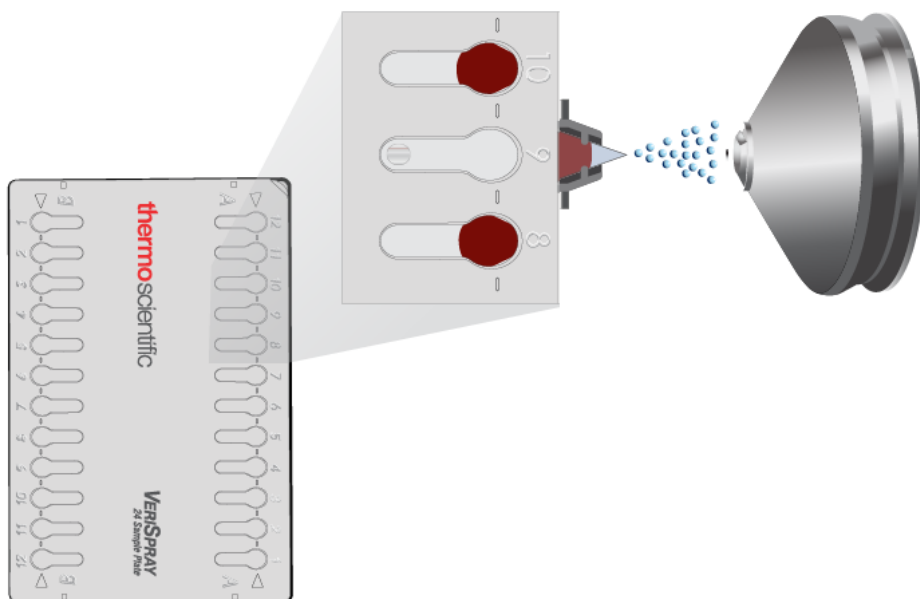


PAPERSPRAY A ZIPCHIP – IONTOVÉ ZDROJE S INTEGROVANOU SEPARAČNÍ TECHNIKOU

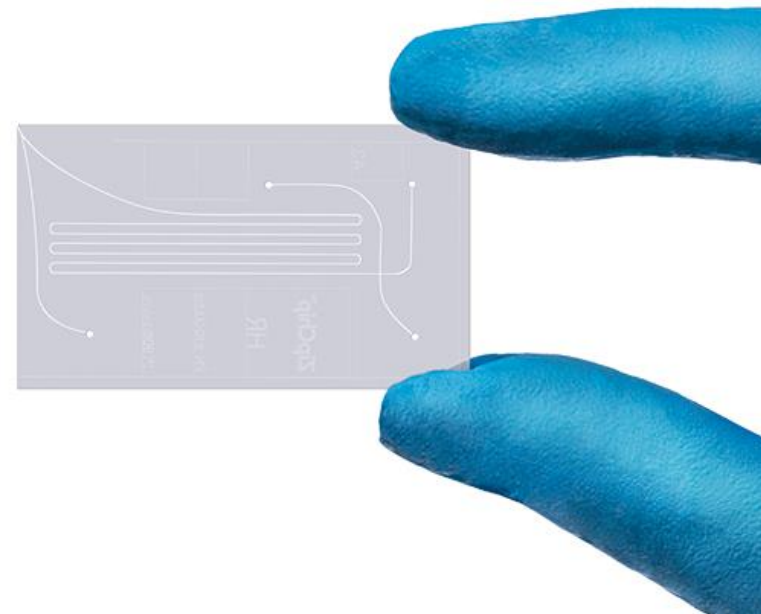
Lukáš Plaček



pragolab
authorized distributor
thermoscientific

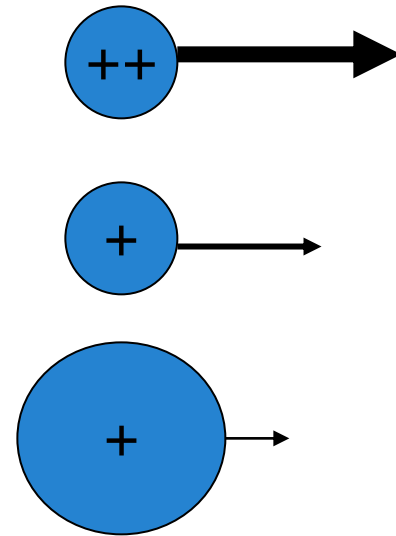
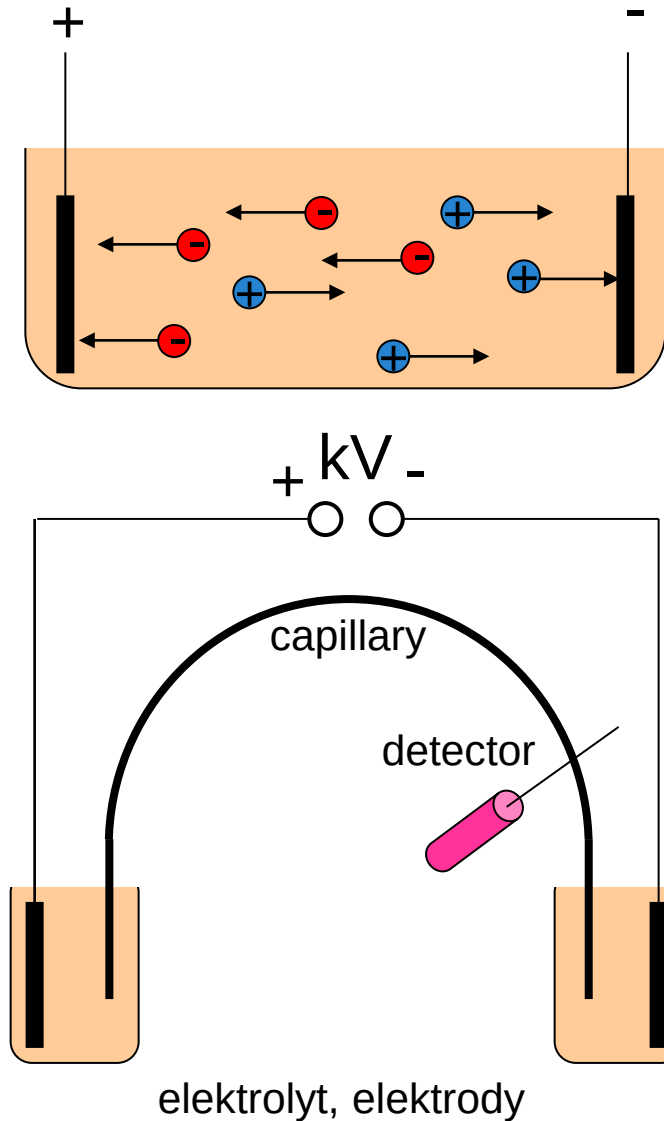


VeriSpray
(paper spray)

