www.elsevier.com/locate/talanta

Real-Time Analysis of Self-Assembled Nucleobases by Venturi Easy Ambient Sonic-Spray Ionization Mass Spectrometry

Na Na, Ruixia Shi, Zi Long, Xin Lu, Fubin Jiang, Jin Ouyang

PII: S0039-9140(14)00358-0
DOI: http://dx.doi.org/10.1016/j.talanta.2014.04.080
Reference: TAL14752

To appear in: *Talanta*

Received date: 11 November 2013
Revised date: 23 April 2014
Accepted date: 29 April 2014

Cite this article as: Na Na, Ruixia Shi, Zi Long, Xin Lu, Fubin Jiang, Jin Ouyang, Real-Time Analysis of Self-Assembled Nucleobases by Venturi Easy Ambient Sonic-Spray Ionization Mass Spectrometry, *Talanta,* http://dx.doi.org/10.1016/j.talanta.2014.04.080

Real-Time Analysis of Self-Assembled Nucleobases by Venturi Easy Ambient Sonic-Spray Ionization Mass Spectrometry

Na Na, [‡a] Ruixia Shi, [‡a,b] Zi Long,[a] Xin Lu, [a,c] Fubin Jiang, [a*] Jin Ouyang [a*]

[a] Key Laboratory of Theoretical and Computational Photochemistry, Ministry of Education, College of Chemistry, Beijing Normal University, Beijing 100875, P. R. China

[b] Xi'an Gaoxin No.1 High School, Xi'an 710065, P.R. China

[c] National Institute of Food and Drug Control, Beijing 100050, P.R. China

Corresponding author: Prof. Dr. Jin Ouyang and Prof. Dr. Fubin Jiang,

College of Chemistry, Beijing Normal University, Beijing 100875, P.R. China,

Fax: +86-10-62799838; E-mail: jinoyang@bnu.edu.cn ; jfb@bnu.edu.cn

[‡]These authors contributed equally.

Abstract

In this study, the real-time analysis of self-assembled nucleobases was employed by venturi easy ambient sonic-spray ionization mass spectrometry (V-EASI-MS). With the analysis of three nucleobases including 6-methyluracil (6MU), uracil (U) and thymine (T) as examples, different orders of clusters centered with different metal ions were recorded in both positive and negative modes. Compared with the results obtained by traditional electrospray ionization mass spectrometry (ESI-MS) at the same condition, more clusters with high orders, such as $[6MU_7+Na]^+$, $[6MU_{15}+2NH_4]^{2+}$, $[6MU_{10}+Na]^+$, $[T_7+Na]^+$, $[T_{15}+2NH_4]^{2+}$ were