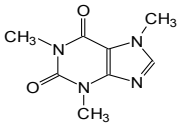
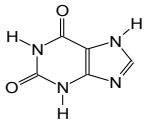
Application & Chromatography

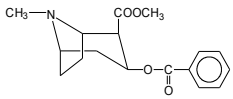
AppliChrom® OTU LipoMare C_{18} –
HPLC-MS Analyse von Coffein, Cocain und Sulfamethoxazol



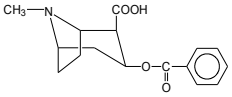
Coffein ($C_8H_{10}N_4O_2$)
MW: 194



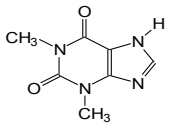
Xanthin ($C_5H_4N_4O_2$)
MW: 152



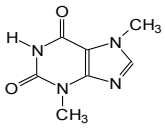
Cocain ($C_{17}H_{21}NO_4$)
MW: 303



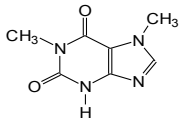
Benzoylecgonin (BEC) ($C_{16}H_{19}NO_4$)
MW: 289



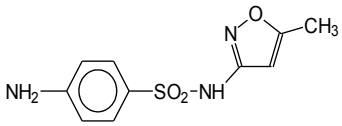
Theophyllin ($C_7H_8N_4O_2$)
MW: 180



Theobromin ($C_7H_8N_4O_2$)
MW: 180

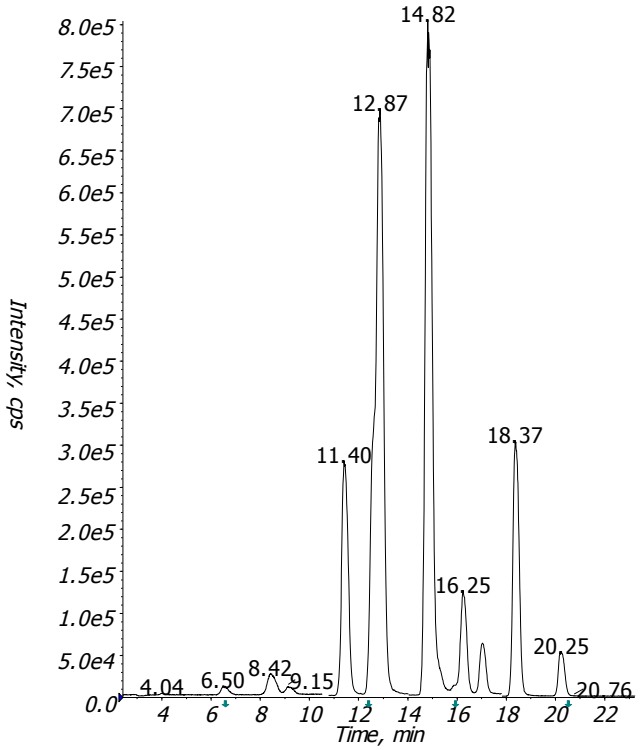


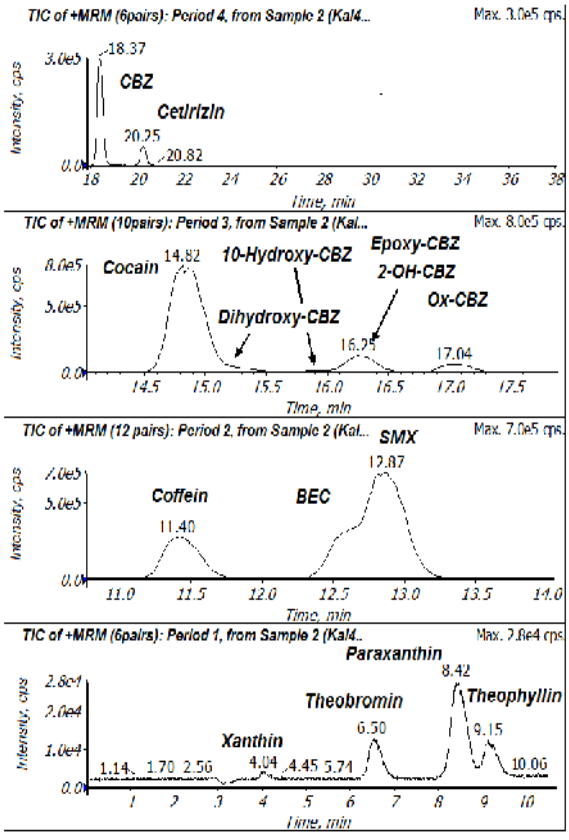
Paraxanthin ($C_7H_8N_4O_2$)
MW: 180



Sulfamethoxazol (SMX) ($C_{10}H_{11}N_3O_3S$)
MW: 253

TIC: from Sample 2 (Kal4_polar, OTU-Säule) of 18060...





mittlere Kalibrierprobe (Substanzklassen 2-5)

