Electronic Supplementary Information

Simultaneous determination of iodide and creatinine in human urine by flow analysis with an on-line sample treatment column

Jirayu Sitanurak[ab], Prawpan Inpota[ab], Thitirat Mantim[ab], Nuanlaor Ratanawimarnwong[ac], Prapin Wilairat[ad] and Duangjai Nacapricha[*ab]

[a]*Flow Innovation-Research for Science and Technology Laboratories (Firstlabs)*

[b]*Department of Chemistry and Center of Excellence for Innovation in Chemistry, Faculty of Science, Mahidol University, Bangkok 10400, Thailand*

[c]*Department of Chemistry, Faculty of Science, Srinakharinwirot University, Sukhumwit 23, Bangkok 10110, Thailand*

[d]*National Doping Control Centre, Mahidol University, Rama VI Rd, Bangkok 10400, Thailand*

**Author to whom correspondence should be addressed*

Tel.: +66 2 201 5127, fax: +66 2 201 5127

E-mail address: duangjai.nac@mahidol.ac.th and dnacapricha@gmail.com

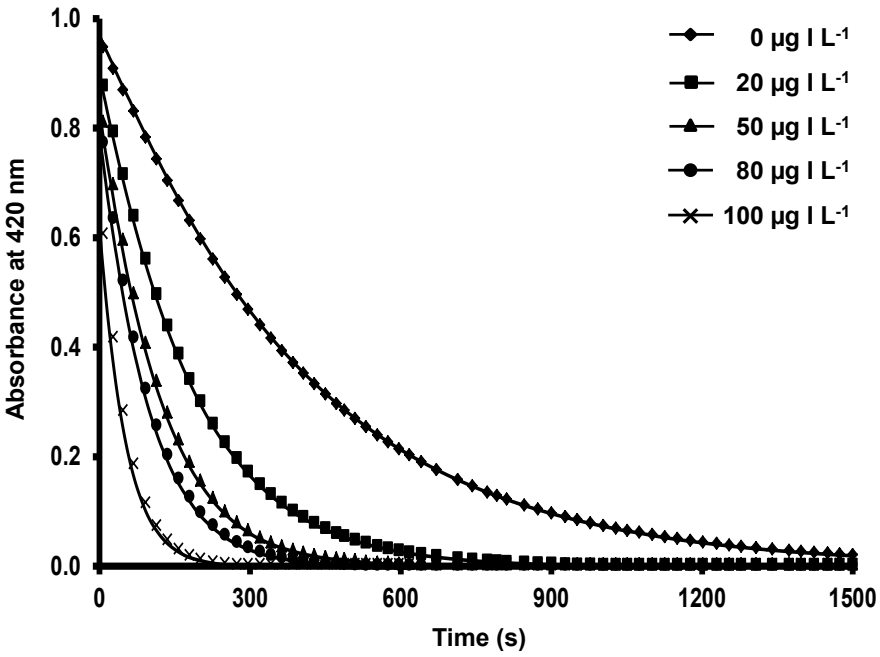

Fig. S1 Kinetics profile obtained from stopped-flow mode, showing decrease in absorbance of Ce(IV) at various concentrations of iodide dissolved in 5 M $NaNO_3$.

