Electronic Supplementary Material (ESI) for Analyst.

Supporting Information for:

Electrochemiluminescent Screening for Methamphetamine Metabolites

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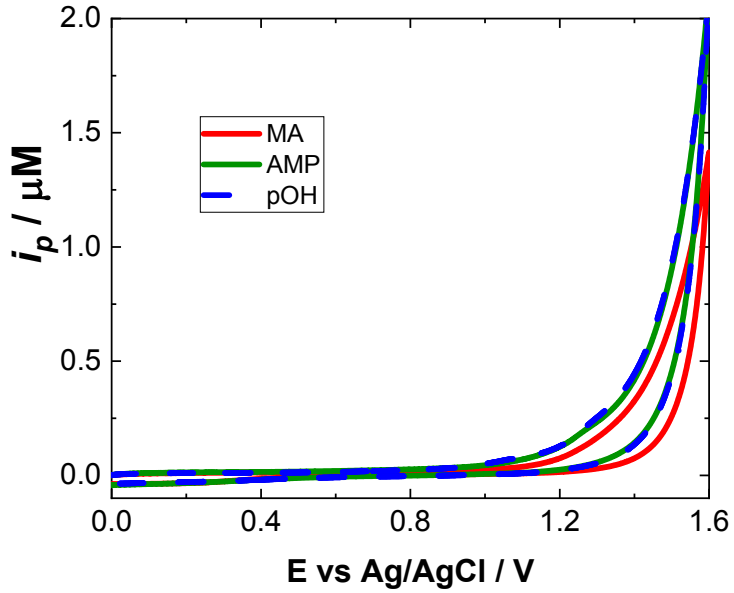

Figure S1. Typical CV for 150 mM MA (red line), AMP (green line) and pOH (blue dashed line) in 0.1 M PBS at pH 7.0 scanned over the potential range $0.0 \leq E \leq 1.6$ V vs Ag/AgCl at a scan rate of 100 mVs^{-1}.

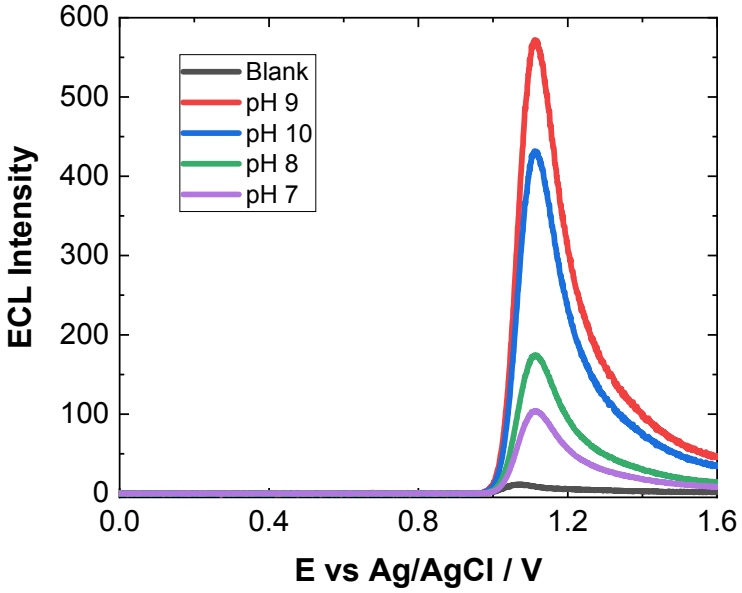

Figure S2. ECL response for 200 µM MA in 0.1 M PBS at pH 7.0 (purple line), pH 8.0 (green line), pH 9.0 (red line), pH 10 (blue line) and a blank (black line) scanned over the potential range $0.8 \leq E \leq 1.6$ V vs Ag/AgCl at a scan rate of 100 mVs^{-1}. PMT was biased at 650 V.

