### Accepted Manuscript

Title: Determination of  $\gamma$ -hydroxybutyrate in human urine samples by ion exclusion and ion exchange two-dimensional chromatography system

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## ACCEPTED MANUSCRIPT

#### Determination of $\gamma$ -hydroxybutyrate in human urine samples by ion exclusion and ion

#### exchange two-dimensional chromatography system

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#### Highlights:

- 1. IC is applied to analysis of GHB in a human urine sample for the first time.
- 2. The main function of ion-exclusion separation is to eliminate the urine matrices.
- 3. Ion-exchange chromatography is aimed to improve the sensitivity of detection.
- 4. The results of this method are comparable to those of GC-MS and LC-MS.

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