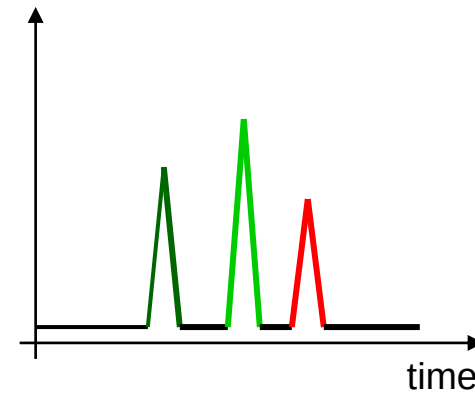
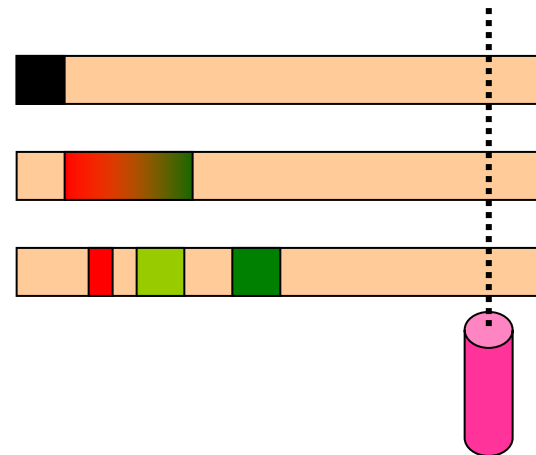


ZipChip
(kapilární elektroforéza)