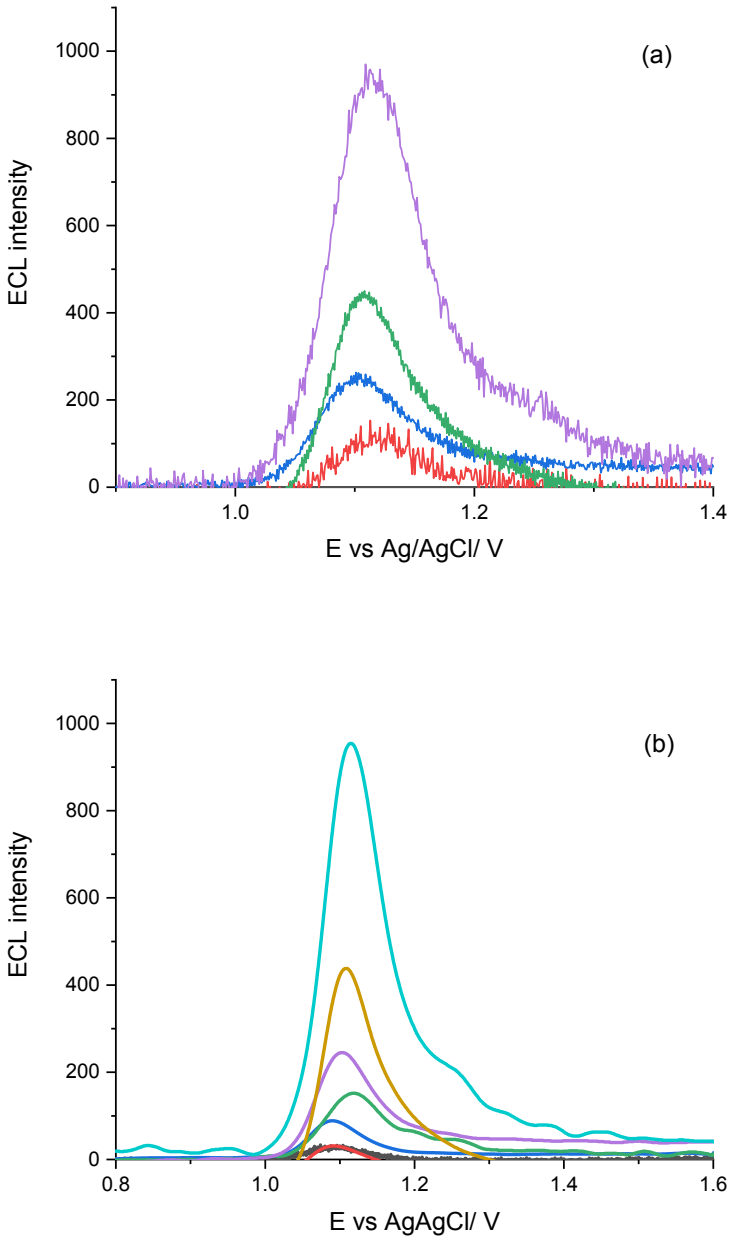

Figure S3. (a) ECL response for increasing [MA] in 0.1 M PBS at pH 7.0. (b) ECL response for increasing [AMP] in 0.1 M PBS at pH 7.0 scanned over the potential range 0.8 ≤ *E* ≤ 1.6 V vs Ag/AgCl at a scan rate of 100 mVs^{-1}. PMT was biased at 650 V.

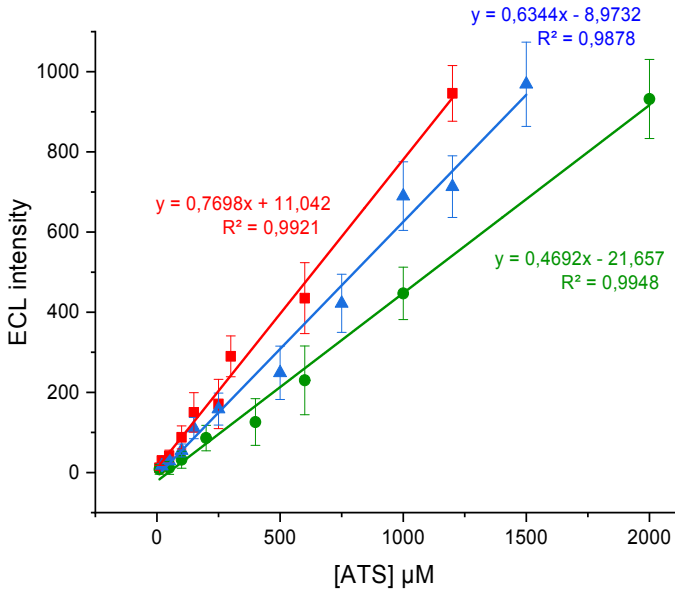

Figure S4. (a) Typical trend of maximum ECL signal against [ATS] at pH 7.0 for MA (red squares), AMP (green circles) and pOH-MA (blue triangles).

