

**Table S-1 Optimized MRM parameters of the target compounds**

| Categories   | Analytes      | Precursor ion<br>(m/z) | Product ions<br>(m/z) | Declustering potential<br>(eV) | Collision energy<br>(eV) |
|--------------|---------------|------------------------|-----------------------|--------------------------------|--------------------------|
| Fungicides   | Carbendazim   | 192                    | 160 <sup>a</sup>      | 56                             | 27                       |
|              |               |                        | 132                   | 56                             | 41                       |
|              | iprodione     | 330                    | 245 <sup>a</sup>      | 55                             | 20                       |
|              |               |                        | 288                   | 55                             | 20                       |
|              | Uniconazole   | 292                    | 70 <sup>a</sup>       | 47                             | 45                       |
|              |               |                        | 125                   | 47                             | 45                       |
|              | Myclobutanil  | 289                    | 70 <sup>a</sup>       | 70                             | 21                       |
|              |               |                        | 125                   | 70                             | 45                       |
|              | Penconazole   | 284                    | 159 <sup>a</sup>      | 61                             | 39                       |
|              |               |                        | 70                    | 61                             | 29                       |
|              | Hexaconazole  | 314                    | 70 <sup>a</sup>       | 56                             | 39                       |
|              |               |                        | 159                   | 56                             | 37                       |
|              | Flusilazole   | 316                    | 247 <sup>a</sup>      | 61                             | 25                       |
|              |               |                        | 165                   | 61                             | 35                       |
|              | Triticonazole | 318                    | 70 <sup>a</sup>       | 32                             | 25                       |
|              |               |                        | 125                   | 32                             | 35                       |
| Epoconazole  | 330           | 121 <sup>a</sup>       | 56                    | 27                             |                          |
|              |               | 101                    | 56                    | 63                             |                          |
| Triadimenol  | 296           | 70 <sup>a</sup>        | 35                    | 19                             |                          |
|              |               | 227                    | 35                    | 11                             |                          |
| Simeconazole | 294           | 70 <sup>a</sup>        | 60                    | 23                             |                          |
|              |               | 135                    | 60                    | 28                             |                          |

|              |                |     |                  |     |    |
|--------------|----------------|-----|------------------|-----|----|
|              | Cyproconazole  | 292 | 70 <sup>a</sup>  | 70  | 21 |
|              |                |     | 125              | 70  | 34 |
|              | Fenbuconazole  | 337 | 125 <sup>a</sup> | 100 | 30 |
|              |                |     | 70               | 100 | 40 |
|              | Tebuconazole   | 308 | 70 <sup>a</sup>  | 90  | 56 |
|              |                |     | 125              | 90  | 45 |
|              | Tricyclazole   | 190 | 163 <sup>a</sup> | 46  | 31 |
|              |                |     | 136              | 46  | 37 |
|              | Bromuconazole  | 378 | 159 <sup>a</sup> | 61  | 43 |
|              |                |     | 161              | 61  | 39 |
|              | Dimethomorph   | 388 | 301 <sup>a</sup> | 66  | 25 |
|              |                |     | 165              | 66  | 45 |
|              | Imazalil       | 297 | 159 <sup>a</sup> | 40  | 30 |
|              |                |     | 255              | 40  | 23 |
|              | Diethofencarb  | 268 | 152 <sup>a</sup> | 70  | 45 |
|              |                |     | 226              | 70  | 20 |
|              | Prochloraz     | 376 | 308 <sup>a</sup> | 65  | 17 |
|              |                |     | 70               | 65  | 43 |
|              | Difenoconazole | 406 | 251 <sup>a</sup> | 72  | 34 |
|              |                |     | 337              | 72  | 23 |
|              | Triazolone     | 294 | 197 <sup>a</sup> | 56  | 21 |
|              |                |     | 225              | 56  | 19 |
| Insecticides | Acephate       | 184 | 143 <sup>a</sup> | 61  | 13 |
|              |                |     | 125              | 61  | 17 |
|              | Acetamiprid    | 223 | 126 <sup>a</sup> | 40  | 30 |
|              |                |     | 56               | 40  | 20 |

