

Charakteristika predkladaného výstupu tvorivej činnosti / Characteristics of the submitted research/ artistic/other output

Tlačivo VTC slúži na predkladanie výstupov tvorivej činnosti podľa metodiky hodnotenia tvorivých činností (časť V. Metodiky na vyhodnocovanie štandardov) / The form is used to submit the research/artistic/other outputs according to the evaluation methodology of research/artistic/other activities (part V. The Methodology for Standards Evaluation).

ID konania/ID of the procedure: ¹	
Kód VTC/Code of the research/artistic/other output (RAOO): ¹	

OCA1. Priezvisko hodnotenej osoby / Surname awarded to the assessed person ²	Mikuš
OCA2. Meno hodnotenej osoby / Name awarded to the assessed person ²	Peter
OCA3. Tituly hodnotenej osoby / Degrees awarded to the assessed person ²	prof., RNDr., PhD.
OCA4. Hyperlink na záznam osoby v Registri zamestnancov vysokých škôl / Hyperlink to the entry of the person in the Register of university staff ³	Form-submit&name=Peter&surname=Miku%C5%A1&sort=s
OCA5. Oblasť posudzovania / Area of assessment ⁴	Doktorandský študijný program Farmaceutická chémia/PhD. Study Programme Pharmaceutical Chemistry
OCA6. Kategória výstupu tvorivej činnosti / Category of the research/artistic/other output <i>Výber zo 6 možností (pozri Vysvetlivky k položke OCA6) / Choice from 6 options (see Explanations for OCA6).</i>	vedecký výstup / scientific output
OCA7. Rok vydania výstupu tvorivej činnosti / Year of publication of the research/artistic/other output	2014
OCA8. ID záznamu v CREPČ alebo CREUČ (ak je) / ID of the record in the Central Registry of Publication Activity (CRPA) or the Central Registry of Artistic Activity (CRAA) ⁵	UK.Bratislava.vtls000285972
OCA9. Hyperlink na záznam v CREPČ alebo CREUČ / Hyperlink to the record in CRPA or CRAA ⁶	http://www.crepce.sk/portal.html?review&id=1337234&pageId=resultform&full=0
Ak výstup nie je registrovaný v CREPČ alebo CREUČ / Characteristics of the output that is not registered in CRPA or CRAA	OCA10. Hyperlink na záznam v inom verejne prístupnom registri, katalógu výstupov tvorivých činností / Hyperlink to the record in another publicly accessible register, catalogue of research/artistic/other outputs ⁷
	s2.0-84926219906&origin=resultslist&sort=plf-f&src=s&st1=On-line+column+coupled+isotachophoresis-
	OCA11. Charakteristika výstupu vo formáte bibliografického záznamu CREPČ alebo CREUČ, ak výstup nie je vo verejne prístupnom registri alebo katalógu výstupov / Characteristics of the output in the format of the CRPA or the CRAA bibliographic record, if the output is not available in a publicly accessible register or catalogue of outputs
	OCA12. Typ výstupu (ak nie je výstup registrovaný v CREPČ alebo CREUČ) / Type of the output (if the output is not registered in CRPA or CRAA) <i>Výber zo 67 možností (pozri Vysvetlivky k položke OCA12) / Choice from 67 options (see Explanations for OCA12).</i>
	OCA13. Hyperlink na stránku, na ktorej je výstup sprístupnený (úplný text, iná dokumentácia a podobne) / Hyperlink to the webpage where the output is available (full text, other documentation, etc.)
OCA14. Charakteristika autorského vkladu / Characteristics of the author's contribution	https://www.sciencedirect.com/science/article/pii/S00326701400395X Stanovenie hypotézy a cieľov, konceptualizácia a garancia riešenia, návrh metód výskumu, získanie a interpretácia výsledkov, príprava rukopisu, finančné prostriedky / Determination of hypothesis and aims, conceptualization and financing of research, methodological guarantee, preparation of manuscript, financial resources

