Table S1. Fragmentation conditions for the target compounds

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Analyte** | **Chemical formula** | **Relative retention time (min)** | **Precurson ion**  **(*m/z*)** | **Product ion** | | **Collision energy**  **(eV)** | | **Internal standard used** |
| **Quantifier** | **Confirmation** | **Quantifier** | **Confirmation** |
| **Sulfacetamide SAA** | [C8H10N2O3S](https://pubchem.ncbi.nlm.nih.gov/#query=C8H10N2O3S) | 1.9 | 215 | 156 | 108 | 10 | 15 | SMT-13C6 |
| **Sulfaguanidine SGD** | C7H10N4O2S | 1.9 | 215 | 156 | 92 | 10 | 22 | SMT-13C6 |
| **Sulfanilamide SAM** | C6H8N2O2S | 2.4 | 173 | 156 | 93 | 10 | 15 | SMT-13C6 |
| **Sulfisomidine SSD** | C12H14N4O2S | 3.3 | 279 | 186 | 124 | 15 | 20 | SMT-13C6 |
| **Sulfadiazine SDZ** | C10H10N4O2S | 4.8 | 251 | 108 | 156 | 20 | 15 | SMT-13C6 |
| **Sulfathiazole STZ** | C9H9N3O2S2 | 5.5 | 256 | 156 | 92 | 15 | 25 | SMT-13C6 |
| **Sulfapyridine SPD** | C5H5N | 5.6 | 250 | 108 | 156 | 25 | 15 | SMT-13C6 |
| **Sulfamerazine SMR** | C11H12N4O2S | 6.2 | 265 | 172 | 156 | 15 | 15 | SMT-13C6 |
| **Sulfamethazine SMT** | C12H14N4O2S | 7.3 | 279 | 124 | 186 | 20 | 15 | SMT-13C6 |
| **Sulfamethizole SFZ** | C9H10N4O2S2 | 7.7 | 271 | 92 | 156 | 25 | 10 | SMT-13C6 |
| **Sulfamethoxypyridazine SMP** | C11H12N4O3S | 7.8 | 281 | 92 | 156 | 25 | 15 | SMT-13C6 |
| **Sulfamonomethoxine SMM** | C11H11N4NaO3S | 7.9 | 281 | 126 | 156 | 20 | 15 | SMT-13C6 |
| **Sulfameter SME** | C11H12N403S | 7.9 | 281 | 92 | 156 | 25 | 20 | SMT-13C6 |
| **Sulfachloropyridazine** | C10H9ClN4O2S | 9.7 | 285 | 156 | 108 | 15 | 20 | SMZ-13C6 |
| **Sulfadoxine SDX** | C12H14N4O4S | 10.3 | 311 | 108 | 156 | 25 | 15 | SMZ-13C6 |
| **Sulfamethoxazole SMZ** | C10H11N3O3S | 10.7 | 254 | 92 | 156 | 25 | 15 | SMZ-13C6 |
| **Sulfisoxazole SSX** | C11H13N3O3S | 11.5 | 268 | 113 | 156 | 15 | 10 | SMZ-13C6 |
| **Sulfabenzamide SBZ** | C13H12N2O3S | 12.7 | 277 | 92 | 156 | 15 | 15 | SMZ-13C6 |
| **Sulfadimethoxine SDM** | C12H14N4O4S | 13.1 | 311 | 108 | 156 | 25 | 18 | SMZ-13C6 |
| **Sulfaquinoxaline SQX** | C14H12N4O2S | 13.2 | 301 | 92 | 156 | 25 | 15 | SMZ-13C6 |
| **Sulfaphenazole SPZ** | C15H14N4O2S | 13.55 | 315 | 108 | 159 | 25 | 20 | SMZ-13C6 |
| **Sulfanitran SNT** | C14H13N3O5S | 16.4 | 336 | 134 | 156 | 25 | 10 | SMZ-13C6 |
| **Dapsone DDS** | C12H12N2O2S | 9.4 | 249.2 | 92.1 | 156 | 22 | 10 | SMZ-13C6 |
| **Trimethoprim TMP** | C14H18N4O3 | 4.5 | 291 | 123 | 230 | 22 | 20 | SMT-13C6 |
| **Sulfametazine-13C6 SMT-13C6 (internal standard)** | 13C6C6H14N4O2S | 7.3 | 285 | 186 | - | 15 | - | - |
| **Sulfamethoxazole-13C6 SMZ-13C6 (internal standard)** | 13C6C4H11N3O3S | 10.7 | 260 | 162 | - | 15 | - | - |