

## HPLC Application 0009

### Drugs of Abuse LC-MS/MS Screening (1)

Column comparison: Dr. Maisch HPLC GmbH  
ReproSil Fluosil 100 PFP 1.8 µm, 50 mm x 2.0 mm  
(PN: fl118.pfp.s0502)

vs.

Phenomenex  
Kinetex PFP- Phenomenex 2.6 µm, 50 mm x 2.1 mm  
(PN: 00B-4477-AN)

In this application 2 similar modified Phenyl-phases (PFP Pentafluorophenyl) were compared for the screening of different drugs of abuse (Mix 1) with standards and real samples.

**ID No.:** 0009

#### Gradient Method

Time program for gradient (binary high-pressure pumps)

	Mobile Phase B (%)	Flow	Comments
Minute		µL/min	
0.00	2.5	200	Start MS and pumps
1.00	2.5	200	Start gradient
8.00	97.5	200	
12.00	97.5	200	
12.10	2.5	200	
18.00	2.5	200	End of program

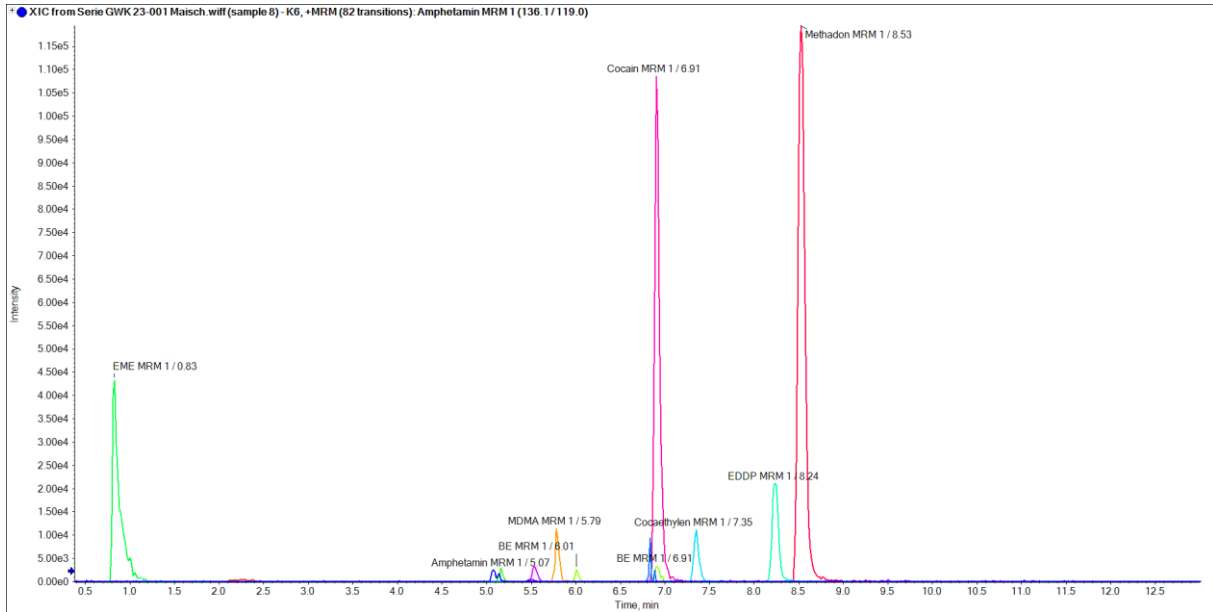
<b>Eluent A:</b>	H <sub>2</sub> O with 0.1 % formic acid
<b>Eluent B:</b>	MeCN with 0.1 % formic acid
<b>Flow Rate:</b>	200 mL/min
<b>Temperature:</b>	40°C
<b>Injection:</b>	20 µL
<b>MS Parameters:</b>	Sciex 3200 QTrap in MRM mode (MS/MS) Positive electrospray ionization, Spray voltage: 3500 V and temperature at 650 °C Gas 1: 40, Gas 2: 60, Curtain gas: 35, Collision Gas: 6 MS/MS conditions tuned for each compound separately