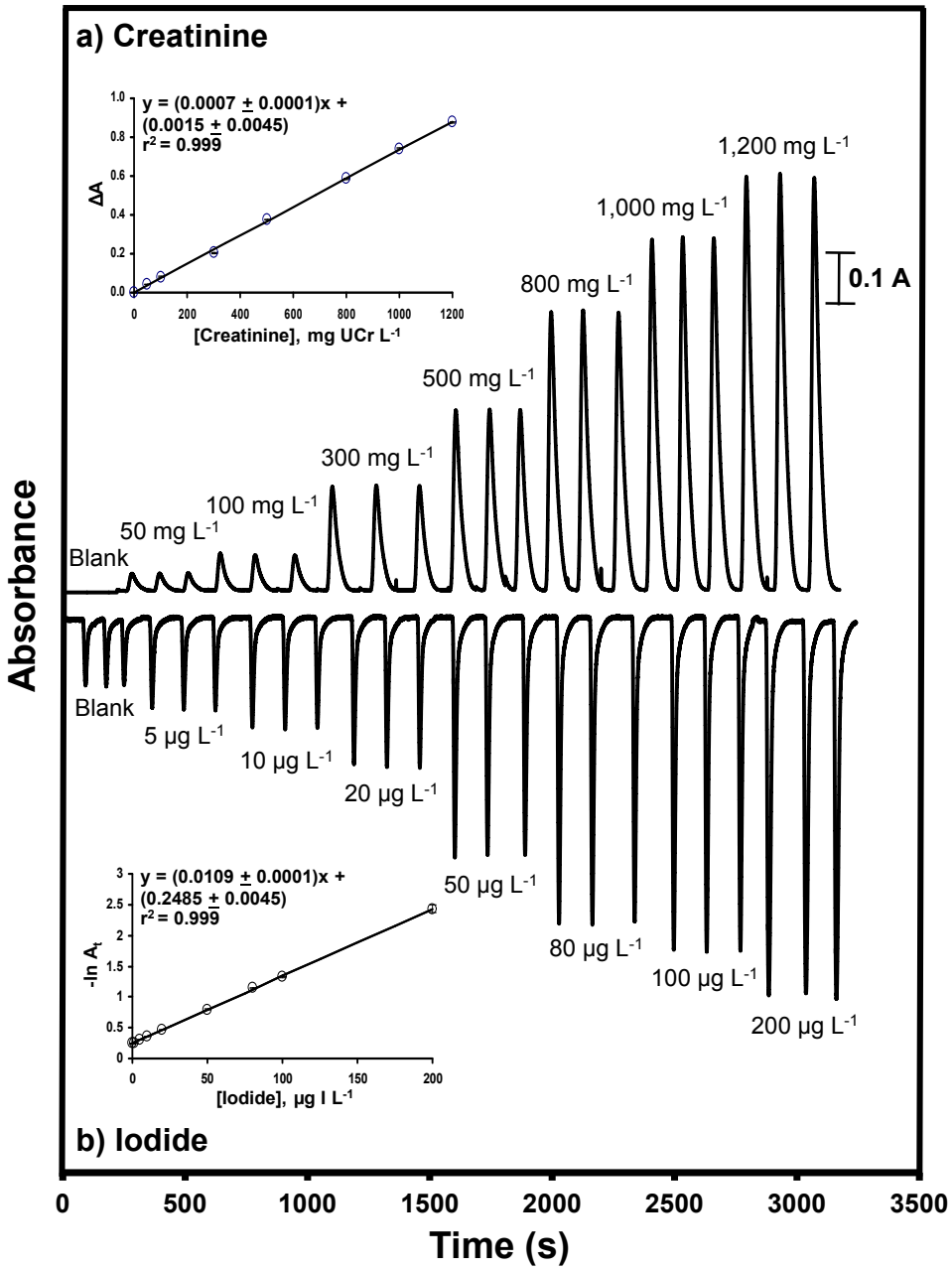

Fig. S2 Recording of signals and calibration curves obtained from the proposed flow system for simultaneous measurement of (a) urinary creatinine and (b) iodide.

