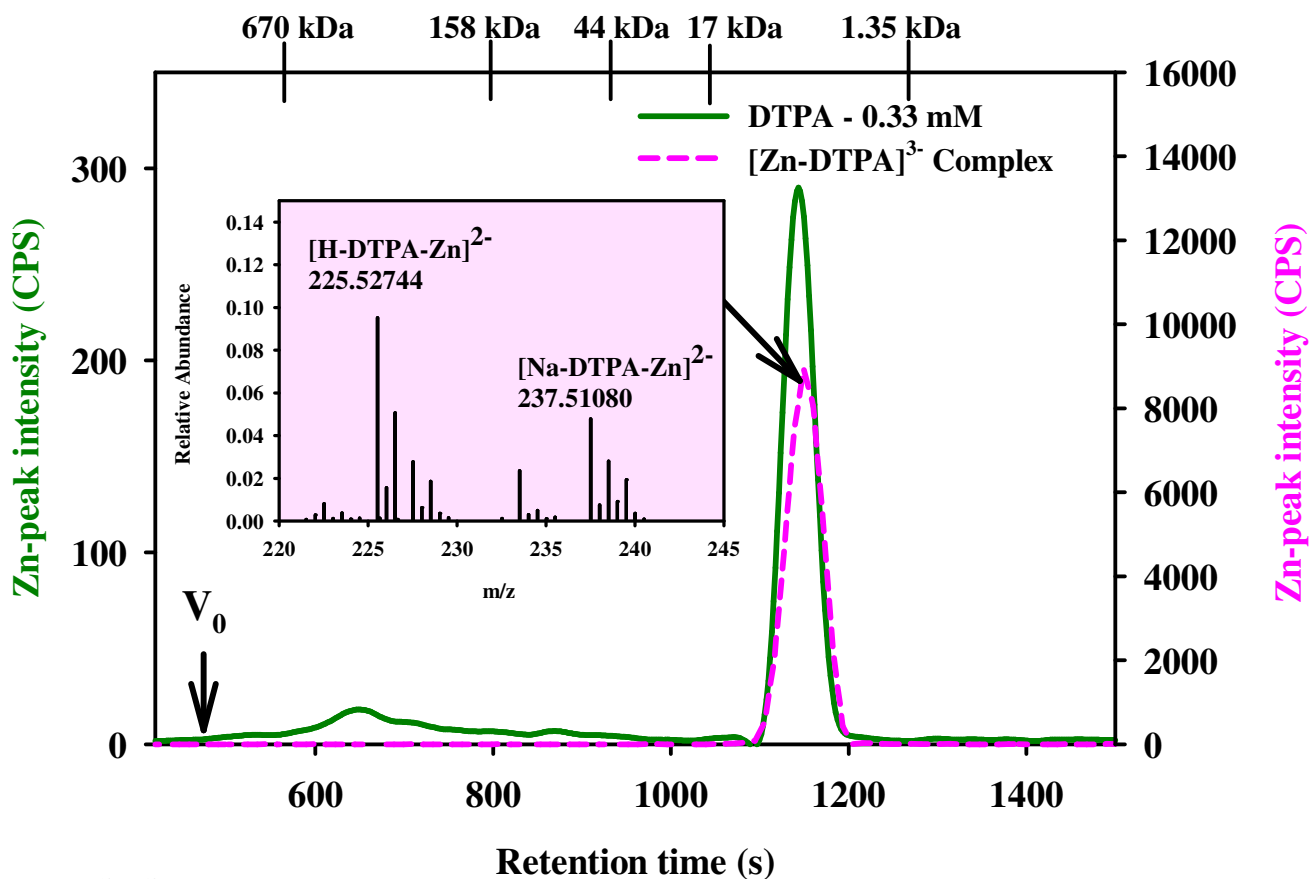


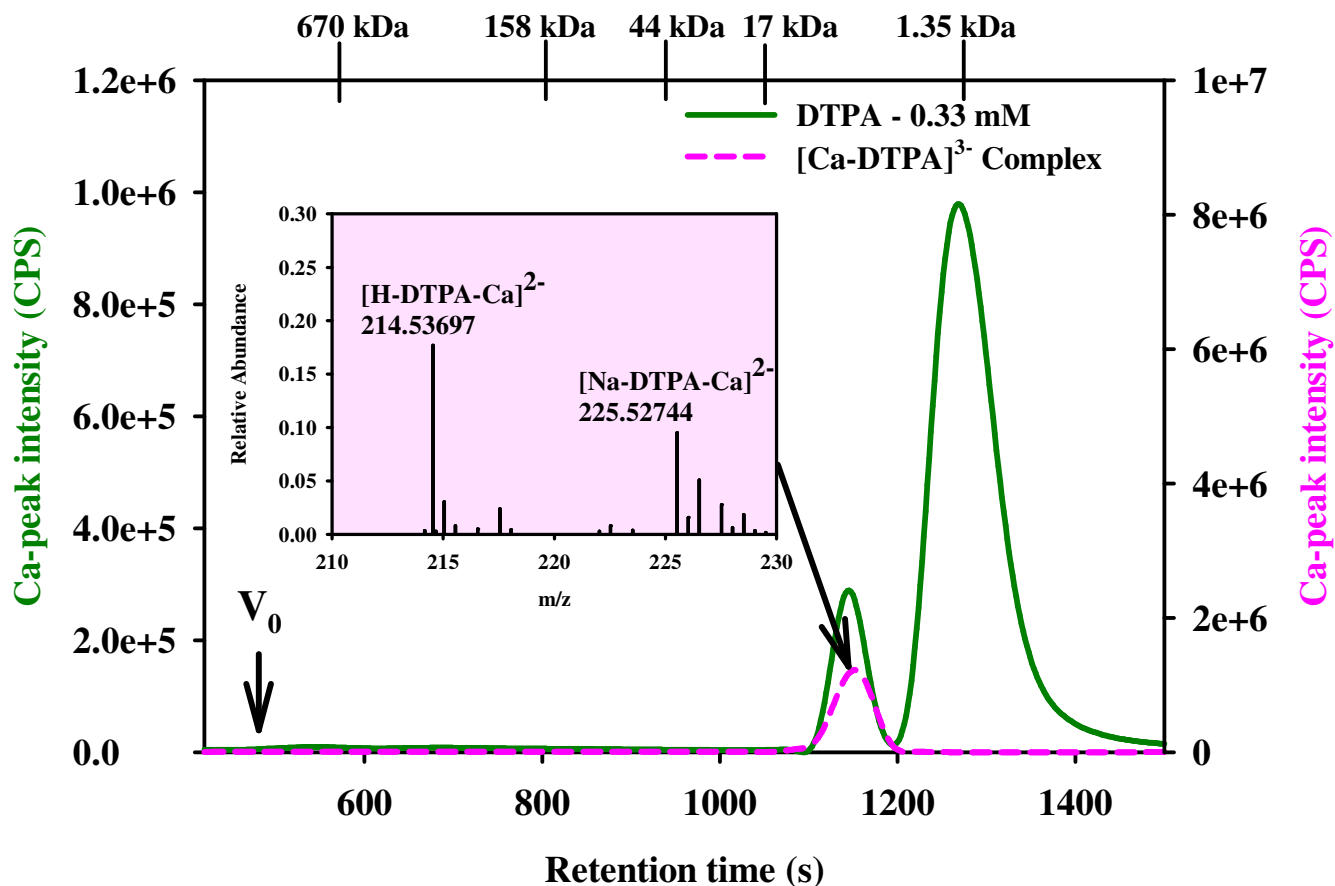
### ESI, S1

SEC-ICP-AES derived Cd-specific chromatograms obtained after the analysis of (i) Cd<sup>2+</sup>-spiked rabbit plasma to which 0.33 mM DTPA had been added at the 5 min time point (green line) and (ii) a [Cd-DTPA]<sup>3-</sup> complex prepared in PBS-buffer by mixing Cd<sup>2+</sup> and DTPA to obtain a solution with a Cd-concentration of 1.0 mM and a molar ratio of DTPA:Cd<sup>2+</sup> of 20 (pink line). Column: Superdex 200 10/300 GL (30 x 1.0 cm I.D., 13 μm particle size), Temperature: 22° C, Mobile Phase: PBS-buffer, pH 7.4, Flow-rate: 1.0 mL/min, Injection volume: 500 μL, Detector: ICP-AES at 226.502 nm (Cd). Retention times of the molecular weight markers are depicted on top of the figure. Inset: ESI-MS identification of [Cd-DTPA]<sup>3-</sup> complex in the aforementioned Cd<sup>2+</sup>/DTPA mixture (Agilent 6520 Accurate Mass Q-TOF MS instrument, negative ion mode). The solution was introduced into the ESI source (temperature: 200° C) at a flow rate of 0.2 mL/min using methanol as solvent.



ESI, S2

SEC-ICP-AES derived Zn-specific chromatograms obtained after the analysis of (i) Cd<sup>2+</sup>-spiked rabbit plasma to which 0.33 mM DTPA had been added at the 5 min time point (green line) and (ii) a [Zn-DTPA]<sup>3-</sup> complex prepared in PBS-buffer by mixing Zn<sup>2+</sup> and DTPA to obtain a solution with a Zn-concentration of 1.0 mM and a molar ratio of DTPA:Zn<sup>2+</sup> of 20 (pink line). Column: Superdex 200 10/300 GL (30 x 1.0 cm I.D., 