# Supplemental Digital Content

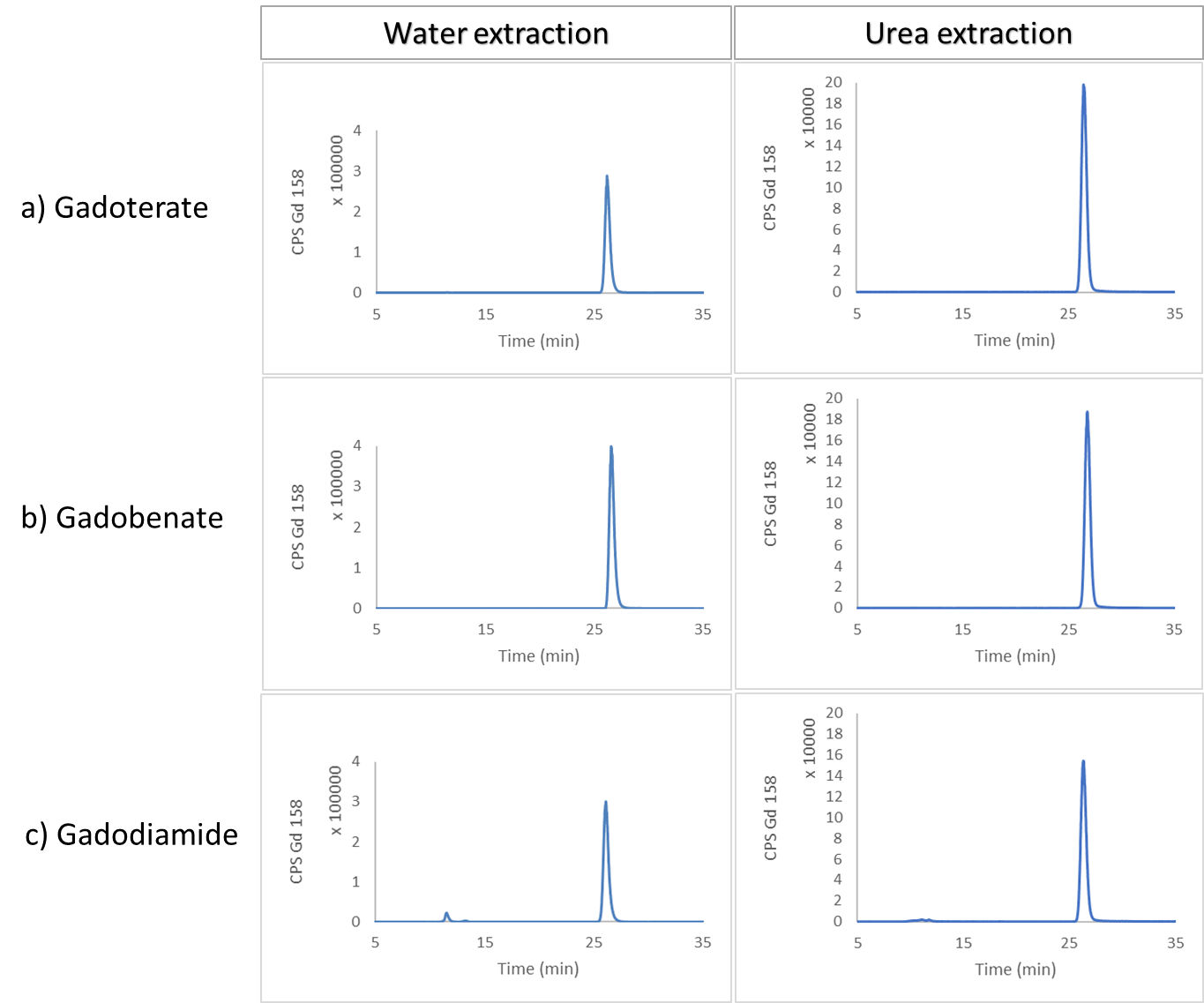
## Table 1

Gd extraction yield values for the cortex samples from the untreated animals spiked with GBCA standards.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Type of protocol** | **Sample type** | **Brain zone** | **Extraction efficiency (%)** | | |
| **Spiked blanks (untreated animals)** | | |
| **Gadoterate** | **Gadobenate** | **Gadodiamide** |
| **Water extraction** | W1 | cortex | 72±0 | 65±6 | 64±3 |
| **Urea extraction** | W1 | cortex | 96±9 | 85±8 | 85±9 |

