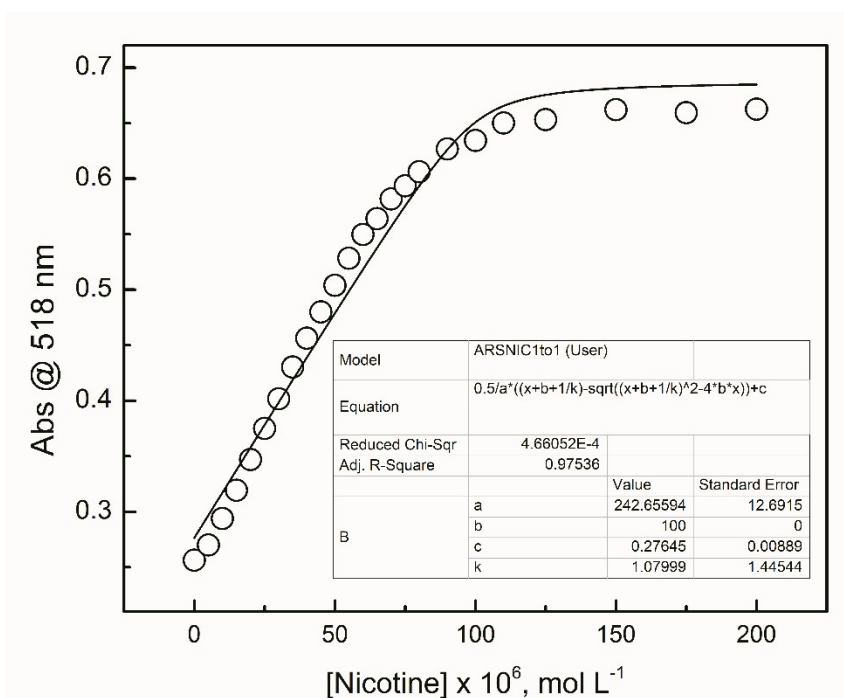
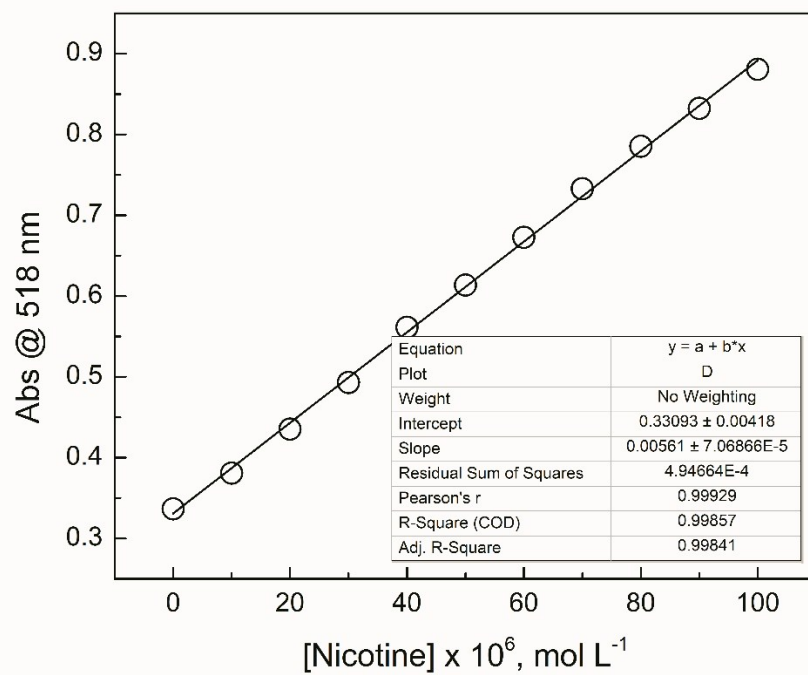


**Figure S1** Absorbance of ARS solution at 518 nm *versus* time. ■[ARS]=200  $\mu\text{M}$ , ●[ARS]=200  $\mu\text{M}$  + [nicotine]=60  $\mu\text{M}$ , ▲[ARS]=200  $\mu\text{M}$  + [nicotine]=60  $\mu\text{M}$  + [benzoic acid]=60  $\mu\text{M}$ . The unchanged absorbance suggested stability of ARS solution in the presence of nicotine and organic acid.



**Figure S2** Absorbance of ARS (100  $\mu\text{M}$ ) solution at 518 nm *versus* nicotine concentration (points) and fitting (line) under a 1:1 stoichiometry of ARS to nicotine.  $K$  is the binding constant. For fitting equation, see P. Thordason, *Chem. Soc. Rev.*, 2011, **40**, 1305-1320.



**Figure S3** Calibration curve for the determination of free-base nicotine in ARS (200  $\mu\text{M}$ ) solution.