

**Supplemental Table 1:** SF-ICP-MS and HPLC operating conditions and data acquisition parameters.

<b>Plasma parameters</b>	
RF power/W	1300
Cool gas flow rate/l min <sup>-1</sup>	16
Sample gas flow rate/l min <sup>-1</sup>	0.90
Auxiliary gas flow rate/l min <sup>-1</sup>	0.87
<b>Data acquisition parameters (ID and IPD analysis)</b>	
Acquisition mode	Total determination
Monitored isotopes	<sup>64</sup> Zn, <sup>66</sup> Zn, <sup>67</sup> Zn, <sup>68</sup> Zn, <sup>70</sup> Zn, <sup>63</sup> Cu, <sup>65</sup> Cu, <sup>111</sup> Cd, <sup>114</sup> Cd
Resolution	Medium (R=4000)
<b>Data acquisition parameters (ID and IPD-Post column)</b>	
Acquisition mode	Quantitative speciation
Monitored isotopes	<sup>32</sup> S, <sup>34</sup> S, <sup>64</sup> Zn, <sup>66</sup> Zn, <sup>67</sup> Zn, <sup>68</sup> Zn, <sup>70</sup> Zn, <sup>63</sup> Cu, <sup>65</sup> Cu, <sup>111</sup> Cd, <sup>114</sup> Cd
Resolution	Medium (R=4000)
<b>SEC-HPLC</b>	
Column	Superdex 200, 10/300 GL
Eluent flow/ ml min <sup>-1</sup>	0.6
Eluent	50 mM Tris/HCl, pH=7.4
<b>AEC-HPLC</b>	
Column	Mono Q HR 5/50 GL (50 × 5 mm id)
Flow rate/ ml min <sup>-1</sup>	1
Eluent	Buffer A: 10 mM Tris/HCl, pH=7.4; Buffer B: 10 mM Tris/HCl, pH=7.4, 0,25M ammonium acetate
Gradient of buffer B (time in min/%B)	0/0, 1.5/2, 2/3, 5.5/4, 6/10, 10/17, 11/18, 12/99, 19/100, 23/0