Supporting Information

**Highly sensitive detection of five typical fluoroquinolones in low-fat milk by field-enhanced sample injection based CE in bubble cell capillary**

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**Abbreviations**: **CIP**, ciprofloxacin; **ENR**, enrofloxacin; **FESI**, field-enhanced sample injection; **FLE**, fleroxacin; **FQs**, Fluoroquinolones; **LOM**, lomefloxacin; **OFL**, ofloxacin

**Table S1 Repeatability study (RSD (%), n=5) of migration time (T) and peak height (H) of FQs in different concentrations with the optimized procedure for FESI-CE-UV.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| FQs | 5 ng/mL | |  | 100 ng/mL | |
| T | H |  | T | H |
| LOM | 3.2 | 9.4 |  | 2.0 | 2.9 |
| CIP | 1.3 | 7.3 |  | 0.6 | 4.1 |
| OFL | 0.9 | 6.7 |  | 0.5 | 4.3 |
| FLE | 0.6 | 12.0 |  | 0.9 | 5.8 |
| ENR | 0.3 | 6.4 |  | 1.4 | 5.8 |

**Table S2 Regression lines of the analyzed FQs with confidence interval of the parameters included.**

|  |  |  |  |
| --- | --- | --- | --- |
| FQs |  | Calibration curve | |
|  | Bubble cell capillary | Standard capillary |
| LOM |  | y=(0.120±0.005)x-(0.07±0.03) R2=0.990 | y=(0.049±0.003)x-(0.15±0.02) R2=0.989 |
| CIP |  | y=(0.24±0.01)x-(0.28±0.07) R2=0.987 | y=(0.061±0.006)x+(0.09±0.04) R2=0.964 |
| OFL |  | y=(0.143±0.008)x-(0.11±0.04) R2=0.986 | y=(0.045±0.005)x+(0.08±0.03) R2=0.961 |
| FLE |  | y=(0.37±0.02)x-(0.42±0.09) R2=0.990 | y=(0.115±0.009)x-(0.30±0.06) R2=0.970 |
| ENR |  | y=(0.18±0.01)x-(0.45±0.06) R2=0.984 | y=(0.037±0.005)x+(0.20±0.03) R2=0.951 |

**Table S3 Recovery (R) study for FQs in spiked milk based on the calibration curves obtained in standard FQs solution and milk, respectively.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| FQs | Spiked milk samples | | | | |
| 100 µg/Kg | |  | 25 µg/Kg | |
| R (%), calculated by calibration curve in standard FQs solutions | R (%), calculated by calibration curve in spiked milk |  | R (%), calculated by calibration curve in standard FQs solutions | R (%), calculated by calibration curve in spiked milk |
| LOM | 57.4 | 103.1 |  | 57.1 | 106.0 |
| CIP | 72.0 | 105.1 |  | 67.0 | 98.0 |
| OFL | 70.7 | 104.5 |  | 58.6 | 94.4 |
| FLE | 64.5 | 105.3 |  | 62.4 | 101.1 |
| ENR | 66.5 | 101.7 |  | 55.2 | 93.6 |