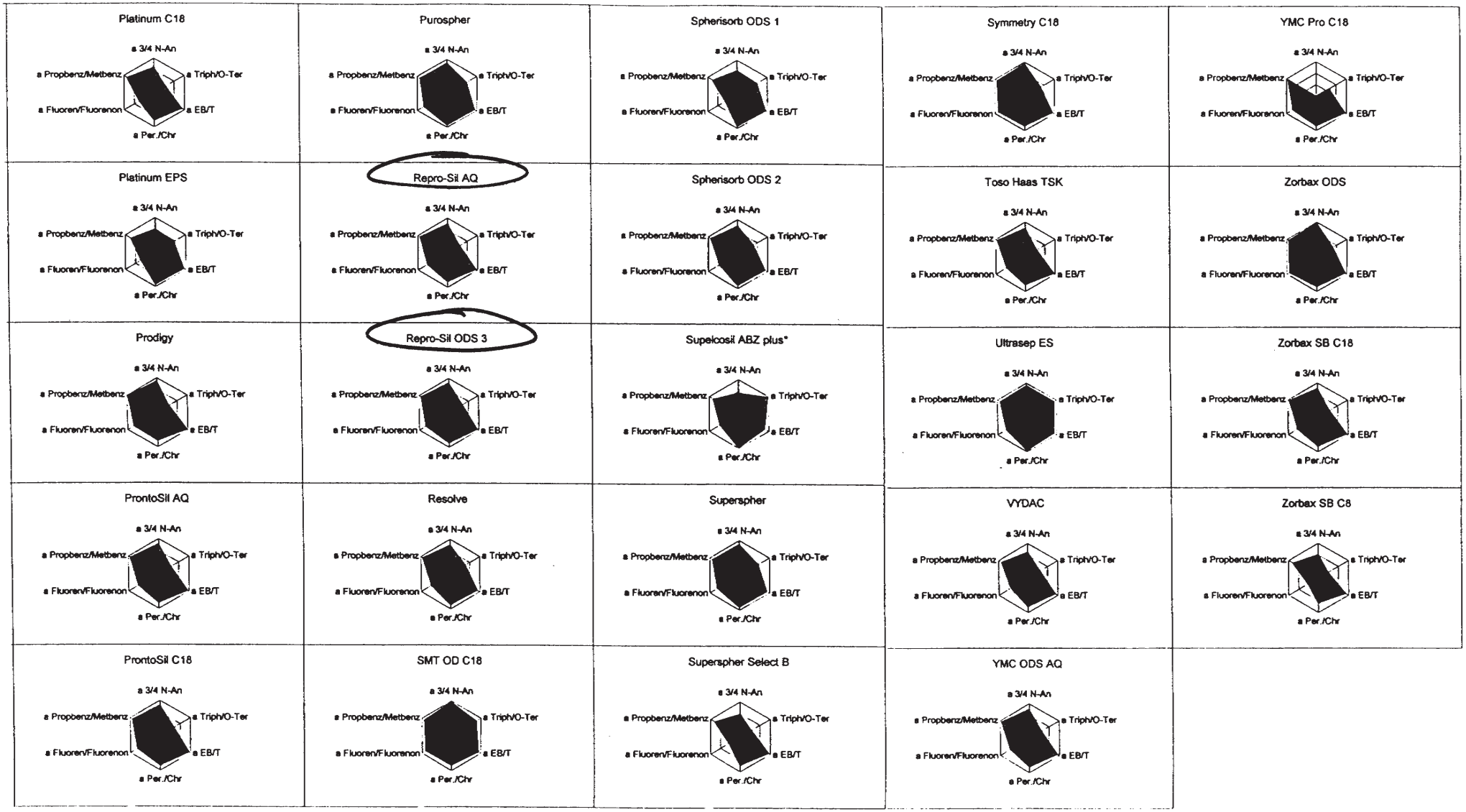


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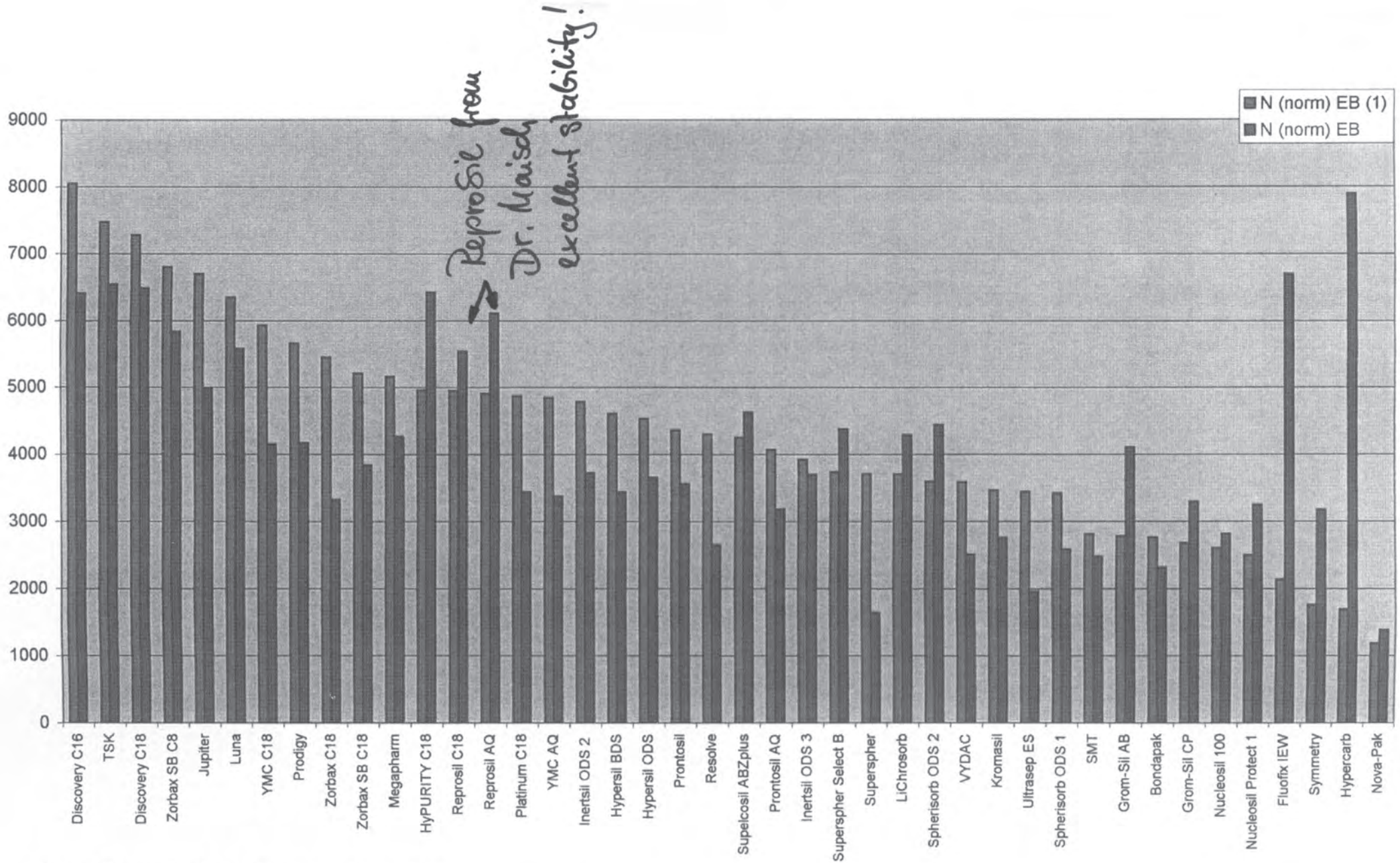


Grey: Theoretical plate number N at start
Black: Theoretical plate number N after 2 months permanent analysis

The theoretical plate number N of the majority of tested columns decreases after 2 months of permanent analysis, but not so with ReproSil and Fluofix (Neos) columns from Dr. Maisch GmbH

From independent study by Dr. S. Kromidas:
"Eigenschaften von kommerziellen HPLC-Phasen im Vergleich"
(Comparison of qualities of commercial HPLC-Phases)
Published by V. Pirrot, Saarbrücken, 2002

# UltraSep ES

Dear Customers,

We would like to inform you that SEPSERV Berlin will finish its work and its activities for reasons of age of the management and the owners on 31.03.2014.

You can order your columns problem-free up to this time. After this time, our current column types are obtainable from Dr. A. Maisch GmbH High Performance LC Ammerbuch, BRD, (maisch@reprosil.com, fon/fax +49(0)7073 -50357/4216).

Inquiries to SEPSERV are possible still up to 30.03.2014.

Thank you very much for the good cooperation.

Your Team SEPSERV


Dr. Maisch GmbH

Beim Brückle 14
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Reprosil-Pur - very reproducible

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Equisil - alternative to HS

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