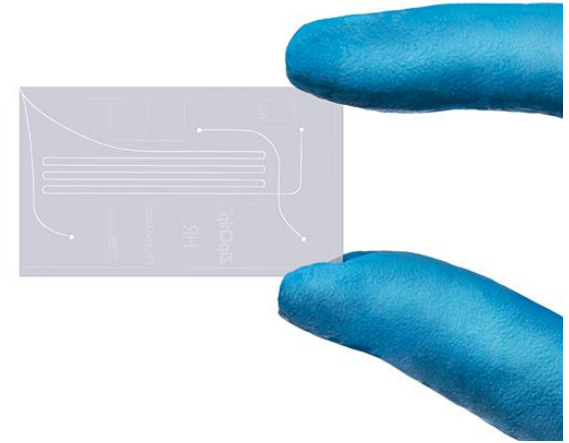
Kapilární elektroforéza

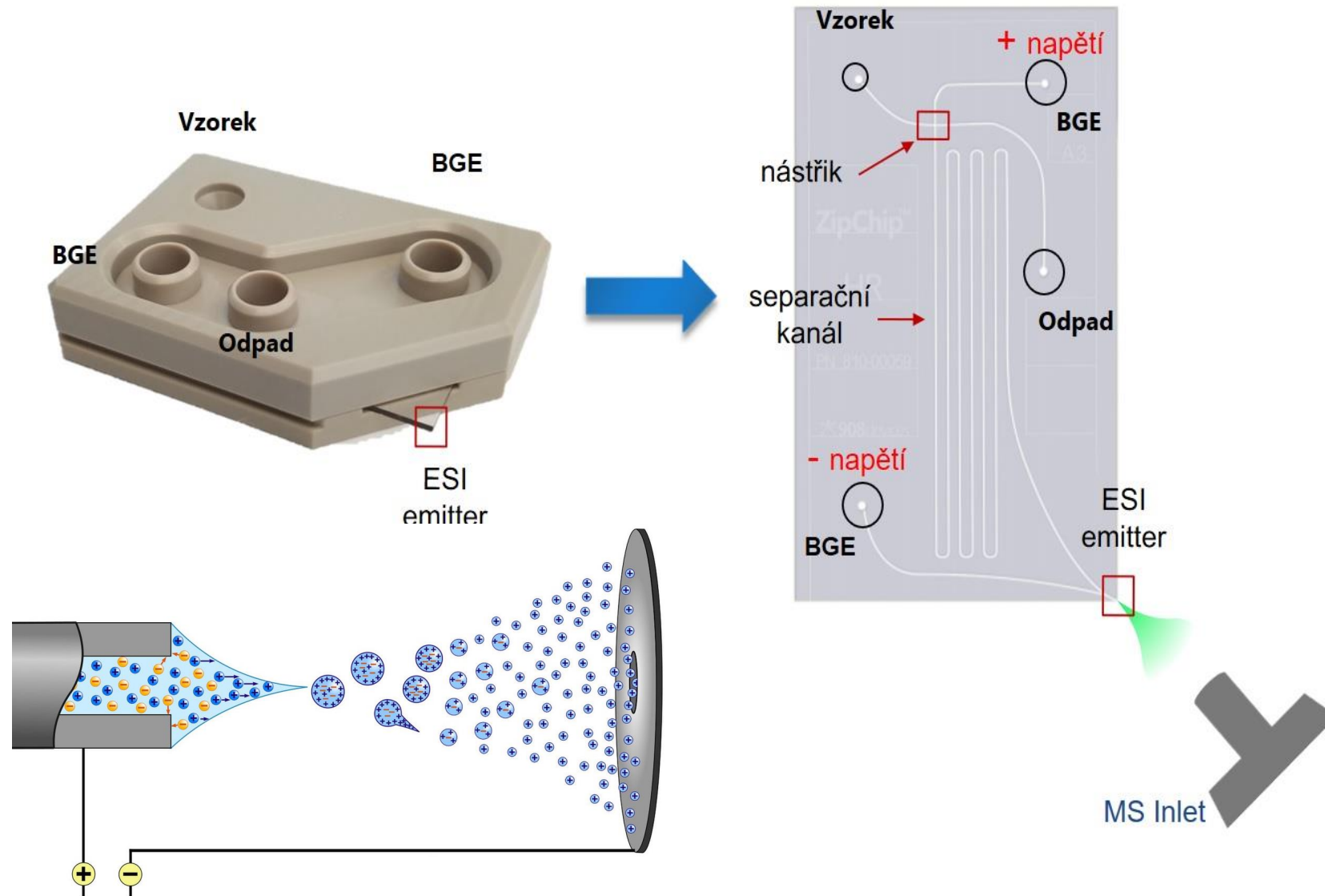


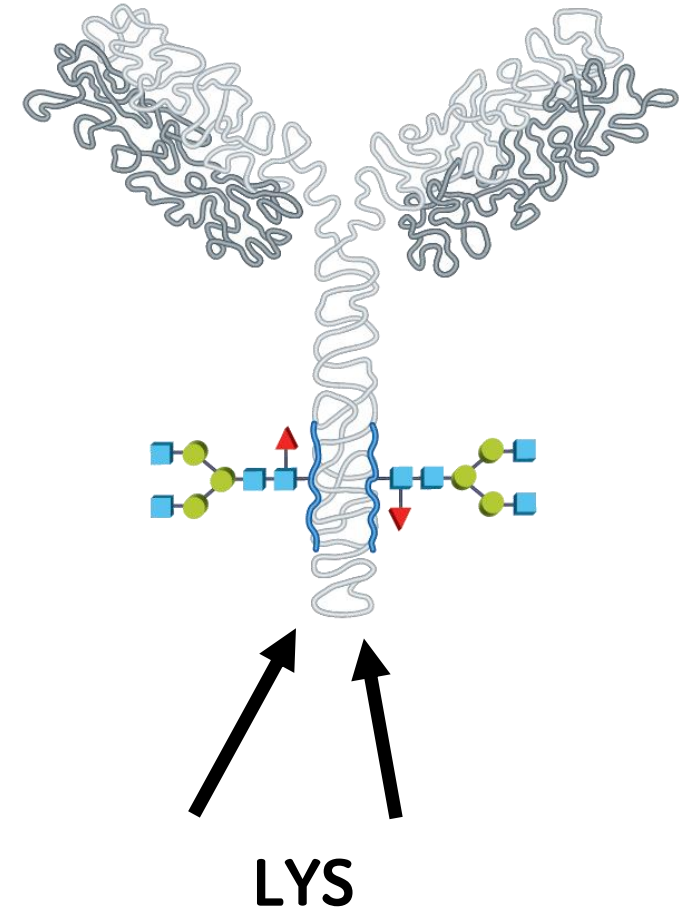
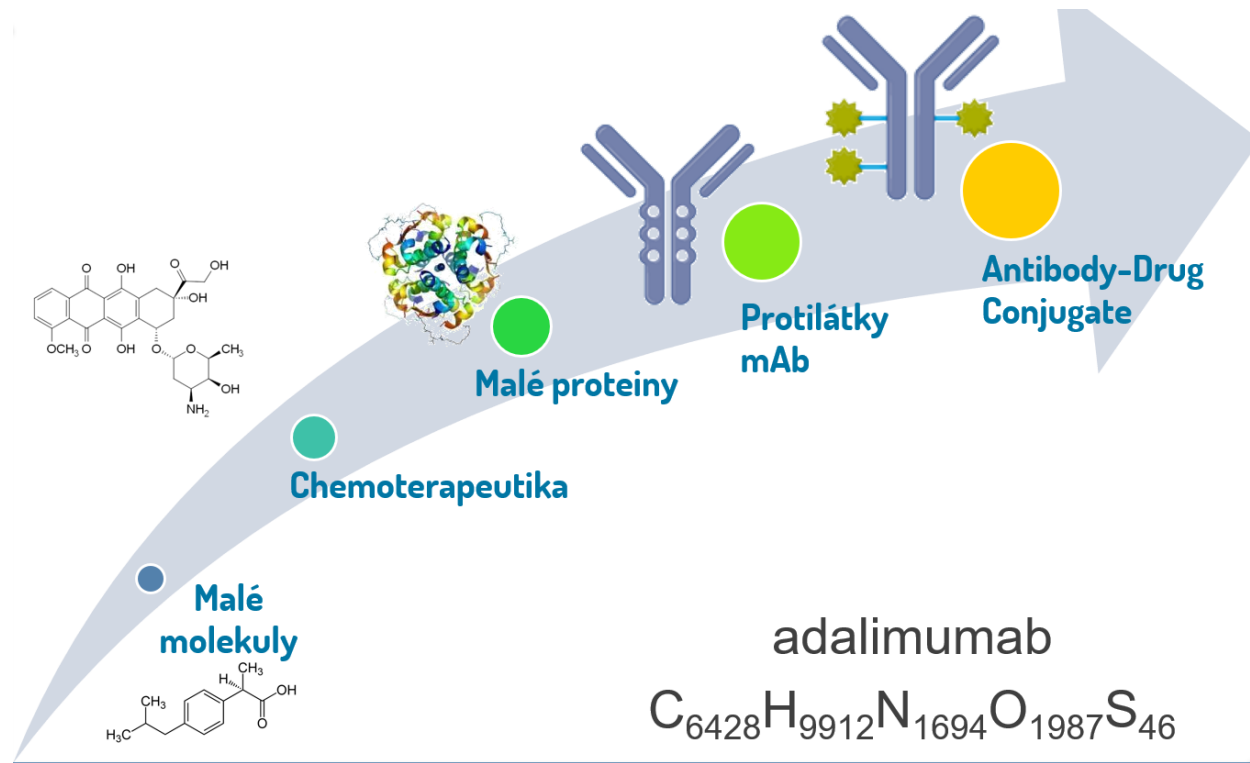
rozdílná
pohyblivost
(mobilita) iontů
v el. poli