#### Simultaneous determination of drugs and drugs of abuse:

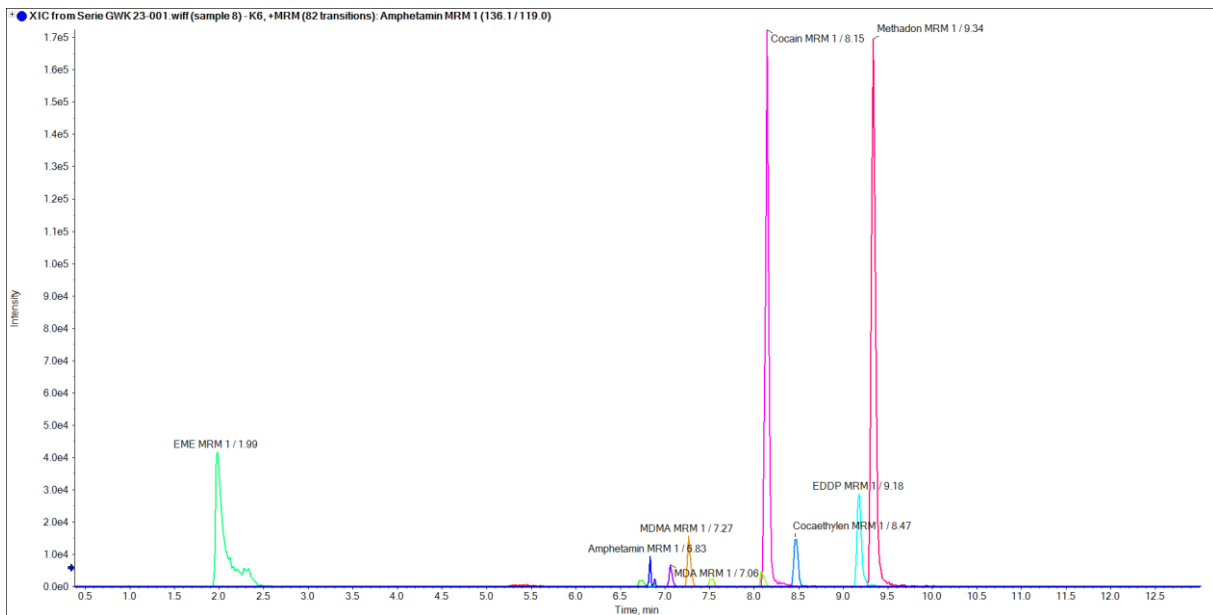
- Amphetamine
- MDA 3,4-Methylenedioxyamphetamine (metabolite of MDMA)
- Cocaine
- Methadone
- MDMA 3,4-Methylenedioxymethamphetamine, also known as Ecstasy and Molly
- Methamphetamine
- BE benzoylecgonine (metabolite of cocaine)
- Morphine
- Codeine
- 6-MAM metabolite of heroine
- EME ecgonine methyl ester (metabolite of cocaine)
- EDDP methadone metabolite
- Cocaethylene cocaine metabolite, formed after consumption of cocaine and ethanol together