|                     |     |                  |      |     |
|---------------------|-----|------------------|------|-----|
| Chlorfluazuron      | 540 | 383 <sup>a</sup> | 80   | 27  |
|                     |     | 158              | 80   | 27  |
| Imidacloprid        | 256 | 175 <sup>a</sup> | 61   | 23  |
|                     |     | 209              | 61   | 23  |
| Cyromazine          | 167 | 125 <sup>a</sup> | 60   | 24  |
|                     |     | 108              | 60   | 45  |
| Thiamethoxam        | 292 | 211 <sup>a</sup> | 71   | 17  |
|                     |     | 181              | 71   | 31  |
| Chloantranliprole   | 484 | 453 <sup>a</sup> | 80   | 17  |
|                     |     | 286              | 80   | 23  |
| Buprofezin          | 306 | 116 <sup>a</sup> | 18   | 21  |
|                     |     | 106              | 18   | 41  |
| Pyridaben           | 365 | 147 <sup>a</sup> | 46   | 31  |
|                     |     | 309              | 46   | 19  |
| Chlorbenzuron       | 309 | 156 <sup>a</sup> | 75   | 20  |
|                     |     | 139              | 75   | 44  |
| Diflubenzuron       | 311 | 141 <sup>a</sup> | 72   | 47  |
|                     |     | 158              | 72   | 21  |
| Fipronil            | 435 | 330 <sup>a</sup> | -100 | -20 |
|                     |     | 399              | -100 | -12 |
| Fipronil sulfone    | 451 | 415 <sup>a</sup> | -55  | -21 |
|                     |     | 282              | -55  | -34 |
| Fipronil sulfide    | 419 | 383 <sup>a</sup> | -110 | -17 |
|                     |     | 262              | -110 | -37 |
| Fipronil-desulfinyl | 387 | 351 <sup>a</sup> | -90  | -15 |
|                     |     | 282              | -90  | -42 |

|               |               |                  |                  |     |    |
|---------------|---------------|------------------|------------------|-----|----|
| Macrolides    | Tilmicosin    | 870              | 697 <sup>a</sup> | 130 | 52 |
|               |               |                  | 174              | 130 | 52 |
|               | Oleandomycin  | 688              | 158 <sup>a</sup> | 65  | 31 |
|               |               |                  | 545              | 65  | 23 |
|               | Tylosin       | 917              | 174 <sup>a</sup> | 60  | 46 |
|               |               |                  | 773              | 60  | 40 |
|               | Kitasamycin   | 773              | 174 <sup>a</sup> | 60  | 40 |
|               |               |                  | 109              | 60  | 40 |
|               | Erythromycin  | 735              | 576 <sup>a</sup> | 45  | 25 |
|               |               |                  | 158              | 45  | 25 |
|               | Josamycin     | 828              | 174 <sup>a</sup> | 130 | 42 |
|               |               |                  | 109              | 130 | 45 |
|               | Lincomycin    | 407              | 126 <sup>a</sup> | 80  | 34 |
|               |               |                  | 359              | 80  | 25 |
| Clindamycin   | 425           | 126 <sup>a</sup> | 90               | 31  |    |
|               |               | 377              | 90               | 25  |    |
| Sulfonamides  | Sulfacetamide | 215              | 156 <sup>a</sup> | 52  | 15 |
|               |               |                  | 108              | 52  | 29 |
|               | Sulfadiazine  | 251              | 156 <sup>a</sup> | 63  | 22 |
|               |               |                  | 108              | 63  | 34 |
|               | Sulfathiazole | 256              | 156 <sup>a</sup> | 60  | 22 |
|               |               |                  | 108              | 60  | 35 |
|               | Sulfapyridine | 250              | 156 <sup>a</sup> | 65  | 23 |
| 184           |               |                  | 65               | 23  |    |
| Sulfamerazine | 265           | 156 <sup>a</sup> | 73               | 24  |    |
|               |               | 172              | 73               | 24  |    |