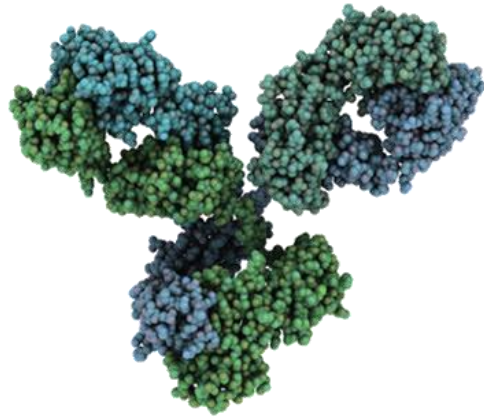


CE, CZE, HPCE



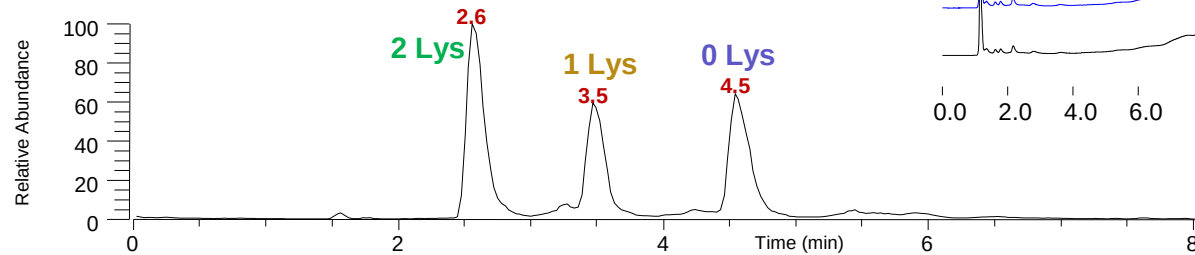
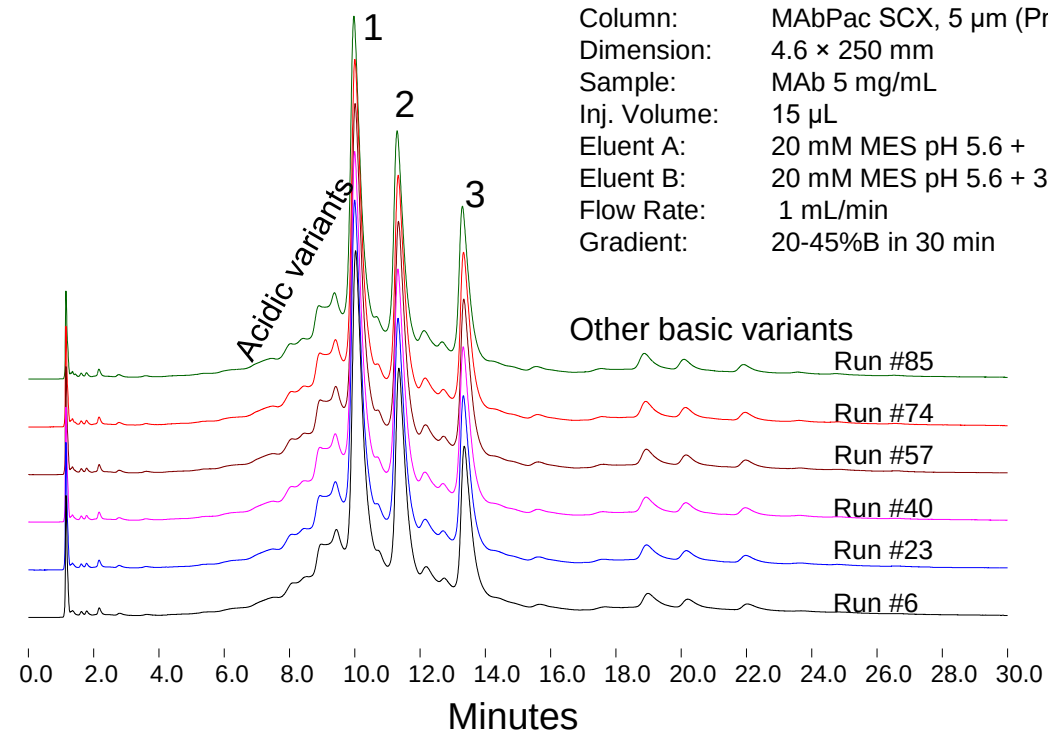




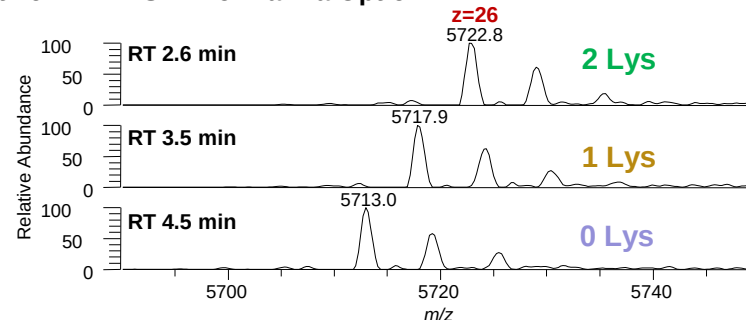
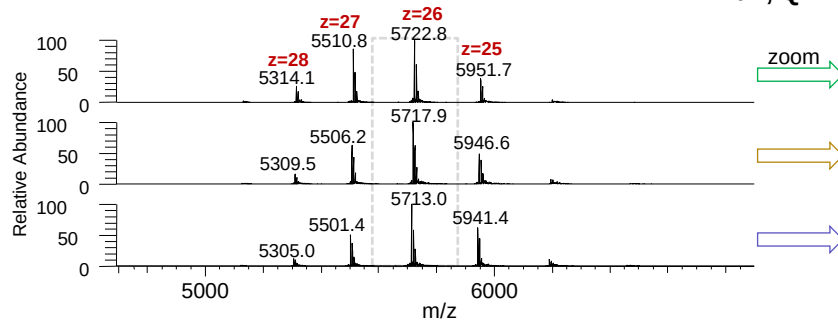


