**Supplementary material**

**Quantification of multiclass antibiotics by UHPLC-MS/MS analysis combined with salt-assisted acetonitrile extraction: Comparative evaluation of dairy and poultry manure**

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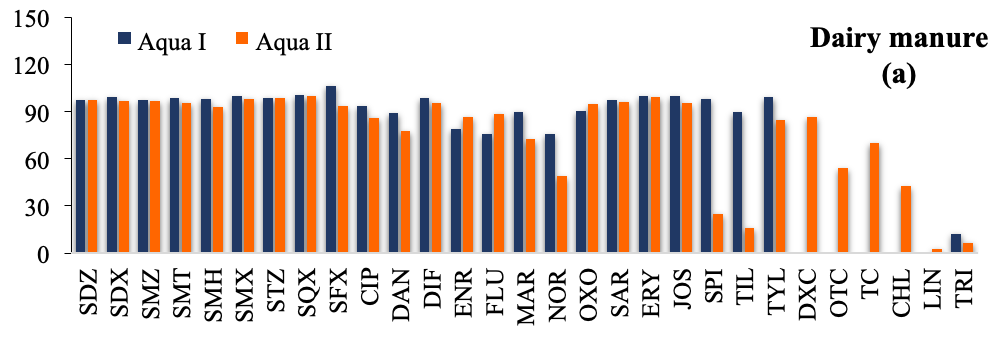
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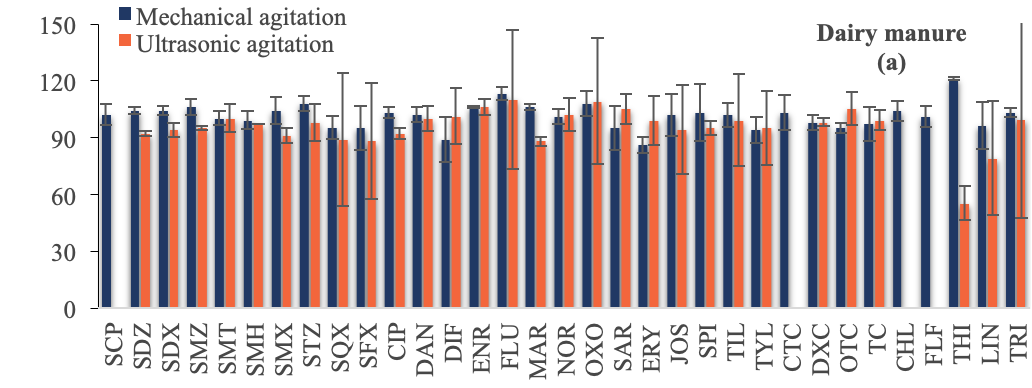
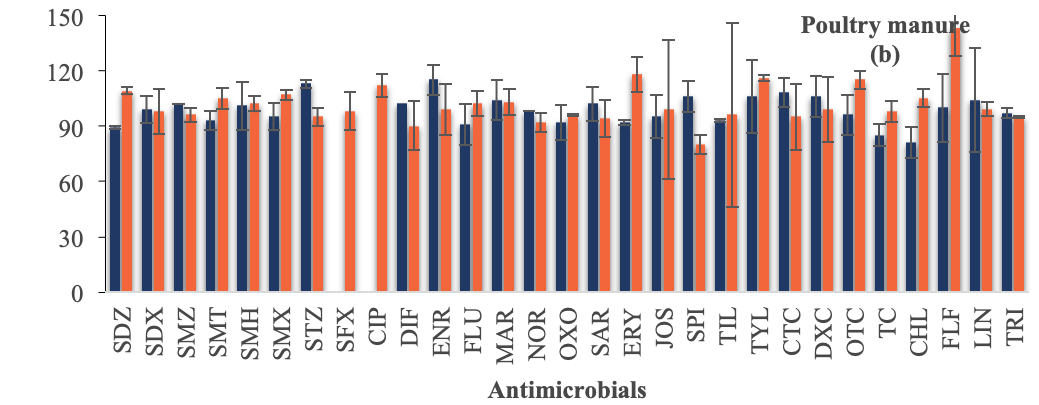
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mobile Phase (A) 1 0.2% HCOOH, 1 mM HCOONH4 in water  Mobile Phase (A) 2 0.2% HCOOH, 1 mM HCOONH4 and 1 mM oxalic ocid in water  Mobile Phase A2  Mobile Phase A1 | |  |  |  | | --- | --- | --- | | Antibiotic | Mobile Phase A1  Retention Time (min) | Mobile Phase A2  Retention Time (min) | | sulfadiazine | 3.6 | 3.6 | | sulfathiazole | 4.5 | 4.6 | | sulfamethazine | 10.8 | 11.4 | | sulfamethizole | 7.6 | 8.1 | | sulfamonomethoxine | 9.6 | 6.8 | | sulfamethoxipyridazine | 9.6 | 6.8 | | sulfachloropyridazine | 9.9 | 10.4 | | sulfadimethoxine | 10.8 | 11.4 | | sulfadoxine | 10.8 | 11.4 | | sulfamethoxazole | 11.1 | 11.5 | | sulfaquinoxaline | 13.2 | 7.9 | | sulfisoxazole | 11.8 | 10.9 | | difloxacin | 10.5 | 11.4 | | marbofloxacin | 6.0 | 7.3 | | oxolinic acid | 14.6 | 15.5 | | flumequine | 14.6 | 15.5 | | sarafloxacin | 10.3 | 11.3 | | norfloxacin | 7.0 | 7.3 | | enrofloxacin | 9.0 | 10.3 | | danofloxacin | 8.6 | 6.0 | | ciprofloxacin | 7.5 | 7.5 | | spiramycin | 11.6 | 12.7 | | erythromycin | 17.5 | 14.2 | | tylosin | 13.9 | 14.0 | | josamycin | 15.6 | 15.8 | | tilmicosin | 12.8 | 13.0 | | oxytetracycline | 6.7 | 7.4 | | tetracycline | 6.2 | 7.3 | | doxycycline | 6.2 | 7.3 | | chlortetracycline | 11.5 | 11.4 | | thiamphenicol | 6.8 | 6.3 | | florfenicol | 11.2 | 11.7 | | chloramphenicol | 12.4 | 13.1 | | trimethoprim | 5.8 | 7.0 | | lincomycin | 4.2 | 5.3 | |

**Figure S1** Ion Chromatograms of mixed antibiotic standards for mobile phase Aqua I and Aqua II (antibiotic concentration=100 µg/L)



**Matrix Effect (%)**

**Figure S2** Matrix effect in determination of antibiotics (n=3, 25-100 µg/kg) in dairy manure (a) and poultry manure (b) by using two different mobile phase in LC-MS/MS analysis. The antibiotics with ME>150 are not shown.



**Recovery (%)**

**Figure S3** Effect of agitation type on the extraction performance of antibiotics (each 100 µg/kg) in dairy (a) and poultry (b) manure samples (n=3).