|                        |     |                         |          |          |
|------------------------|-----|-------------------------|----------|----------|
| Sulfameter             | 281 | 156 <sup>a</sup><br>108 | 90<br>90 | 27<br>42 |
| Sulfamethizole         | 279 | 156 <sup>a</sup><br>108 | 65<br>65 | 21<br>36 |
| Sulfamethazine         | 279 | 186 <sup>a</sup><br>124 | 75<br>75 | 25<br>35 |
| Sulfamethoxypyridazine | 281 | 156 <sup>a</sup><br>126 | 75<br>75 | 25<br>27 |
| Sulfachloropyridazine  | 285 | 156 <sup>a</sup><br>108 | 65<br>65 | 22<br>37 |
| Sulfamethoxazole       | 254 | 156 <sup>a</sup><br>108 | 70<br>70 | 23<br>32 |
| Sulfamonomethoxine     | 281 | 156 <sup>a</sup><br>126 | 75<br>75 | 25<br>30 |
| Sulfadoxine            | 311 | 156 <sup>a</sup><br>108 | 80<br>80 | 26<br>37 |
| Sulfisoxazole          | 268 | 156 <sup>a</sup><br>113 | 82<br>82 | 21<br>23 |
| Sulfabenzamide         | 277 | 156 <sup>a</sup><br>108 | 60<br>60 | 19<br>32 |
| Sulfaphenazole         | 315 | 156 <sup>a</sup><br>108 | 84<br>84 | 29<br>44 |
| Sulfamethazine         | 311 | 156 <sup>a</sup><br>108 | 80<br>80 | 31<br>38 |
| Sulfaquinoxaline       | 301 | 156 <sup>a</sup><br>108 | 80<br>80 | 24<br>36 |

|                        |                 |                  |                  |     |     |
|------------------------|-----------------|------------------|------------------|-----|-----|
| Nitroimidazoles        | Metronidazole   | 172              | 128 <sup>a</sup> | 50  | 20  |
|                        |                 |                  | 82               | 50  | 31  |
|                        | Ronidazole      | 201              | 140 <sup>a</sup> | 40  | 16  |
|                        |                 |                  | 55               | 40  | 28  |
|                        | Dimetridazole   | 142              | 96 <sup>a</sup>  | 40  | 21  |
|                        |                 |                  | 81               | 40  | 32  |
| Methylol metronidazole | 158             | 140 <sup>a</sup> | 40               | 16  |     |
| Amphenicols            | Chloramphenicol | 321              | 55 <sup>a</sup>  | 40  | 23  |
|                        |                 |                  | 152 <sup>a</sup> | -20 | -22 |
|                        | Thiamphenicol   | 354              | 257              | -20 | -16 |
|                        |                 |                  | 185 <sup>a</sup> | -20 | -28 |
|                        | Florfenicol     | 356              | 290              | -20 | -18 |
| 336 <sup>a</sup>       |                 |                  | -20              | -14 |     |
|                        |                 |                  | 185              | -20 | -27 |