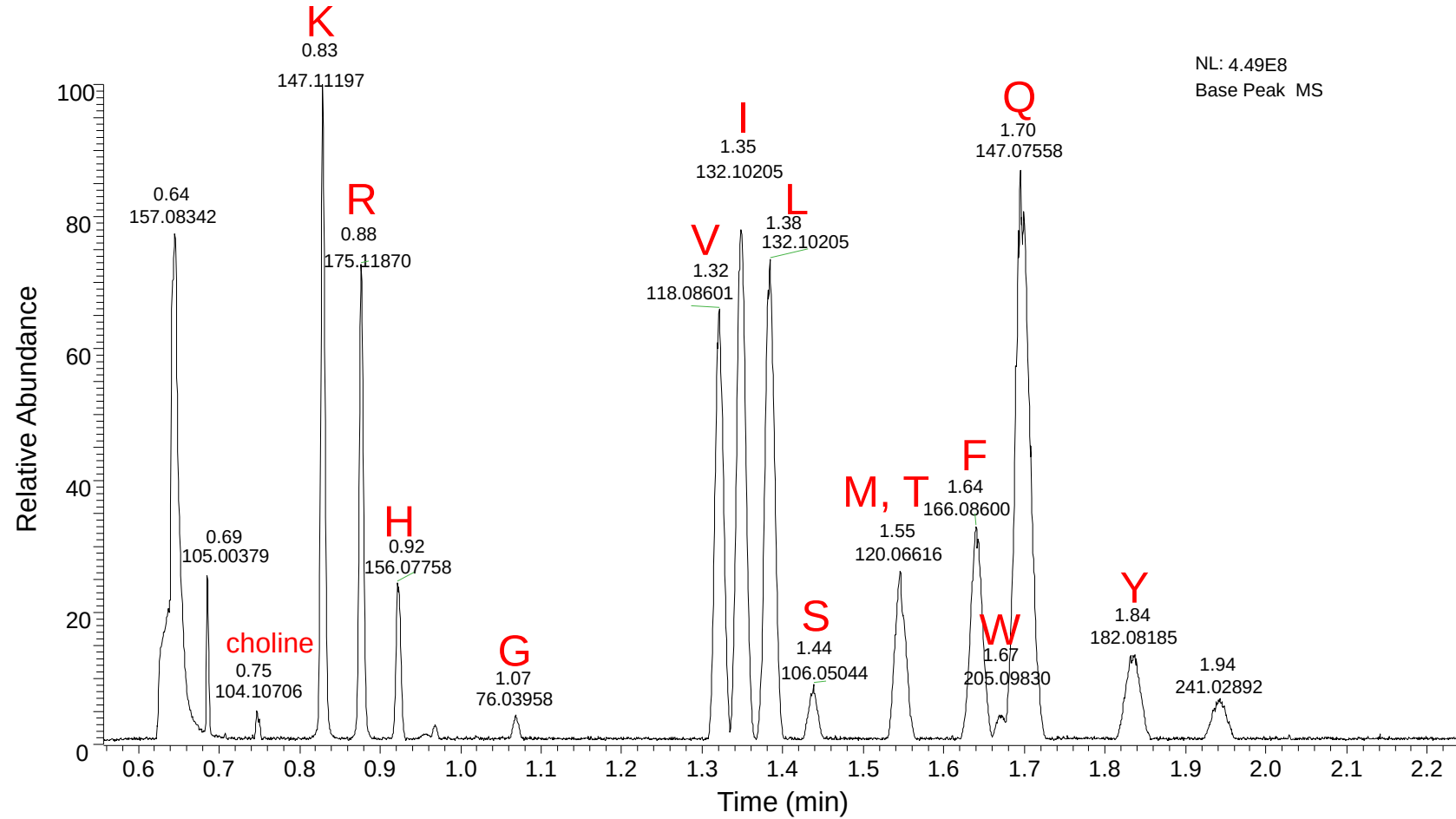
Lysine variants

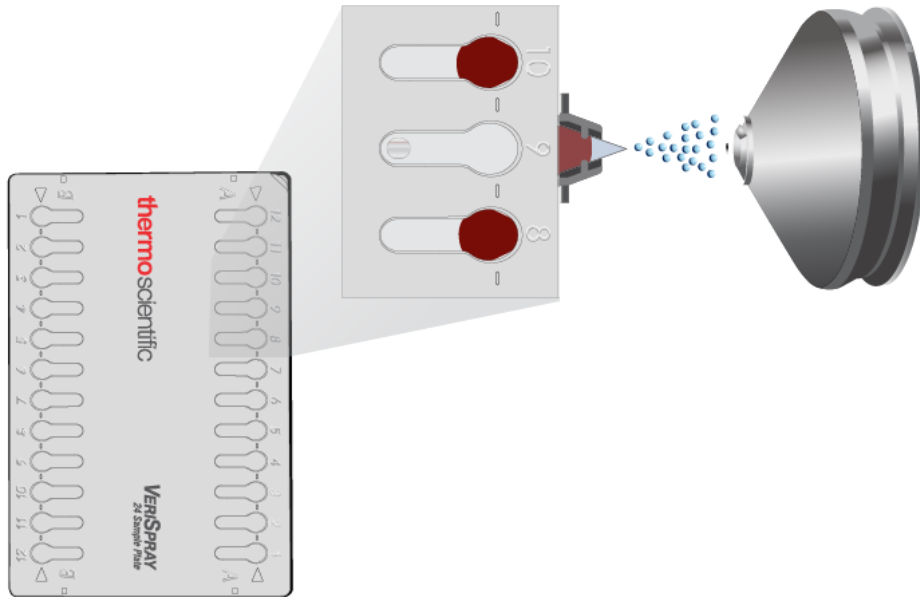
Column: MAbPac SCX, 5 μ m (Prototype)
 Dimension: 4.6 $\times$ 250 mm
 Sample: MAb 5 mg/mL
 Inj. Volume: 15 μ L
 Eluent A: 20 mM MES pH 5.6 + 60 mM NaCl
 Eluent B: 20 mM MES pH 5.6 + 300 mM NaCl
 Flow Rate: 1 mL/min
 Gradient: 20-45%B in 30 min



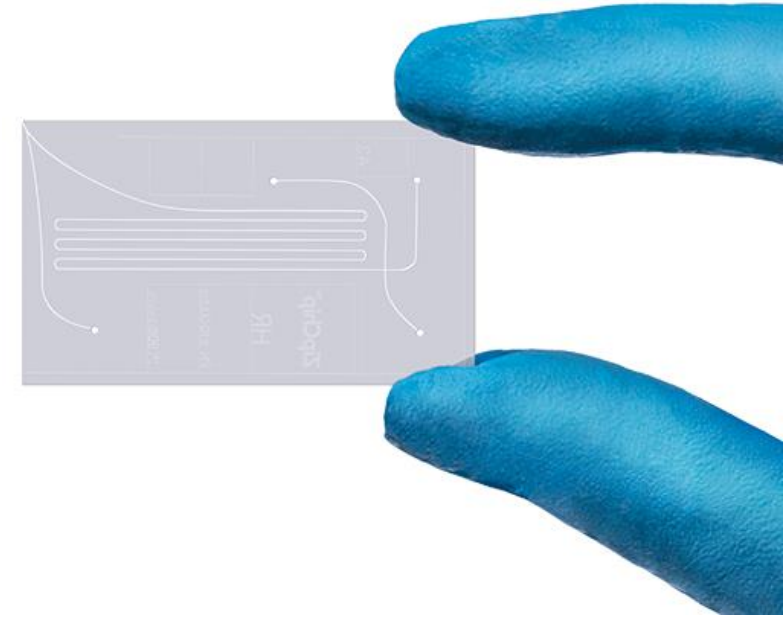
Full, Q Exactive HF-X MS + BioPharma Option