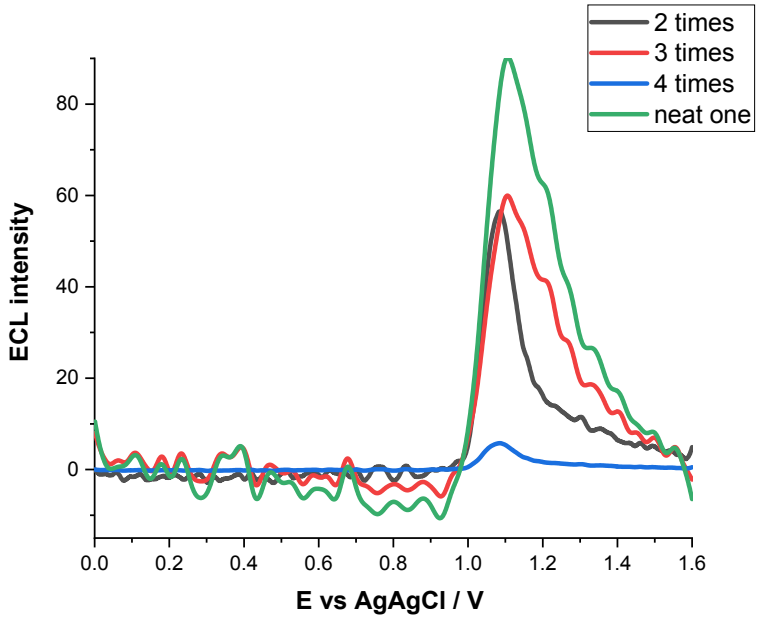

Figure S5. Background signals of serum neat blank and blanks after dilution (v/v). Green line is neat serum signal, black line is 2 times dilution (1:1), red line is 3 times dilution (1:2) and blue line is 4 times dilution (1:3) with 0.1 M PBS (pH = 9.0) scanned over the potential range $0 \leq E \leq 1.6$ V vs Ag/AgCl at a scan rate of 100 mVs^{-1}. PMT was biased at 650 V. Signal to noise improved with reduced viscosity.

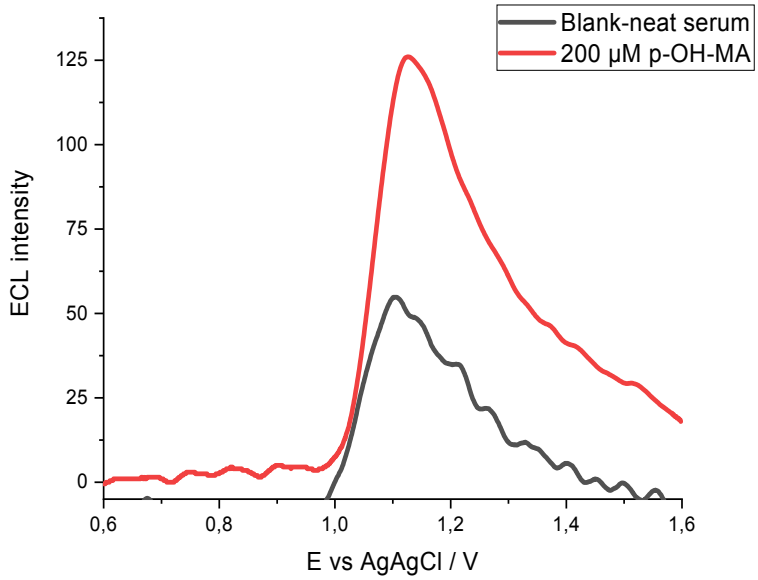

Figure S6. Background signal of neat serum (black line) and ECL signal of 200 µM p-OH-MA in neat serum (red line) over the potential range $0 \leq E \leq 1.6$ V vs Ag/AgCl at a scan rate of 100 mVs^{-1}. PMT was biased at 650 V.