

Supplementary Information

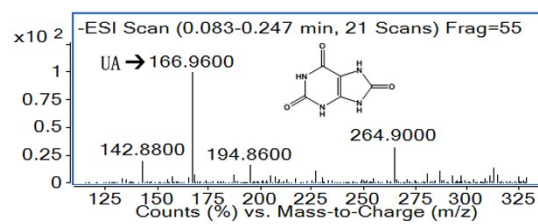


Figure 1. Full scan negative ion ESI Mass Spectrum and the chemical structure of UA;

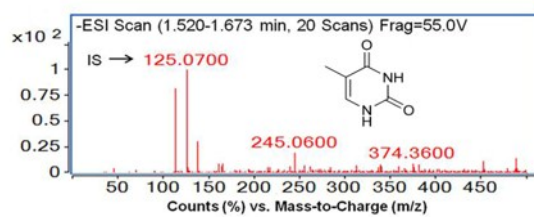


Figure 2. Full scan negative ESI mass spectrum and the chemical structure of I.S..

Table 1. Regression equations, Linearity ranges and LLOQs results for determination of uric acid in biological samples

Biological samples	Concentration Ratio		Peak	Regression Equation	R ²	Linear Rang	LLOQ
	Concentration value of UA	Concentration value of I.S.	Area Ratio				
Serum (ng/ml)	0.00	40	0.234	Y=0.3016X+0.234	0.9991	1.0~ 350.0	1.05
	1.05	40	0.251				
	3.66	40	0.269				
	12.80	40	0.331				
	32.00	40	0.468				
	80.00	40	0.845				
	200.00	40	1.674				
	350.00	40	2.911				
Lung (ng/ml)	0.0000	80	0.003	Y=0.7074X+0.003	0.9984	1.5~ 1500.0	1.5
	1.5	80	0.014				
	3.0	80	0.03				
	6.0	80	0.06				
	30.0	80	0.31				
	150.0	80	1.33				
	750.0	80	7.04				
	1500.0	80	13.06				
PAECs (ng/ml)	0.0000	80	0.004	Y=0.9586X+0.004	0.9994	1.5~ 1500.0	1.5
	1.5	80	0.012				
	3.0	80	0.024				
	6.0	80	0.058				
	30.0	80	0.30				
	150.0	80	1.55				
	750.0	80	8.76				
	1500.0	80	18.12				

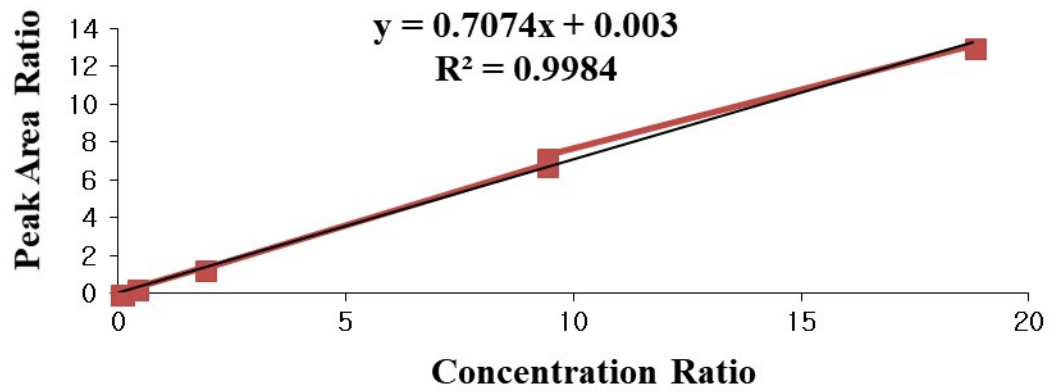


Figure 3. The calibration graph of UA in lung tissue. R^2 (correlation coefficient) were equal to 0.9984.