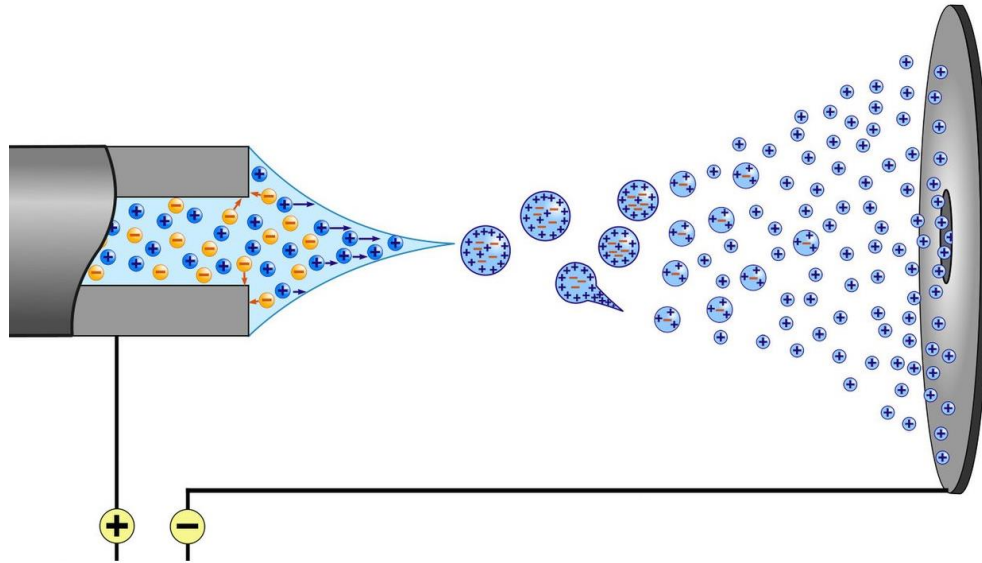




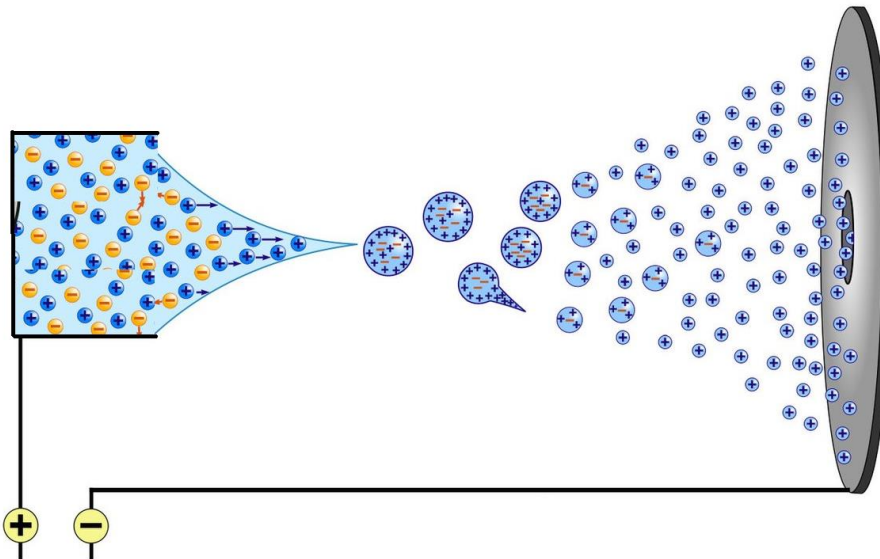
VeriSpray
(paper spray)



ZipChip
(kapilární elektroforéza)



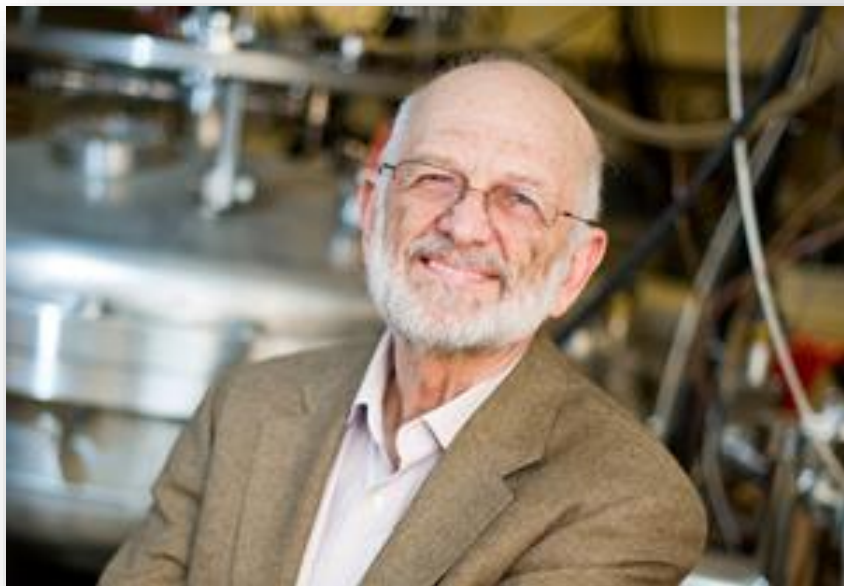
ElectroSpray



PaperSpray



- VeriSpray iontový zdroj využívá technologii paper spray
- Paper spray byl objeven v lab. prof. Grahama Cookse



JOURNAL OF MASS SPECTROMETRY

J. Mass Spectrom. 2005; **40**: 430–443

Published online in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/jms.856

SPECIAL FEATURE: PERSPECTIVE

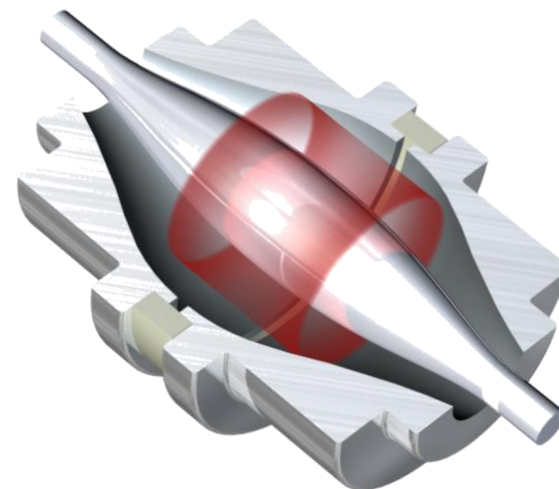
The Orbitrap: a new mass spectrometer

Qizhi Hu,^a Robert J. Noll,^a Hongyan Li,^a Alexander Makarov,^b Mark Hardman^c and R. Graham Cooks^{a*}