---

<sup>a</sup> The transition ion pair used for quantitation

**TableS-2. Orthogonal array L27(3<sup>13</sup>) matrix with experimental results**

| Factor | A | B | (A×B)1 | (A×B)2 | C | (A×C)1 | (A×C)2 | (A×D)1 | D | (A×D)2 |   |   |   | S    |
|--------|---|---|--------|--------|---|--------|--------|--------|---|--------|---|---|---|------|
| 1      | 1 | 1 | 1      | 1      | 1 | 1      | 1      | 1      | 1 | 1      | 1 | 1 | 1 | 2017 |
| 2      | 1 | 1 | 1      | 1      | 2 | 2      | 2      | 2      | 2 | 2      | 2 | 2 | 2 | 2024 |
| 3      | 1 | 1 | 1      | 1      | 3 | 3      | 3      | 3      | 3 | 3      | 3 | 3 | 3 | 1902 |
| 4      | 1 | 2 | 2      | 2      | 1 | 1      | 1      | 2      | 2 | 2      | 3 | 3 | 3 | 2427 |
| 5      | 1 | 2 | 2      | 2      | 2 | 2      | 2      | 3      | 3 | 3      | 1 | 1 | 1 | 2210 |
| 6      | 1 | 2 | 2      | 2      | 3 | 3      | 3      | 1      | 1 | 1      | 2 | 2 | 2 | 2125 |
| 7      | 1 | 3 | 3      | 3      | 1 | 1      | 1      | 3      | 3 | 3      | 2 | 2 | 2 | 2523 |
| 8      | 1 | 3 | 3      | 3      | 2 | 2      | 2      | 1      | 1 | 1      | 3 | 3 | 3 | 2324 |
| 9      | 1 | 3 | 3      | 3      | 3 | 3      | 3      | 2      | 2 | 2      | 1 | 1 | 1 | 2115 |
| 10     | 2 | 1 | 2      | 3      | 1 | 2      | 3      | 1      | 2 | 3      | 1 | 2 | 3 | 1611 |
| 11     | 2 | 1 | 2      | 3      | 2 | 3      | 1      | 2      | 3 | 1      | 2 | 3 | 1 | 1577 |
| 12     | 2 | 1 | 2      | 3      | 3 | 1      | 2      | 3      | 1 | 2      | 3 | 1 | 2 | 1450 |
| 13     | 2 | 2 | 3      | 1      | 1 | 2      | 3      | 2      | 3 | 1      | 3 | 1 | 2 | 1909 |
| 14     | 2 | 2 | 3      | 1      | 2 | 3      | 1      | 3      | 1 | 2      | 1 | 2 | 3 | 1713 |
| 15     | 2 | 2 | 3      | 1      | 3 | 1      | 2      | 1      | 2 | 3      | 2 | 3 | 1 | 1506 |
| 16     | 2 | 3 | 1      | 2      | 1 | 2      | 3      | 3      | 1 | 2      | 2 | 3 | 1 | 1782 |
| 17     | 2 | 3 | 1      | 2      | 2 | 3      | 1      | 1      | 2 | 3      | 3 | 1 | 2 | 1809 |
| 18     | 2 | 3 | 1      | 2      | 3 | 1      | 2      | 2      | 3 | 1      | 1 | 2 | 3 | 1600 |

| Factor | A    | B    | (A×B)1 | (A×B)2 | C    | (A×C)1 | (A×C)2 | (A×D)1 | D    | (A×D)2 |      |      |      | S    |
|--------|------|------|--------|--------|------|--------|--------|--------|------|--------|------|------|------|------|
| 19     | 3    | 1    | 3      | 2      | 1    | 3      | 2      | 1      | 3    | 2      | 1    | 3    | 2    | 2577 |
| 20     | 3    | 1    | 3      | 2      | 2    | 1      | 3      | 2      | 1    | 3      | 2    | 1    | 3    | 2486 |
| 21     | 3    | 1    | 3      | 2      | 3    | 2      | 1      | 3      | 2    | 1      | 3    | 2    | 1    | 1835 |
| 22     | 3    | 2    | 1      | 3      | 1    | 3      | 2      | 2      | 1    | 3      | 3    | 2    | 1    | 2677 |
| 23     | 3    | 2    | 1      | 3      | 2    | 1      | 3      | 3      | 2    | 1      | 1    | 3    | 2    | 2606 |
| 24     | 3    | 2    | 1      | 3      | 3    | 2      | 1      | 1      | 3    | 2      | 2    | 1    | 3    | 2336 |
| 25     | 3    | 3    | 2      | 1      | 1    | 3      | 2      | 3      | 2    | 1      | 2    | 1    | 3    | 2874 |
| 26     | 3    | 3    | 2      | 1      | 2    | 1      | 3      | 1      | 3    | 2      | 3    | 2    | 1    | 2722 |
| 27     | 3    | 3    | 2      | 1      | 3    | 2      | 1      | 2      | 1    | 3      | 1    | 3    | 2    | 2567 |
| k1     | 2185 | 1942 | 2084   | 2137   | 2266 | 2149   | 2089   | 2114   | 2127 | 2096   | 2113 | 2134 | 2049 |      |
| k2     | 1662 | 2168 | 2174   | 2095   | 2163 | 2066   | 2138   | 2154   | 2090 | 2127   | 2137 | 2092 | 2177 |      |
| k3     | 2520 | 2257 | 2110   | 2135   | 1937 | 2152   | 2140   | 2099   | 2151 | 2143   | 2117 | 2141 | 2141 |      |
| R      | 858  | 315  | 90     | 43     | 329  | 86     | 51     | 54     | 61   | 47     | 24   | 49   | 128  |      |