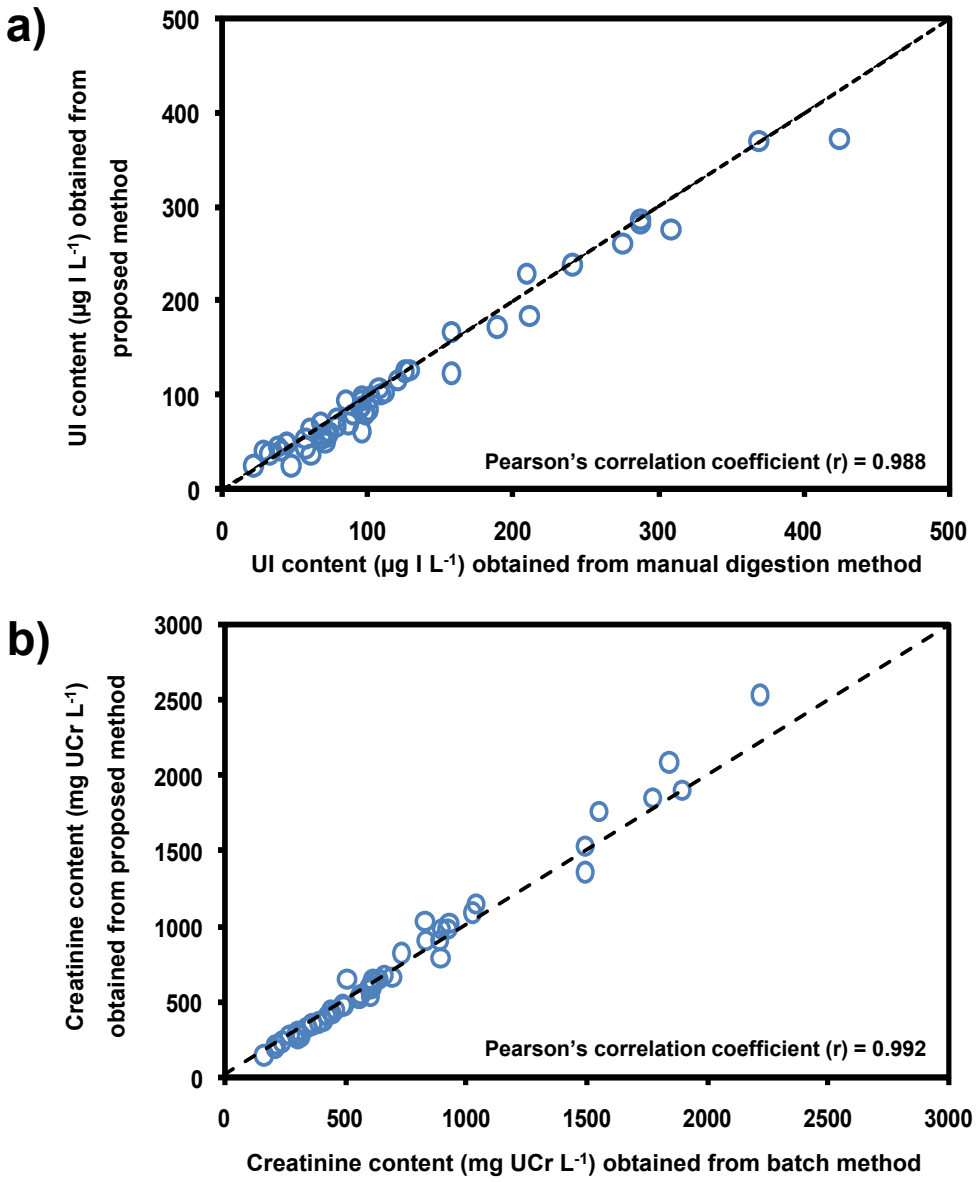

Fig. S3 Pearson's linear plot for statistical comparison of two analytical methods. (a) The proposed method and manual chloric acid digestion with flow kinetic detection for UI analysis[19] and (b) proposed method and batch method using Jaffe's reaction for creatinine determination.[29] Linear regression equation for iodine: $y = (0.947 \pm 0.021)x - (0.119 \pm 3.173)$, $r^2 = 0.984$ and for creatinine: $y = (1.098 \pm 0.020)x - (35.32 \pm 17.40)$, $r^2 = 0.984$, n = 50. The ideal correlation line (y = x) is shown by the dashed line.