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## Supplementary Information

### Trap-and-release membrane inlet ion mobility spectrometry for on-line measurement of trace propofol in exhaled air

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This supplementary information provides additional information on the following aspect:

The propofol concentration in the patient's arterial blood was measured by the high performance liquid chromatograph (HPLC, Waters2010). Propofol was detected by a UV detector working at 270 nm (model, 996PAD). The HPLC mobile phase consisted of 80% methanol and 20% water with a flow rate of 1.0 mL/min. To each 1 mL sample, 20  $\mu$ L of 50.0  $\mu$ g/mL thymol (internal standard), 1 mL of 0.1 mol/L  $\text{NaH}_2\text{PO}_4$ , and 5mL cyclohexane were added, and the sample was mixed with a liquid mixer. After centrifugation (3000 rpm for 10 min), a 4 mL aliquot of cyclohexane layer was transferred to a clean tube with 20  $\mu$ L tetramethylammonium (TMAH) solution (600  $\mu$ L of 25% TMAH in methanol was diluted with 7.4 mL 2-propanol). After centrifugation (3000 rpm for 5 min), the solution was kept in a water bath at 50  $^\circ\text{C}$  for the solvent being evaporated to dryness in a stream of nitrogen. The residue was re-dissolved in 100  $\mu$ L mobile phase, and 20  $\mu$ L of this solution was injected into a 200 mm $\times$ 4.6 mm i.d.  $\text{C}_{18}$  silica gel column (Diamonsil  $\text{C}_{18}$  (2), 5  $\mu\text{M}$ ).

#### Notes

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