A: Extraction temperature; B: Static time; C: Cycle; D: Ratios of adsorbents



**Table S-3 Linearity of the target compounds and assessment of matrix effects**

| Categories | Analytes      | Calibration curve equation for standard solution | Linearity (R <sup>2</sup> ) | Calibration curve equation for matrix-matched standard solution | Linearity (R <sup>2</sup> ) | Assessment of matrix effects |
|------------|---------------|--|-----------------------------|---|-----------------------------|------------------------------|
| Fungicides | Carbendazim   | $y = 2512523x + 568351$                          | 0.993                       | $y = 2368453x + 276583$   | 0.992                       | 94.3                         |
|            | iprodione     | $y = 93692x - 27398$                             | 0.999                       | $y = 89524x - 19538$  | 0.994                       | 95.6                         |
|            | Uniconazole   | $y = 176953x + 47193$                            | 0.997                       | $y = 121850x + 32566$   | 0.993                       | 68.9                         |
|            | Myclobutanil  | $y = 240586x + 65741$                            | 0.994                       | $y = 198135x + 41891$   | 0.999                       | 82.4                         |
|            | Penconazole   | $y = 265175x - 4149$                             | 0.998                       | $y = 235225x - 16007$   | 0.991                       | 88.7                         |
|            | Hexaconazole  | $y = 189038x + 65864$                            | 0.999                       | $y = 210681x - 68371$   | 0.993                       | 111                          |
|            | Flusilazole   | $y = 654973x + 50988$                            | 0.999                       | $y = 562840x - 67091$   | 0.993                       | 85.9                         |
|            | Triticonazole | $y = 192273x + 18997$                            | 0.999                       | $y = 177520x + 64561$   | 0.997                       | 92.3                         |
|            | Epoxiconazole | $y = 521068x - 183367$                           | 0.999                       | $y = 528564x + 31518$   | 0.996                       | 101                          |
|            | Triadimenol   | $y = 108694x + 28734$                            | 0.993                       | $y = 128381x + 3369$  | 0.997                       | 118                          |
|            | Simeconazole  | $y = 242756x + 60298$                            | 0.995                       | $y = 208535x + 23260$   | 0.998                       | 85.9                         |
|            | Cyproconazole | $y = 130484x + 26816$                            | 0.999                       | $y = 89420x + 38774$  | 0.998                       | 68.5                         |
|            | Fenbuconazole | $y = 159462x - 37551$                            | 0.992                       | $y = 168628x - 76487$   | 0.996                       | 106                          |
|            | Tebuconazole  | $y = 277449x + 26230$                            | 0.998                       | $y = 210065x - 22023$   | 0.998                       | 75.7                         |
|            | Tricyclazole  | $y = 1133073x + 316451$                          | 0.998                       | $y = 1127305x + 162775$   | 0.999                       | 99.5                         |
|            | Bromuconazole | $y = 110528x - 28548$                            | 0.999                       | $y = 128487x + 15627$   | 0.999                       | 116                          |
|            | Dimethomorph  | $y = 273848x - 46242$                            | 0.998                       | $y = 285977x - 38447$   | 0.997                       | 104                          |