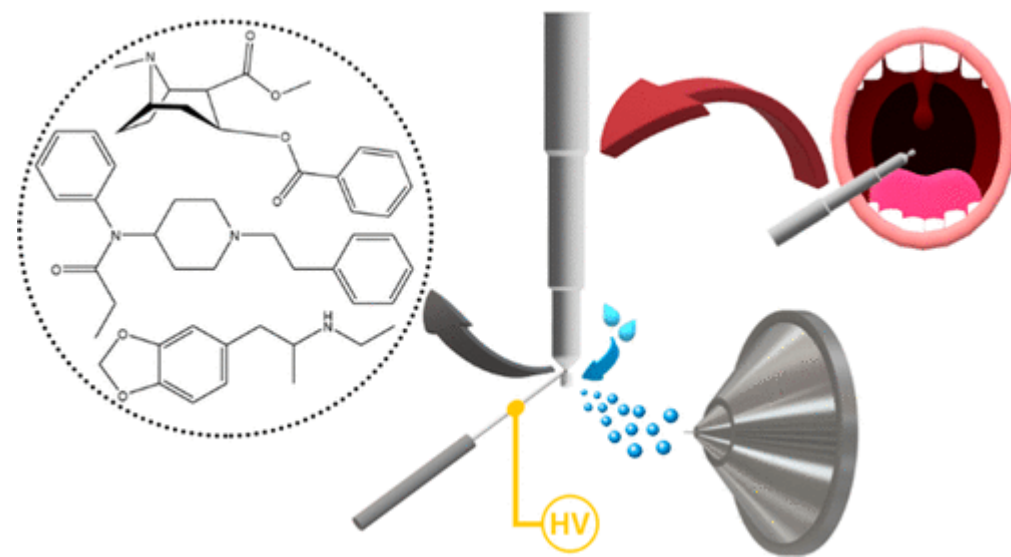
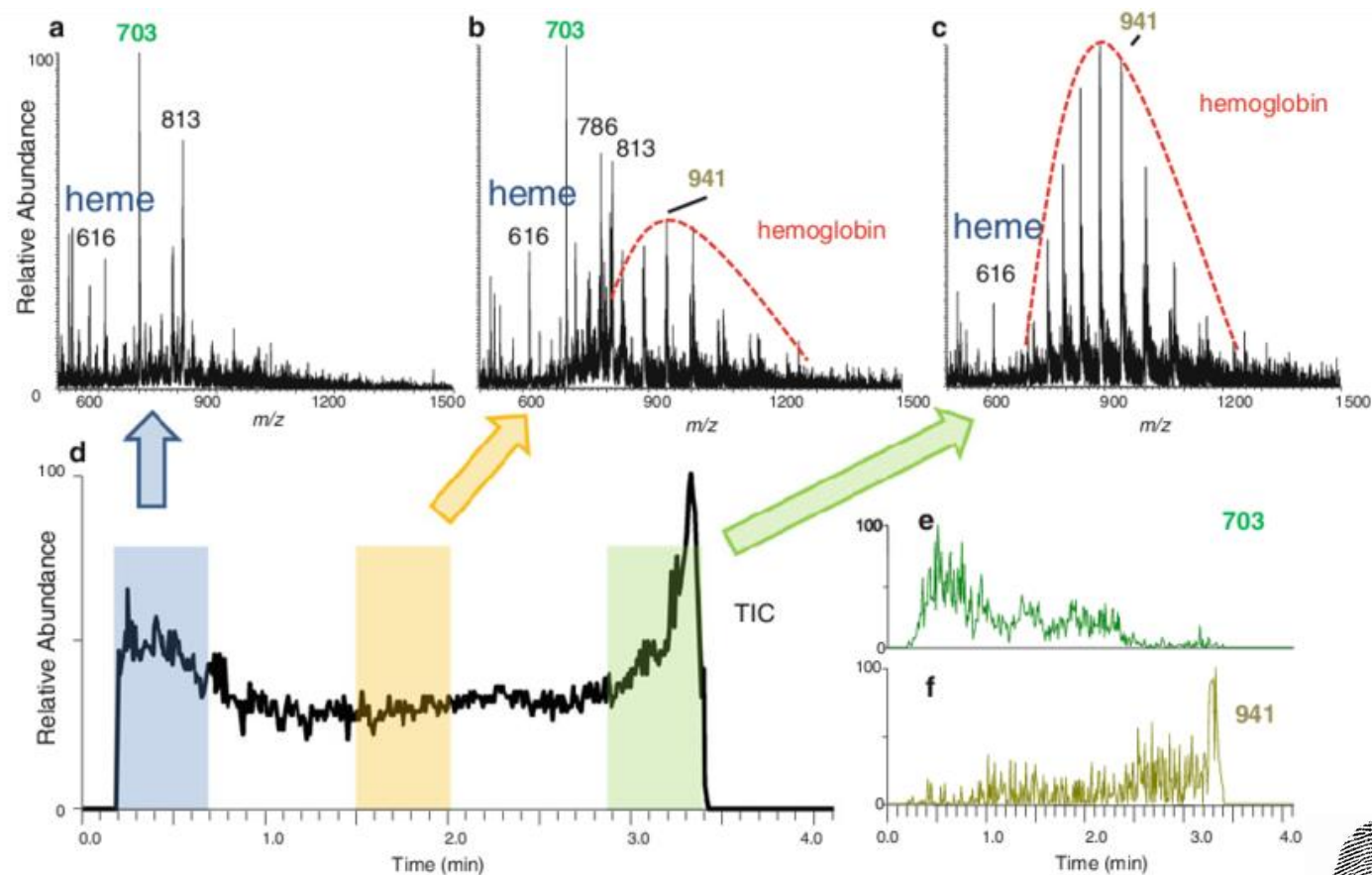
^a Purdue University, Chemistry Department, West Lafayette, IN 47907, USA

^b Thermo Electron (Bremen), Hanna-Kunath-Str. 11, Bremen 28199, Germany

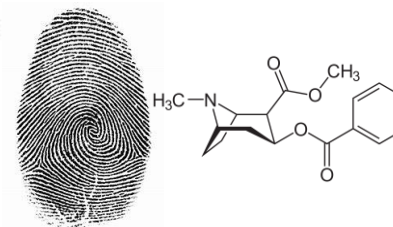
^c Thermo Electron (San Jose) 355 River Oaks Parkway, San Jose, CA 95134 USA



