authentic ephedrines and samples (nos 1 and 6). The spectra of peaks 1 and 2 in the chromatogram of Fig. 2(B and C) matched the spectra of the standard solution of *l*-ephedrine and *d*-pseudoephedrine in the chromatogram of Fig. 2(A).

Conclusion

This simple and convenient HPLC method could determine ephedrine and pseudoephedrine at levels as low as 3 ppm in bulk methamphetamine. As it is very difficult to extract trace ephedrines from the structural analog methamphetamine, this method without any extraction or derivatization procedure may bring benefits for the profiling of high-purity methamphetamine. This developed method was confirmed to be effective for qualitative determination of ephedrines in illicit bulk methamphetamine hydrochloride samples, in which the contents were substantially below the detection limit of the previous method. The configuration of ephedrines is not acquired by this method, but the detection of trace ephedrines may provide valuable information in impurity profiling of high-purity samples. If the content of ephedrines is rich in seized methamphetamine sample, it's favorable to confirm the configuration of ephedrine by our previous method (Makino *et al.*, 2002). Illicit *d*-methamphetamine is prepared only from *l*-ephedrine or *d*-pseudoephedrine, not from *d*-ephedrine or *l*-pseudoephedrine. The ephedrine and pseudoephedrine detected in seized samples may be considered *l*-ephedrine and *d*-pseudoephedrine. Conventional HPLC apparatus is available at most forensic laboratories, so the present method should be widely applicable for identifying trace ephedrines in bulk methamphetamine hydrochloride, and should be helpful for monitoring trends in synthetic methods and precursors used for the illicit production of methamphetamine hydrochloride.

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