## K6 Standard

### ReproSil Fluosil 100 PFP - Dr. Maisch HPLC GmbH

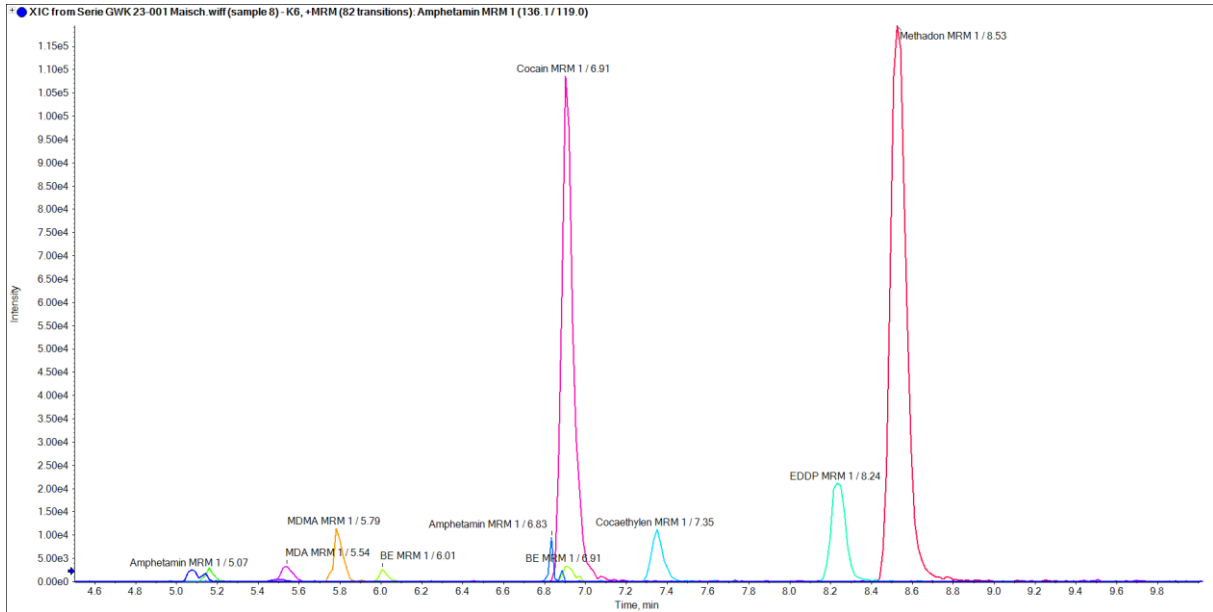


### Kinetex PFP - Phenomenex

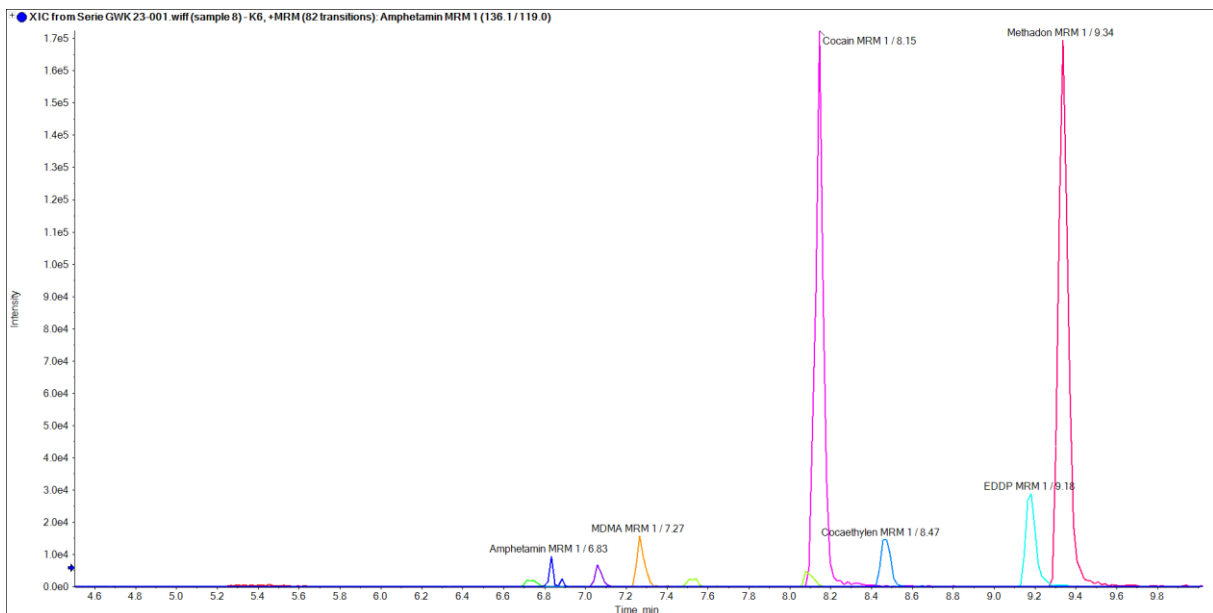


## K6 Standard ZOOM 1

### ReproSil Fluosil 100 PFP - Dr. Maisch HPLC GmbH

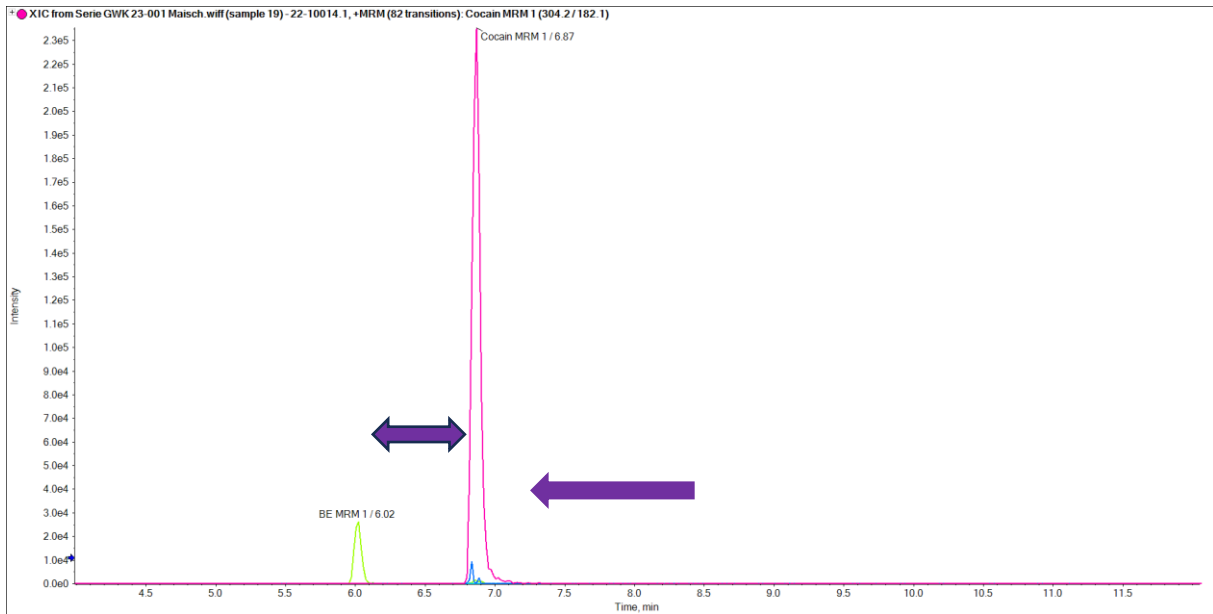


### Kinetex PFP - Phenomenex

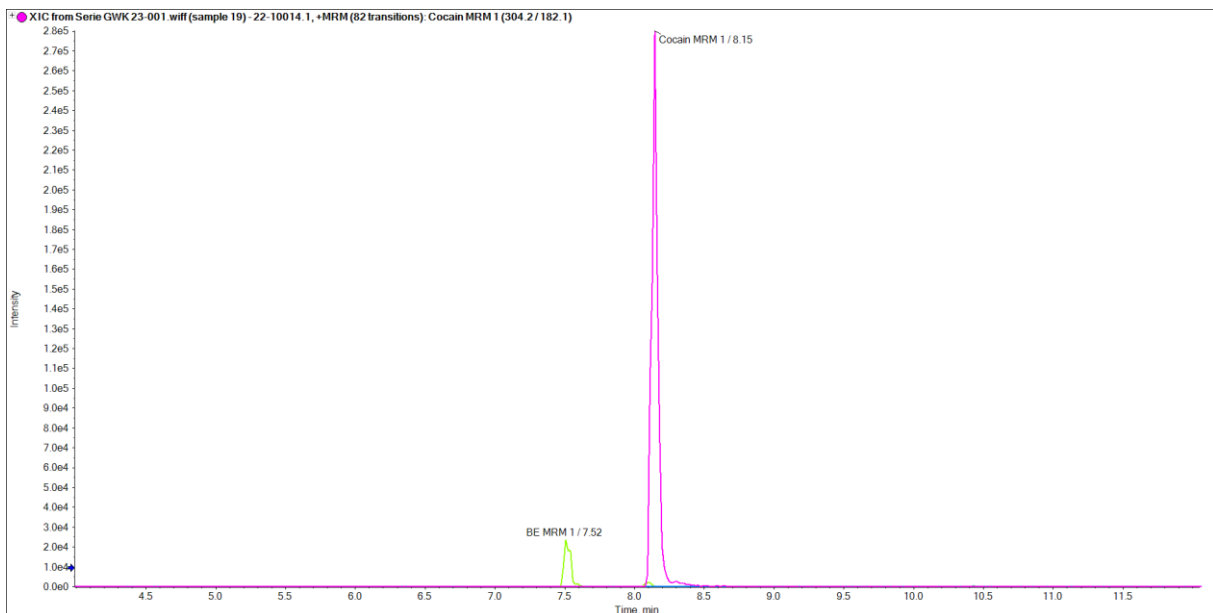


## Sample 19

### ReproSil Fluosil 100 PFP - Dr. Maisch HPLC GmbH

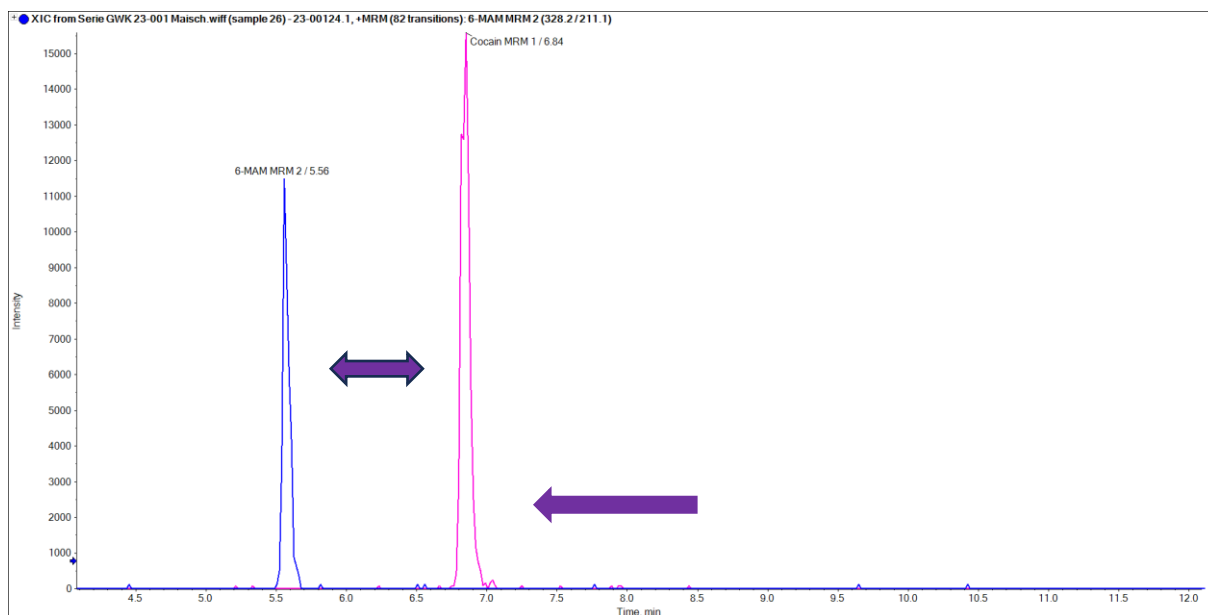