Charakteristika výstupu, kto	OCA15. Anotácia výstupu s kontextovými informáciami týkajúcimi sa opisu tvorivého procesu a obsahu tvorivej činnosti a pod. / Annotation of the output with contextual information concerning the description of creative process and the content of the research/artistic/other activity, etc. ⁸ <i>Rozsah do 200 slov v slovenskom jazyku / Range up to 200 words in Slovak</i> <i>Rozsah do 200 slov v anglickom jazyku / Range up to 200 words in English</i>	
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OCA16. Anotácia výstupu v anglickom jazyku / Annotation of the output in English ⁹ <i>Rozsah do 200 slov / Range up to 200 words</i>	A new highly advanced analytical approach, based on two-dimensional column coupled CE (ITP-CZE) hyphenated with tandem mass spectrometry (MS/MS, here triple quadrupole, QqQ) was developed, evaluated, and applied in biomedical field in the present work. Capillary isotachopheresis (ITP) coupled online with capillary zone electrophoresis (CZE) used in hydrodynamically closed separation system was favorable for increasing the sample load capacity, increasing the analyte concentration, and removing the deteriorative highly conductive major matrix constituents. These factors considerably reduced the concentration limits of detection (cLOD) and external sample preparation (comparing to single column CZE), and, by that, provided favorable conditions for the mass spectrometry (enhanced signal to noise ratio, reproducibility of measurements, working life of MS). Here, the CZE-ESI combination provided more effective interfacing than ITP-ESI resulting in both a higher obtainable intensity of MS detection signal of the analyte as well as reproducibility of measurements of the analyte's peak area. The optimized ITP-CZE-ESI-QqQ method was successfully evaluated as for its performance parameters (LOD, LOQ, linearity, precision, recovery/accuracy) and applied for the direct identification and ultratrace (pg/mL) determination of varenicline and, in addition, identification of its targeted metabolite, 2-hydroxy-varenicline, in unpretreated/diluted human urine.
OCA17. Zoznam najviac 5 najvýznamnejších ohlasov na výstup / List of maximum 5 most significant citations corresponding to the output <i>Rozsah do 200 slov / Range up to 200 words</i>	[o1] Pallmann, Sebastian; Siegle, Alexander F.; Steflova, Jana; Trapp, Oliver: Direct Hadamard Transform Capillary Zone Electrophoresis without Instrumental Modifications, ANALYTICAL CHEMISTRY, Volume 90, Issue 14, Page 8445-8453, 2018, DOI 10.1021/acs.analchem.8b01010; [o1] Mala, Zdena; Gebauer, Petr: Capillary moving-boundary isotachopheresis with electrospray ionization mass-spectrometric detection and hydrogen ion used as essential terminator: Methodology for sensitive analysis of hydroxyderivatives of s-triazine herbicides in waters, JOURNAL OF CHROMATOGRAPHY A, Volume 1518, Page 97-103, 2017, DOI 10.1016/j.chroma.2017.08.074; [o1] Jiang, You; He, Mu-Yi; Zhang, Wen-Jing; Luo, Pan; Guo, Dan; Fang, Xiang; Xu, Wei: Recent advances of capillary electrophoresis-mass spectrometry instrumentation and methodology, CHINESE CHEMICAL LETTERS, Volume 28, Issue 8, Page 1640-1652, 2017, DOI 10.1016/j.cclet.2017.05.008; [o1] Breadmore, Michael C.; Wuethrich, Alain; Li, Feng; Phung, Sui Ching; Kalsoom, Umme; Cabot, Joan M.; Tehranirokh, Masoomeh; Shalan, Aliaa I.; Keyon, Aemi S. Abdul; See, Hong Heng: Recent advances in enhancing the sensitivity of electrophoresis and electrochromatography in capillaries and microchips (2014-2016), ELECTROPHORESIS, Volume 38, Issue 1, Page 33-59, 2017, DOI 10.1002/elps.201600331; [o1] Thanh Duc Mai; Oukacine, Farid; Taverna, Myriam: Multiple capillary isotachopheresis with repetitive hydrodynamic injections for performance improvement of the electromigration preconcentration, JOURNAL OF CHROMATOGRAPHY A, Volume 1453, Page 116-123, 2016, DOI 10.1016/j.chroma.2016.05.048
OCA18. Charakteristika dopadu výstupu na spoločensko-hospodársku prax / Characteristics of the output's impact on socio-economic practice <i>Rozsah do 200 slov v slovenskom jazyku / Range up to 200 words in Slovak</i> <i>Rozsah do 200 slov v anglickom jazyku / Range up to 200 words in English</i>	Prvá metóda integrujúca izotachoforetickú úpravu vzorky s analytickou separáciou na báze zónovej elektroforézy a detekciou na princípe hmotnostnej spektrometrie. Demonstrujeme možnosti nového spôsobu analýzy stopových množstiev iónogénnych liečiv v mnohložkových biologických matriciach pre účely klinického výskumu a praxe, s priaznivými validačnými parametrami navrhnutého metodického prístupu. / The first method integrating isotachophoretic sample treatment with analytical separation based on zone electrophoresis and detection on the principle of mass spectrometry. We demonstrate the possibilities of a new method of analysis of trace amounts of ionic drugs in multicomponent biological matrices for the purposes of clinical research and practice, with favorable validation parameters of the proposed methodological approach.
OCA19. Charakteristika dopadu výstupu a súvisiacich aktivít na vzdelávací proces / Characteristics of the output and related activities' impact on the educational process <i>Rozsah do 200 slov v slovenskom jazyku / Range up to 200 words in Slovak</i> <i>Rozsah do 200 slov v anglickom jazyku / Range up to 200 words in English</i>	Teoretické aj experimentálne aspekty navrhnutého analytického prístupu spolu so získanými dátami/výsledkami sú prezentované v rámci prednášok z predmetov analytická chémia, nové smery v analytickej chémii, analýza látok v biologických systémoch a budú zaradené tiež do pripravovaného modulu monitorovanie hladín liečiv vo farmaceutickej praxi. Tieto výstupy dopĺňajú edukačnú bázu o nové poznatky v oblasti analytickej metodológie ale aj farmaceutickej chémie. /