| Categories       | Analytes             | Calibration curve equation for standard solution | Linearity (R <sup>2</sup> ) | Calibration curve equation for matrix-matched standard solution | Linearity (R <sup>2</sup> ) | Assessment of matrix effects |
|------------------|----------------------|--|-----------------------------|---|-----------------------------|------------------------------|
| Insecticides     | Imazalil             | $y = 206665x + 26511$                            | 0.994                       | $y = 180948x + 38512$   | 0.999                       | 87.6                         |
|                  | Diethofencarb        | $y = 3246x - 431$                                | 0.993                       | $y = 2832x - 707$   | 0.994                       | 87.2                         |
|                  | Prochloraz           | $y = 116321x + 18930$                            | 0.996                       | $y = 97438x + 27541$  | 0.995                       | 83.8                         |
|                  | Difenoconazole       | $y = 318714x + 56819$                            | 0.998                       | $y = 358698x + 44869$   | 0.999                       | 113                          |
|                  | Triazolone           | $y = 136572x + 26931$                            | 0.997                       | $y = 118615x - 19821$   | 0.992                       | 86.9                         |
|                  | Acephate             | $y = 238037x + 36447$                            | 0.996                       | $y = 216755x + 26650$   | 0.999                       | 91.1                         |
|                  | Acetamiprid          | $y = 318974x + 55588$                            | 0.994                       | $y = 268428x + 47425$   | 0.998                       | 84.2                         |
|                  | Chlorfluazuron       | $y = 45371x - 5616$                              | 0.998                       | $y = 44523x - 7131$   | 0.997                       | 98.1                         |
|                  | Imidacloprid         | $y = 58992x + 8185$                              | 0.994                       | $y = 78531x - 10439$  | 0.993                       | 133                          |
|                  | Cyromazine           | $y = 58166x + 3545$                              | 0.996                       | $y = 89675x + 16734$  | 0.999                       | 154                          |
|                  | Thiamethoxam         | $y = 166734x + 30037$                            | 0.998                       | $y = 194637x + 35431$   | 0.999                       | 117                          |
|                  | Chloantranliprole    | $y = 18207x + 20612$                             | 0.999                       | $y = 15314x + 15352$  | 0.995                       | 84.1                         |
|                  | Buprofezin           | $y = 873204x + 45932$                            | 0.998                       | $y = 739668x + 83915$   | 0.998                       | 84.7                         |
|                  | Pyridaben            | $y = 193239x + 53609$                            | 0.996                       | $y = 171466x - 36383$   | 0.997                       | 88.7                         |
|                  | Chlorbenzuron        | $y = 188834x + 26893$                            | 0.995                       | $y = 159399x + 30726$   | 0.997                       | 84.4                         |
|                  | Diflubenzuron        | $y = 143430x - 8878$                             | 0.991                       | $y = 106579x - 6825$  | 0.996                       | 74.3                         |
|                  | Fipronil             | $y = 14075x + 2961$                              | 0.997                       | $y = 13077x + 2253$   | 0.999                       | 92.9                         |
| Fipronil sulfone | $y = 71195x + 10585$ | 0.999  | $y = 65099x + 7021$         | 0.998   | 91.4                        |                              |

| Categories   | Analytes            | Calibration curve equation for standard solution | Linearity (R <sup>2</sup> ) | Calibration curve equation for matrix-matched standard solution | Linearity (R <sup>2</sup> ) | Assessment of matrix effects |
|--------------|---------------------|--|-----------------------------|---|-----------------------------|------------------------------|
| Macrolides   | Fipronil sulfide    | $y = 15454x + 3698$                              | 0.992                       | $y = 18569x + 4090$   | 0.998                       | 120                          |
|              | Fipronil-desulfinyl | $y = 38569x - 4538$                              | 0.994                       | $y = 37902x - 6742$   | 0.999                       | 98.3                         |
|              | Tilmicosin          | $y = 6253x + 1650$                               | 0.999                       | $y = 5604x + 871$   | 0.996                       | 89.6                         |
|              | Oleandomycin        | $y = 68235x + 12739$                             | 0.996                       | $y = 63904x + 13514$  | 0.991                       | 93.7                         |
|              | Tylosin             | $y = 4089x + 1001$                               | 0.994                       | $y = 3704x + 696$   | 0.993                       | 90.6                         |
|              | Kitasamycin         | $y = 6648x + 1257$                               | 0.999                       | $y = 6135x + 2605$  | 0.992                       | 92.3                         |
|              | Erythromycin        | $y = 18950x + 2044$                              | 0.999                       | $y = 13398x + 3735$   | 0.992                       | 70.7                         |
|              | Josamycin           | $y = 11585x + 534$                               | 0.999                       | $y = 10382x + 1064$   | 0.997                       | 89.6                         |
|              | Lincomycin          | $y = 994610x + 157376$                           | 0.998                       | $y = 786612x + 132226$  | 0.994                       | 79.1                         |
| Sulfonamides | Clindamycin         | $y = 481861x - 36141$                            | 0.993                       | $y = 626895x - 83770$   | 0.995                       | 130                          |
|              | Sulfacetamide       | $y = 55905x + 19284$                             | 0.999                       | $y = 47503x + 9320$   | 0.998                       | 85.0                         |
|              | Sulfadiazine        | $y = 107020x + 24949$                            | 0.999                       | $y = 85211x + 7138$   | 0.999                       | 79.6                         |
|              | Sulfathiazole       | $y = 83374x + 8822$                              | 0.999                       | $y = 80970x + 15651$  | 0.996                       | 97.1                         |
|              | Sulfapyridine       | $y = 150432x + 19194$                            | 0.999                       | $y = 155320x - 31532$   | 0.997                       | 103                          |
|              | Sulfamerazine       | $y = 147412x + 15821$                            | 0.999                       | $y = 127963x - 15214$   | 0.999                       | 86.8                         |
|              | Sulfameter          | $y = 73029x + 12989$                             | 0.995                       | $y = 70599x + 4705$   | 0.999                       | 96.7                         |
|              | Sulfamethizole      | $y = 213255x + 19789$                            | 0.998                       | $y = 154397x + 24946$   | 0.990                       | 72.4                         |
|              | Sulfamethazine      | $y = 156374x + 8768$                             | 0.993                       | $y = 138870x + 9113$  | 0.994                       | 88.8                         |