### Kinetex PFP - Phenomenex

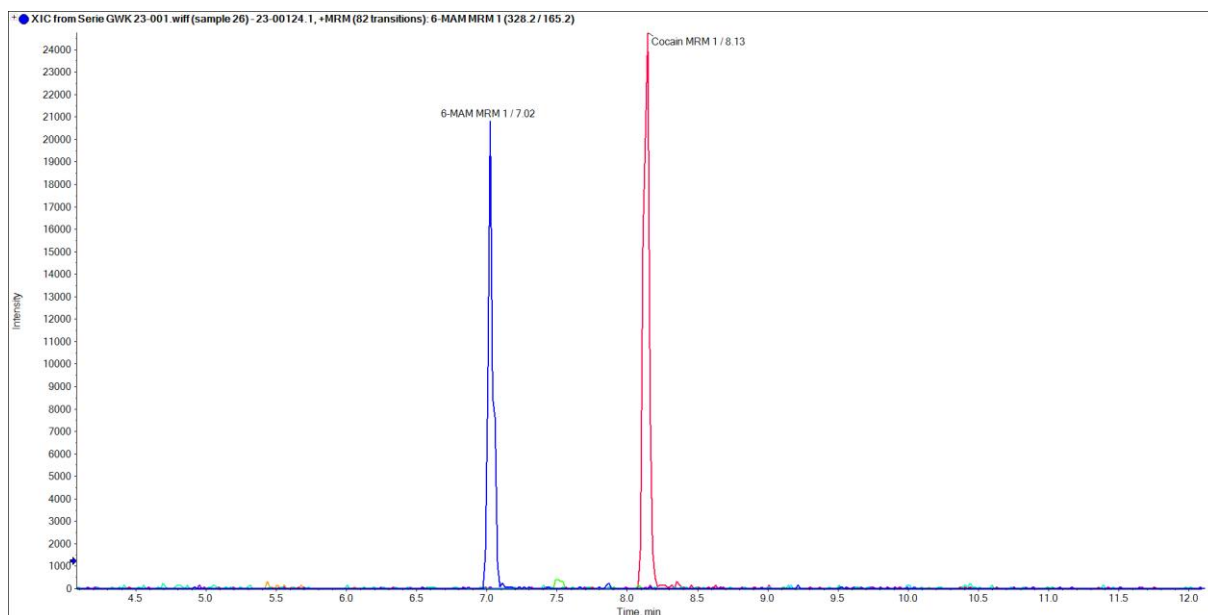


## Sample 26

### ReproSil Fluosil 100 PFP - Dr. Maisch HPLC GmbH

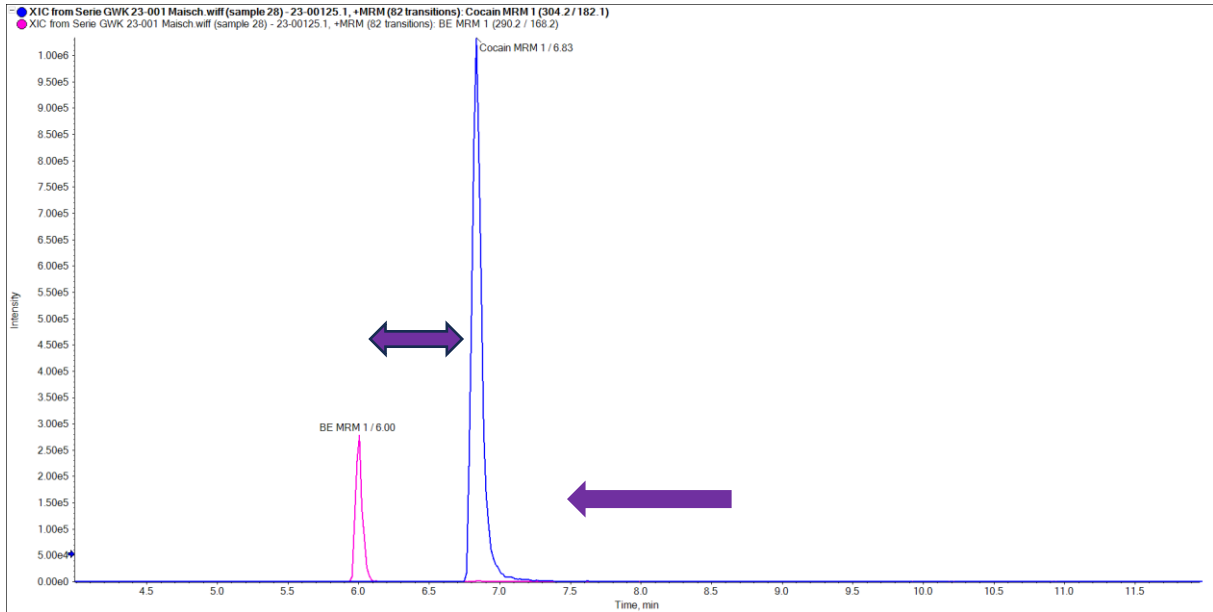


### Kinetex PFP - Phenomenex

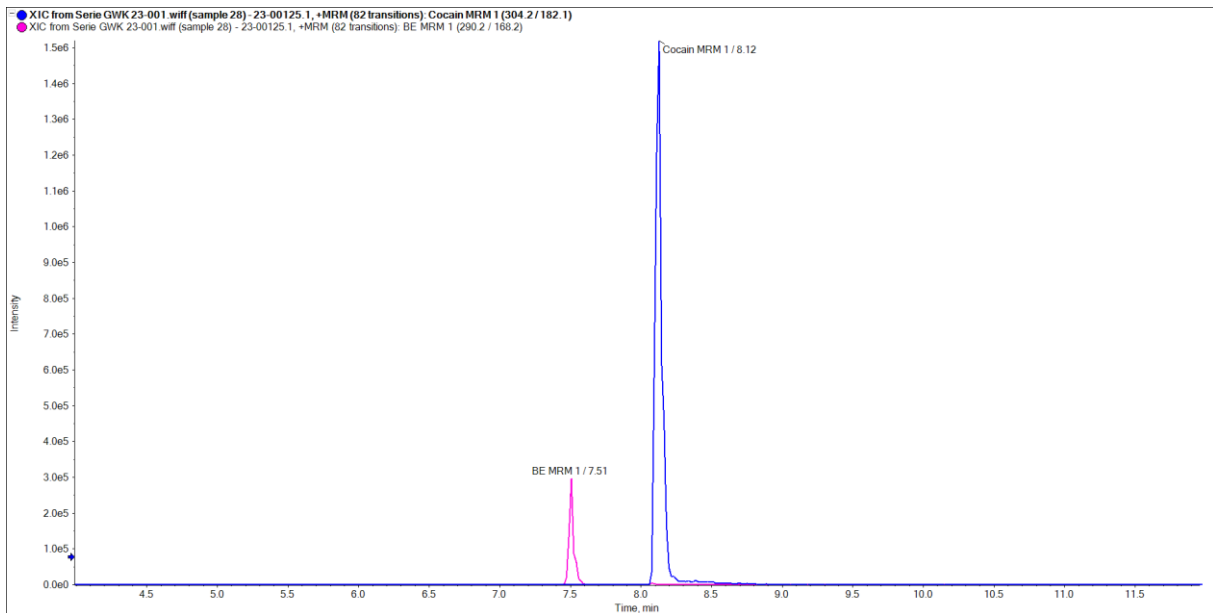


## Sample 28

### ReproSil Fluosil 100 PFP - Dr. Maisch HPLC GmbH



### Kinetex PFP - Phenomenex



*Application courtesy of Dr. Stefan König, Institut für Rechtsmedizin Bern (Switzerland),  
Forensische Toxikologie und Chemie.*

*Dr. Maisch products are available globally. For more information contact your  
Dr. Maisch representative at [info@dr-maisch.com](mailto:info@dr-maisch.com).*

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