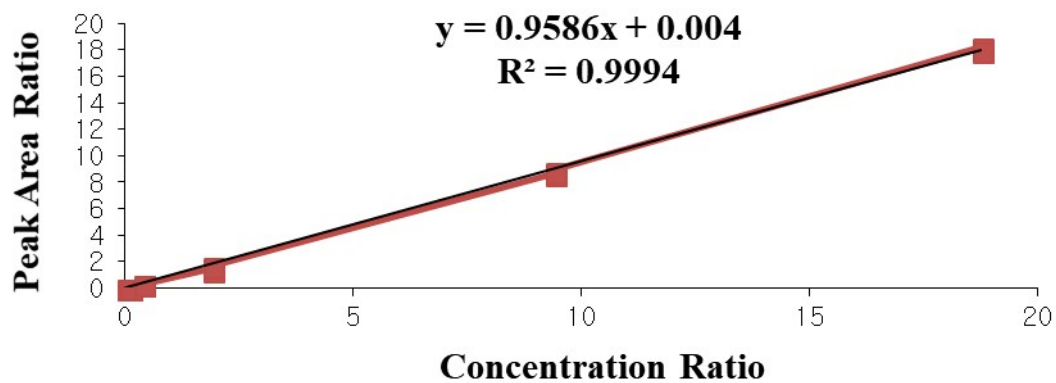


Figure 4. The calibration graph of UA in PAECs. R^2 (correlation coefficient) were equal to 0.9994.

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Table 2. Intra-day and inter-day precisions and accuracies for the determination of uric acid in biological samples of normal group. Mean \pm SD (n=6).

Biological samples	Spiked Conc.	Measured Conc	Intra-Day accuracy (RE%)	Intra-Day precision (RSD%)	Measured Conc	Inter-day accuracy (RE%)	Inter-day precision (RSD%)
Serum (ng/mL)	0.1	0.1 \pm 0.0	103.8	7.0	0.1 \pm 0.0	93.9	7.7
	10.0	9.7 \pm 0.2	97.0	2.1	10.10 \pm 0.3	101.0	3.1
	50.0	50.9 \pm 1.4	101.8	2.8	50.50 \pm 0.9	101.0	1.8
	200.0	199.8 \pm 2.4	99.90	1.2	201.7 \pm 3.7	100.0	1.8
Lung (ng/mL)	1.5	1.3 \pm 0.1	88.9	7.8	1.4 \pm 0.1	91.3	6.4
	3.75	3.8 \pm 0.2	101.8	4.6	3.7 \pm 0.2	99.5	4.3
	67.50	77.2 \pm 7.6	114.3	9.8	75.0 \pm 2.0	111.1	2.7
	1200.0	1274.7 \pm 124.7	105.3	9.8	1270.8 \pm 26.6	105.9	2.1
PAECs (ng/mL)	1.5	1.7 \pm 0.0	112.7	2.8	1.6 \pm 0.1	109.7	5.4
	3.75	3.8 \pm 0.3	101.4	8.7	3.9 \pm 0.2	103.0	5.7
	67.5	66.5 \pm 2.5	98.4	3.8	63.2 \pm 2.9	93.6	4.7
	1200.0	1155.5 \pm 43.2	96.3	3.7	1101.3 \pm 107.7	91.8	9.8

Table 3. Extraction recovery and matrix effect of the determination of uric acid in biological samples of normal group (n=6).

Biological samples	Spiked Conc.	Recovery (%)	RSD (%)	Matrix effect (%)	RSD (%)
Serum (ng/ml)	10.00	90.7	6.7	111.09	9.7
	50.00	86.2	9.0	106.88	6.3
	200.00	98.7	6.6	112.57	2.1
Lung (ng/ml)	3.75	90.9	7.2	114.49	8.9
	67.50	84.4	10.9	105.35	5.2
	1200.00	92.9	9.9	103.75	5.1
PAECs (ng/ml)	3.75	87.1	12.2	106.11	9.1
	67.50	86.6	7.3	110.37	10.4
	1200.00	80.7	5.2	108.06	7.6

Table 4. Stability results of the determination of uric acid in biological samples of normal group (n=6).

Biological samples	Spiked Conc.	Measured Conc	RE (%)	RSD (%)
Serum (ng/ml)	10.0	10.47	104.7	8.3
	200.00	215.24	107.6	1.0
Lung (ng/ml)	3.75	3.7	98.5	2.7
	1200.00	1262.7	105.2	8.3
PAECs (ng/ml)	3.75	3.6	96.4	2.8
	1200.00	1138.8	94.9	1.4