Legende: System: Agilent 1100, Säule: AppliChrom Otu LipoMare C18, 105A, 250x3mm + 10x3mm Vorsäule, Säulentemperatur: 40°C, Injektionsvolumen: 40µl, Mobile Phase: A: Wasser / 10mM NH4acetat / 0.1% Essigsäure, B: Methanol / 10mM NH4acetat / 0.1% Essigsäure.

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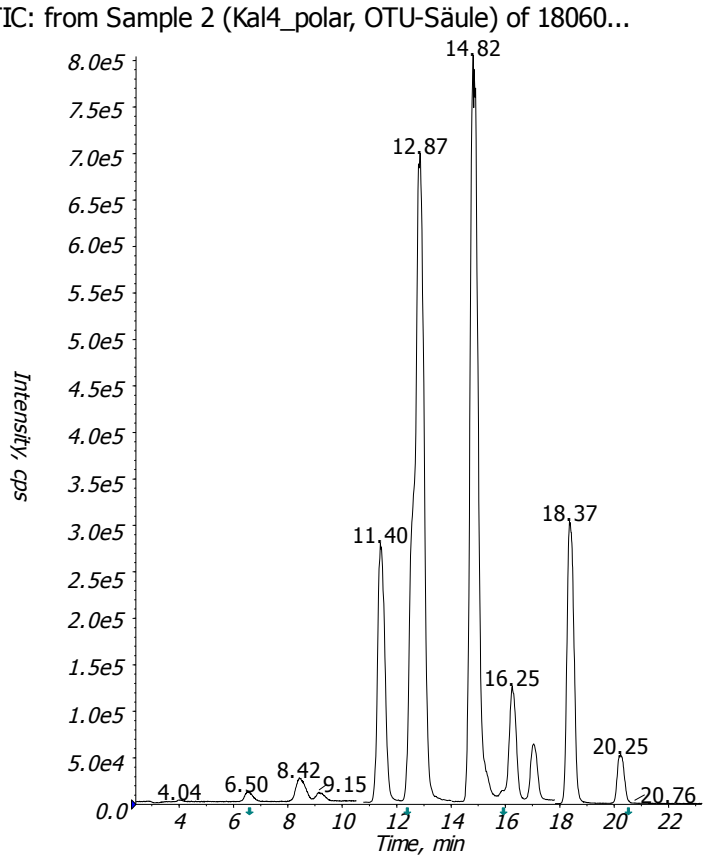
Schritt	Zeit (min)	Flussrate (µl/min)	A (%)	B (%)
0	0.5	500	80	20
1	0.0	500	80	20
2	3	500	80	20
3	20	500	5	95.0
4	28.0	500	5	95
5	29	500	80	20
6	38	500	80	20

MS: Gerät: API4000, Scantyp MRM, dwell-time je Signal 100 ms, Ionisierung: ESI-positiv

Ergebnis: Retentionszeit: Substanzzuordnung.
4.04: Xanthin,
6.50: Theobromin,
8.64: Paraxanthin,
9.15: Theophyllin,
11.40: Coffein,
12.5: BEC,
12.87: SMX,
14.82: Cocain,
15.35: Dihydroxy-CBZ,
15.85: 10-Hydroxy-CBZ,
16.25: Epoxy-CBZ, 2-OH-CBZ,
17.04: Ox-CBZ,
18.37: CBZ,
20.25: Cetirizin.



Referenz:
Ergebnisse mit freundlicher Genehmigung von Herrn Dr. Andreas Lehmann, BAM – Berlin, 2009.