

Figure S1. Chemical structures of SDD, SDZ and STZ



Figure S2. Structure of Ag(III) complex anion [Ag(HIO<sub>6</sub>)<sub>2</sub>]<sup>5-</sup>



**Figure S3.** Effect of changing [Luminol] on the CL intensity. Conditions: applied voltage, 18 kV; injection time, 15 s; separation capillary, 60 cm × 50  $\mu$ m i.d.; running buffer, 12.0 mM sodium borate (pH 9.0); oxidant, 0.05 mM Ag(III) in 10.0 mM NaOH solution; [SDD] = [SDZ] = 50.0  $\mu$ g mL<sup>-1</sup>; [STZ] = 20.0  $\mu$ g mL<sup>-1</sup>.



**Figure S4.** Effect of changing [Ag(III)] on the CL intensity. Conditions: applied voltage, 18 kV; injection time,15s; separation capillary, 60 cm × 50  $\mu$ m i.d.; running buffer, 2.5 mM luminol in 12.0 mM sodium borate (pH 9.0); oxidant, Ag(III) in 10.0 mM NaOH solution; [SDD] = [SDZ] = 50.0  $\mu$ g mL<sup>-1</sup>; [STZ] = 20.0  $\mu$ g mL<sup>-1</sup>.



**Figure S5.** Effect of changing [NaOH] in Ag(III) solution on the CL intensity. Conditions: applied voltage, 18 kV; injection time, 15 s; separation capillary, 60 cm × 50  $\mu$ m i.d.; running buffer, 1.5 mM luminol in 12.0 mM sodium borate (pH 9.0); oxidant, 0.06 mM Ag(III); [SDD] = [SDZ] = 50.0  $\mu$ g mL<sup>-1</sup>; [STZ] = 20.0  $\mu$ g mL<sup>-1</sup>.



**Figure S6.** Electropherograms obtained for the standard solutions of sulfonamide(SAs). Conditions: [SDD] = [SDZ] = 50.0  $\mu$ g mL<sup>-1</sup>; [STZ] = 20.0  $\mu$ g mL<sup>-1</sup>; separation capillary, 60 cm × 50  $\mu$ m i.d; applied voltage, 18 kV; injection time, 18 s; running buffer, 1.5 mM luminol in 12.0 mM sodium borate (pH 9.5); oxidant, 0.06 mM Ag(III) in 15.0 mM NaOH solution.



Figure S7. Plot of CL relative intensity versus SA concentration.



**Figure S8.** Electropherograms obtained for the standard solutions of SDD. Conditions: separation capillary, 60 cm × 50  $\mu$ m i.d; applied voltage, 18 kV; injection time, 18 s; running buffer, 1.5 mM luminol in 12.0 mM sodium borate (pH 9.5); oxidant, 0.06 mM Ag(III) in 15.0 mM NaOH solution. Electropherograms of a, b, c, d, e and f, correspond to [SDD] = 10.0, 20.0, 50.0, 100.0, 150.0, 200.0  $\mu$ g mL<sup>-1</sup>, respectively.



**Figure S9.** Electropherograms obtained for the standard solutions of SDZ. Conditions: separation capillary, 60 cm × 50  $\mu$ m i.d; applied voltage, 18 kV; injection time, 18 s; running buffer, 1.5 mM luminol in 12.0 mM sodium borate (pH 9.5); oxidant, 0.06 mM Ag(III) in 15.0 mM NaOH solution. Electropherograms of a, b, c, d, e and f, correspond to [SDZ] = 10.0, 20.0, 50.0, 100.0, 150.0, 200.0  $\mu$ g mL<sup>-1</sup>, respectively.



**Figure S10.** Electropherograms obtained for the standard solutions of STZ. Conditions: separation capillary, 60 cm × 50  $\mu$ m i.d; applied voltage, 18 kV; injection time, 18 s; running buffer, 1.5 mM luminol in 12.0 mM sodium borate (pH 9.5); oxidant, 0.06 mM Ag(III) in 15.0 mM NaOH solution. Electropherograms of a, b, c, d, e and f, correspond to [STZ] = 2.0, 5.0, 10.0, 20.0, 30.0, 50.0  $\mu$ g mL<sup>-1</sup>, respectively.