13 μm particle size), Temperature: 22° C, Mobile Phase: PBS-buffer, pH 7.4, Flow-rate: 1.0 mL/min, Injection volume: 500 μL, Detector: ICP-AES at 213.856 nm (Zn). Retention times of the molecular weight markers are depicted on top of the figure. Inset: ESI-MS identification of [Zn-DTPA]<sup>3-</sup> complex in the aforementioned Zn<sup>2+</sup>/DTPA mixture (Agilent 6520 Accurate Mass Q-TOF MS instrument, negative ion mode). The solution was introduced into the ESI source (temperature: 200° C) at a flow rate of 0.2 mL/min using methanol as solvent.



### ESI, S3

SEC-ICP-AES derived Ca-specific chromatograms obtained after the analysis of (i) Cd<sup>2+</sup>-spiked rabbit plasma to which 0.33 mM DTPA had been added at the 5 min time point (green line) and (ii) a [Ca-DTPA]<sup>3-</sup> complex prepared in PBS-buffer by mixing Ca<sup>2+</sup> and DTPA to obtain a solution with a Ca-concentration of 1.0 mM and a molar ratio of DTPA:Ca<sup>2+</sup> of 20 (pink line). Column: Superdex 200 10/300 GL (30 x 1.0 cm I.D., 13 μm particle size), Temperature: 22° C, Mobile Phase: PBS-buffer, pH 7.4, Flow-rate: 1.0 mL/min, Injection volume: 500 μL, Detector: ICP-AES at 393.366 nm (Ca). Retention times of the molecular weight markers are depicted on top of the figure. Inset: ESI-MS identification of [Ca-DTPA]<sup>3-</sup> complex in the aforementioned Ca<sup>2+</sup>/DTPA mixture (Agilent 6520 Accurate Mass Q-TOF MS instrument, negative ion mode). The solution was introduced into the ESI source (temperature: 200° C) at a flow rate of 0.2 mL/min using methanol as solvent.