| Categories   | Analytes               | Calibration curve equation for standard solution | Linearity (R <sup>2</sup> ) | Calibration curve equation for matrix-matched standard solution | Linearity (R <sup>2</sup> ) | Assessment of matrix effects |
|--------------|------------------------|--|-----------------------------|---|-----------------------------|------------------------------|
|              | Sulfamethoxypyridazine | $y = 65618x - 5501$                              | 0.996                       | $y = 62938x - 8015$   | 0.994                       | 95.9                         |
|              | Sulfachloropyridazine  | $y = 95214x + 24456$                             | 0.992                       | $y = 80425x - 18898$  | 0.997                       | 84.5                         |
|              | Sulfamethoxazole       | $y = 76806x + 9390$                              | 0.999                       | $y = 58679x - 10543$  | 0.999                       | 76.4                         |
|              | Sulfamonomethoxine     | $y = 331330x + 51576$                            | 0.999                       | $y = 408729x + 40781$   | 0.993                       | 123                          |
|              | Sulfadoxine            | $y = 69393x + 28463$                             | 0.994                       | $y = 70945x + 30158$  | 0.997                       | 102                          |
|              | Sulfisoxazole          | $y = 62285x + 5529$                              | 0.998                       | $y = 66458x + 17613$  | 0.999                       | 106                          |
|              | Sulfabenzamide         | $y = 54488x + 8901$                              | 0.999                       | $y = 64864x + 18950$  | 0.999                       | 119                          |
|              | Sulfaphenazole         | $y = 231411x + 21293$                            | 0.999                       | $y = 202129x + 8718$  | 0.999                       | 87.3                         |
|              | Sulfamethazine         | $y = 84200x + 3259$                              | 0.999                       | $y = 80802x + 12853$  | 0.999                       | 96.0                         |
|              | Sulfaquinoxaline       | $y = 139859x + 37986$                            | 0.999                       | $y = 108565x + 18241$   | 0.999                       | 77.6                         |
| Nitroimidazo | Metronidazole          | $y = 72553x + 12054$                             | 0.995                       | $y = 73362x + 3041$   | 0.999                       | 101                          |
|              | Ronidazole             | $y = 150823x + 31352$                            | 0.996                       | $y = 134537x + 16053$   | 0.999                       | 89.2                         |
|              | Dimetridazole          | $y = 682124x + 52219$                            | 0.997                       | $y = 621040x + 62713$   | 0.993                       | 91.0                         |
|              | Methylol metronidazole | $y = 18635x + 502$                               | 0.998                       | $y = 17978x + 3004$   | 0.997                       | 96.5                         |
| Amphenicols  | Chloramphenicol        | $y = 17818x + 16223$                             | 0.998                       | $y = 14721x - 9303$   | 0.999                       | 82.6                         |
|              | Thiamphenicol          | $y = 4988x + 673$                                | 0.998                       | $y = 5193x - 762$   | 0.996                       | 104                          |
|              | Florfenicol            | $y = 35959x + 8509$                              | 0.995                       | $y = 32334x + 2851$   | 0.998                       | 89.9                         |