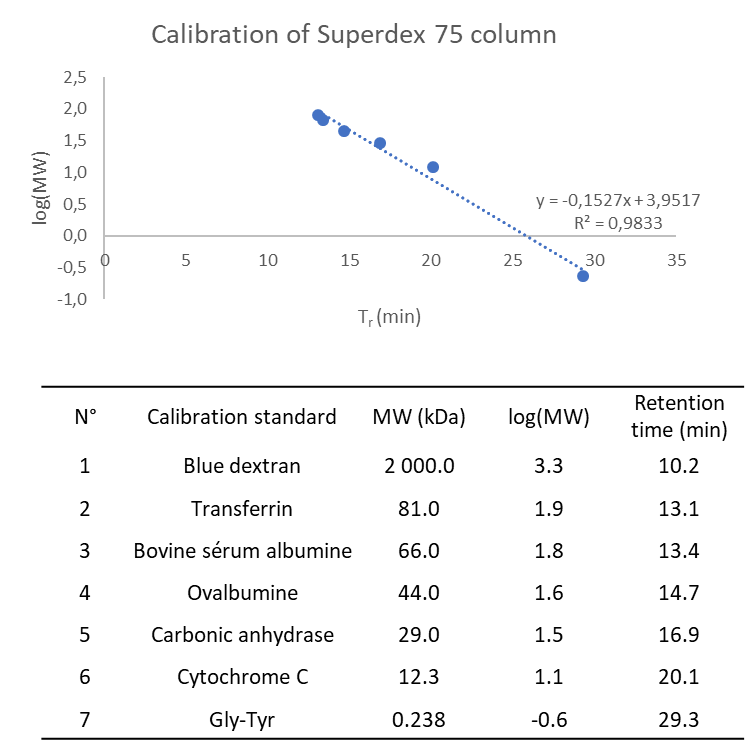
## Fig. 1

Control of the stability of the intact GBCA form during sample processing and the analysis. SEC-ICP-MS chromatograms of water and urea-soluble fractions of the samples from untreated animals spiked with GBCAs standards.



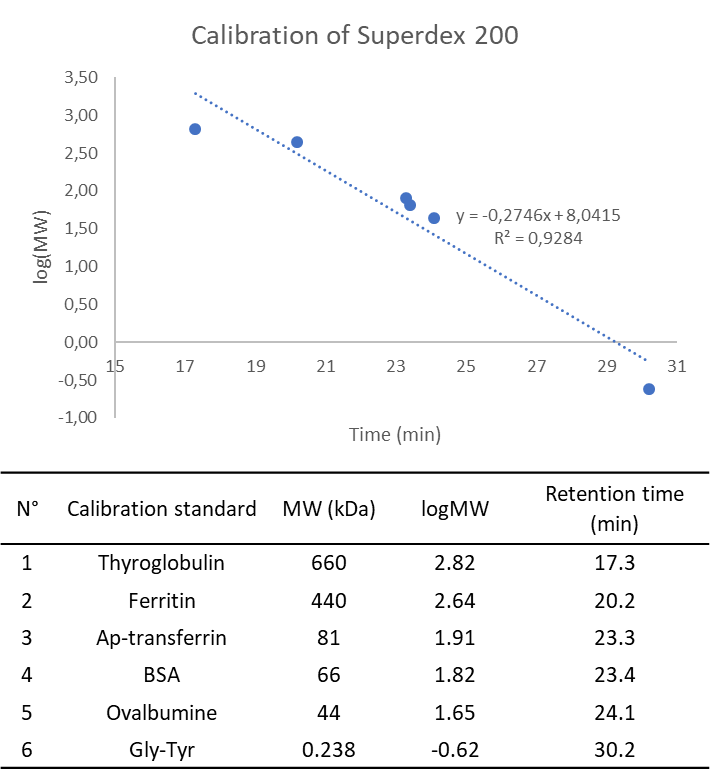
## Fig. 2

Calibration of Superdex 75 column.



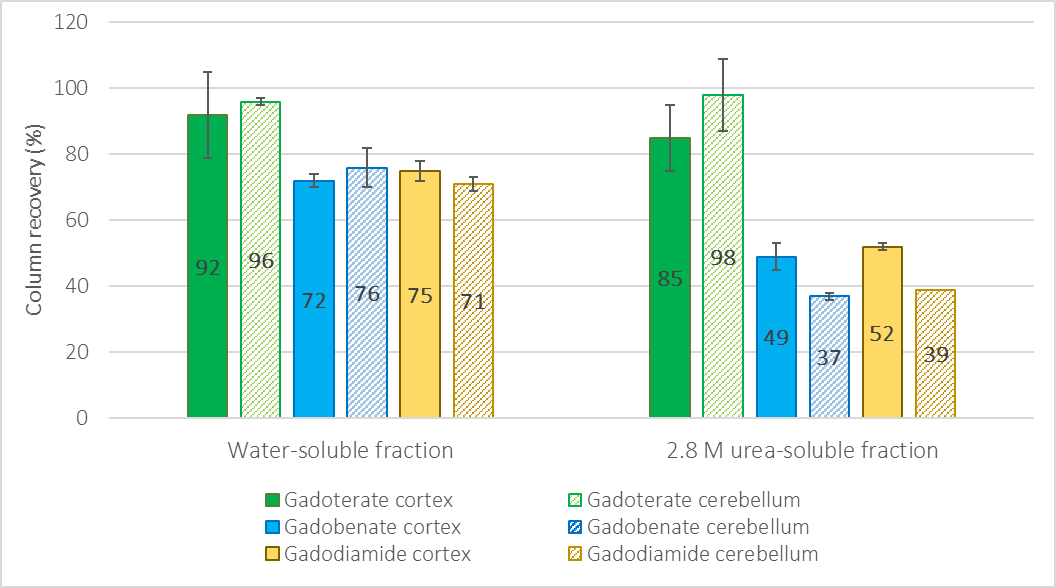
## Fig. 3

Calibration of Superdex 200 column.



## Fig. 4

Column Superdex 200 recovery obtained for water-soluble and urea-soluble fractions of real samples of cortex and cerebellum obtained using sequential extraction. Data points for each group are n=2.



## Fig. 5

SEC-ICP-MS chromatogram of 158Gd and 54Fe of urea-soluble fraction of the cerebellum after treatment with a) gadoterate, b) gadobenate and c) gadodiamide.

