Supplementary Materials

Identification of the impurities in chloroephedrine samples by HPLC-IT/TOF-MS and preparation of chloroephedrine standard

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Table S1. Characterization summary of the impurities identified in chloroephedrine samples

Identity	R_t/min	Intensity/10^6 cps	Molecular formula	Experimental mass (m/z)	Theoretical mass (m/z)	Error/mDa	Degree of unsaturation	Fragment ion
Chloroephedrine	6.869	7.203	$C_{10}H_{14}ClN$	183.0885	183.0821	-6.43	4	184.1046 ($C_{10}H_{15}ClN^+$)
								148.0938 ($C_{10}H_{14}N^+$)
								133.0389 ($C_9H_{11}N^+$)
								117.0526 ($C_9H_9^+$)
Impurity 1	7.692	2.758	$C_{10}H_{14}ClN$	183.0860	183.0821	-3.99	4	184.1021 ($C_{10}H_{15}ClN^+$)
								148.1028 ($C_{10}H_{14}N^+$)
								133.0650 ($C_9H_{11}N^+$)
								117.0712 ($C_9H_9^+$)
Impurity 2	19.420	3.706	$C_{19}H_{22}ClN$	299.1512	299.1568	5.61	9	300.1043 ($C_{19}H_{23}ClN^+$)
								264.2059 ($C_{19}H_{22}N^+$)

R_t: retention time

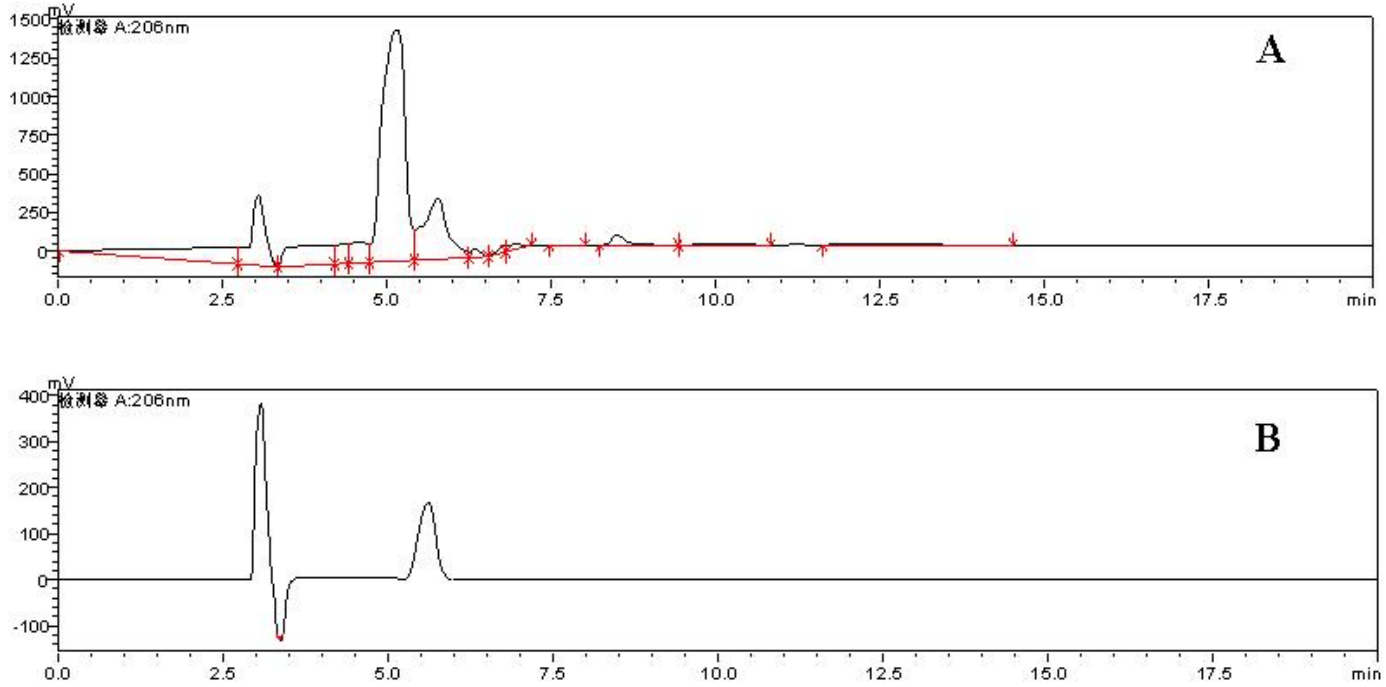

Figure S1. Analytical HPLC chromatogram of chlorephedrine sample (A) and (1R, 2S)-β-chloro-methamphetamine (B)
Chiral separation conditions: a chiralpak AD-H column (250 mm×4.6 mm, 5 μm, DAICEL, Osaka, Japan);
Column temperature was 25□; Mobile phase was *n*-hexane:2-propanol:trifluoroacetic acid:triethylamine=92:8:0.1:0.05;
Flow rate was 1.0 mL/min.