VeriSpray – paper spray

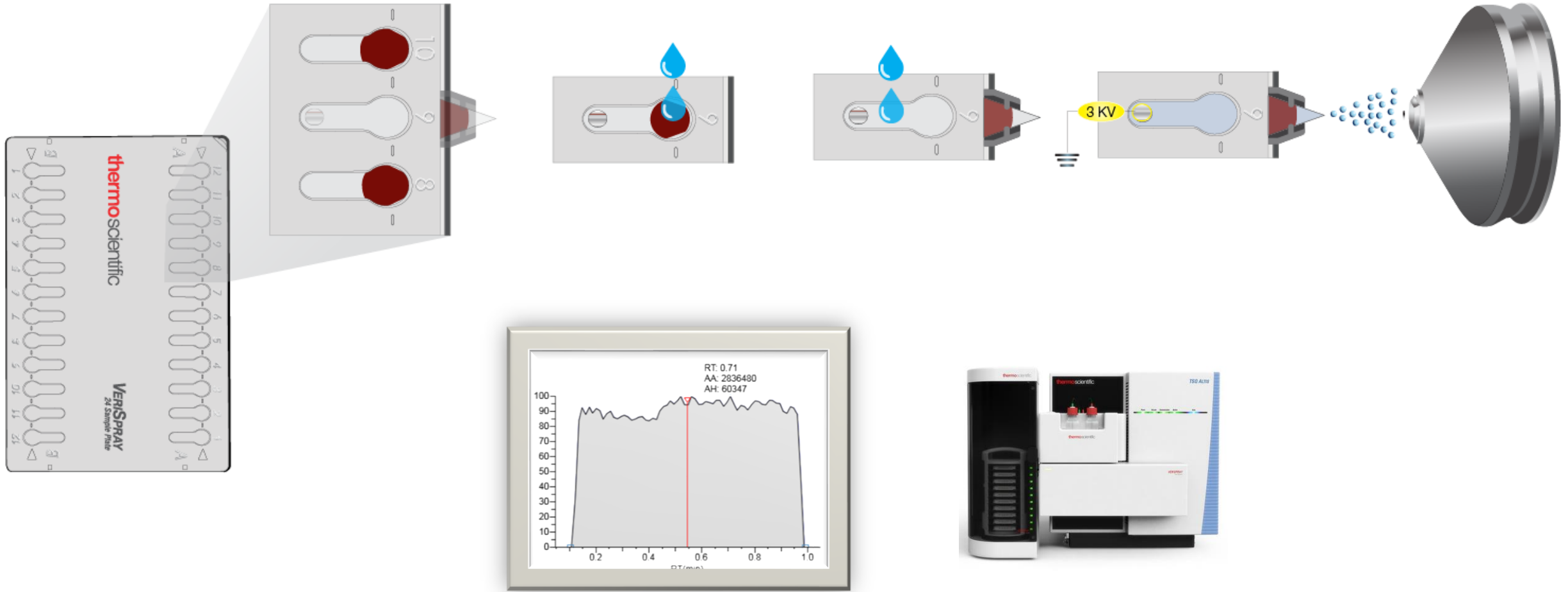


Chromatographia 76(19-20):1339-1346, 2013



Anal. Chem. 2019, 91,11, 7450-7457

VeriSpray – paper spray



VeriSpray

VeriSpray – paper spray



Zásobník (magazine) pro 10 plat

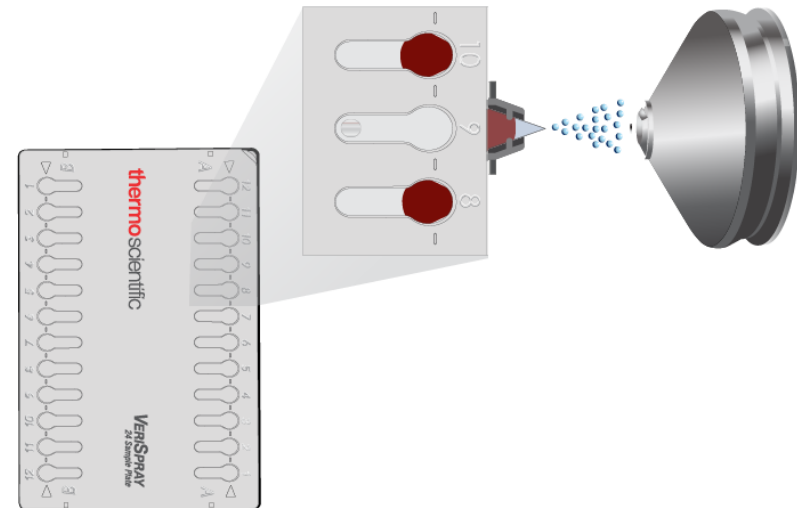


8 hodin nepřetržitých analýz

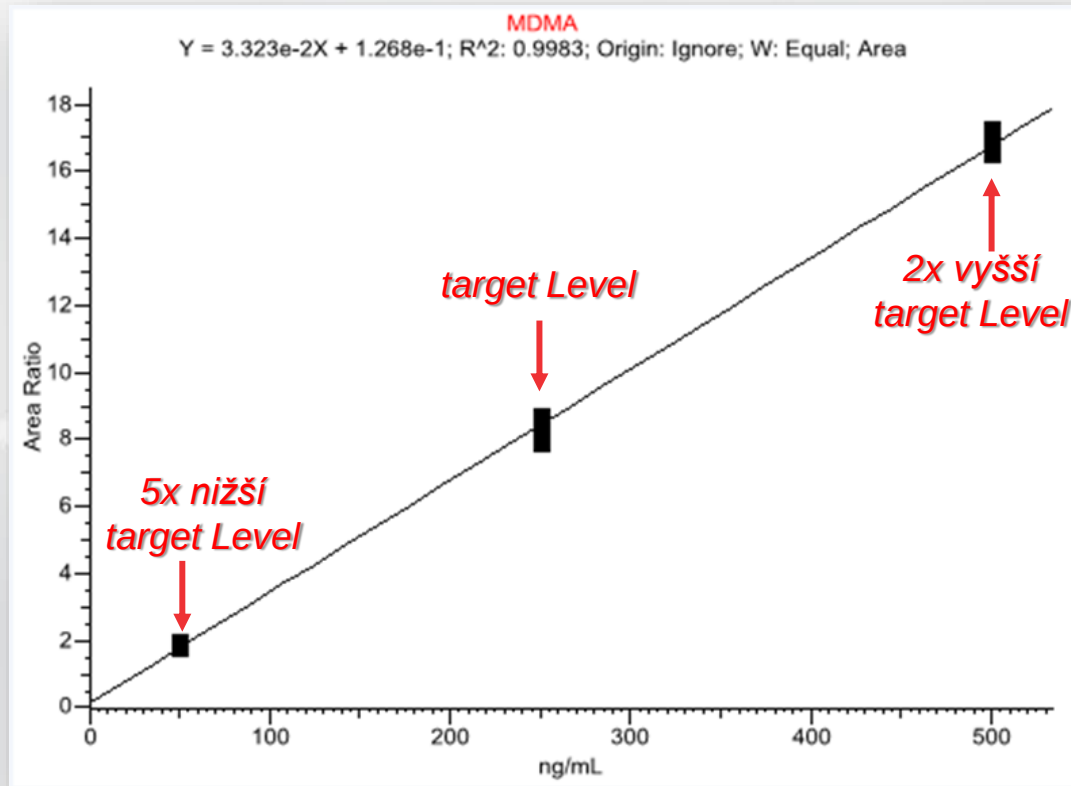


Mimořádné výhody

- Minimální příprava vzorku
- Rychlost analýzy (< 2 min)
- Minimální spotřeba rozpouštědel
- Nulový přenos vzorku
- Automatizace



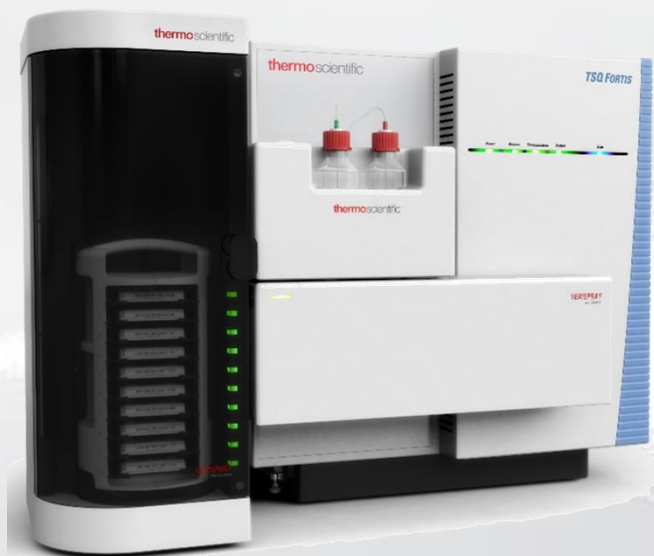
VeriSpray – paper spray



TSQ Quantis

	Target Level in Urine (ng/mL)	VeriSpray LOQ in Urine (ng/mL)	LCMS LOQ in Urine (pg/mL)
CNS Depressants			
Nordiazepam	100	9.1	2.5
Zolpidem Phenyl-4-Carboxylic Acid	50	2.2	1
Alprazolam	50	10	1
Diazepam	100	20	1
Oxazepam	100	20	10
CNS Stimulants			
Amphetamine	250	50	5
Methamphetamine	250	22	12.5
MDMA	250	2.2	5
MDA	250	50	50
Cocaine	100	2.2	2
Benzoylcegonine	250	2.2	1
Dissociative Drugs			
Phencyclidine (PCP)	50	9.1	1
Norketamine	25	9.1	0.5

Thermo Scientific™ VeriSpray™ PaperSpray Ion Source



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