Electronic Supplementary Material (ESI) for Analyst.

Supporting Information

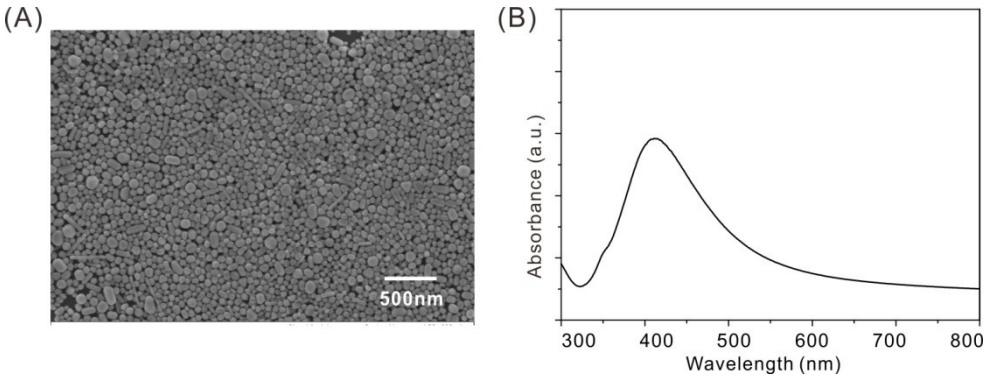

Fig. S1 (A) SEM image and (B) UV-visible spectra of Ag colloids.

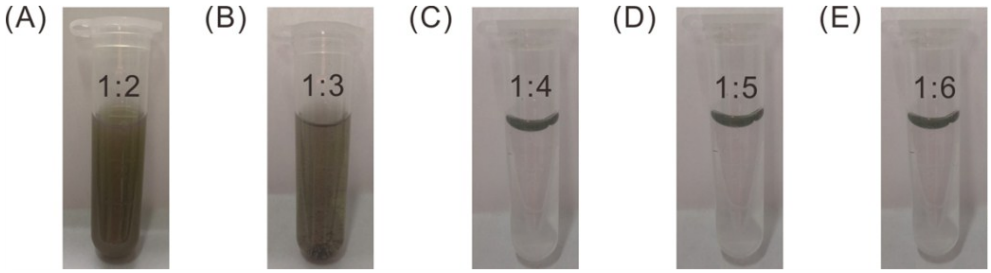

Fig. S2 Optical pictures of Ag colloids added into different ratio of CH_3OH and $CHCl_3$ from 1:2,1:3,1:4 and1:5 to 1:6, respectively.

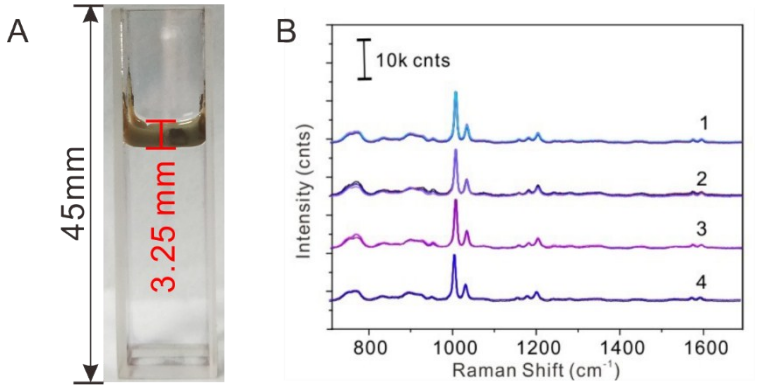

Fig. S3 The optical image of Ag colloids distributed on the solvent and the SERS spectra of phenformin hydrochloride (PHE, 1 ppm) at different positions of Ag colloids.

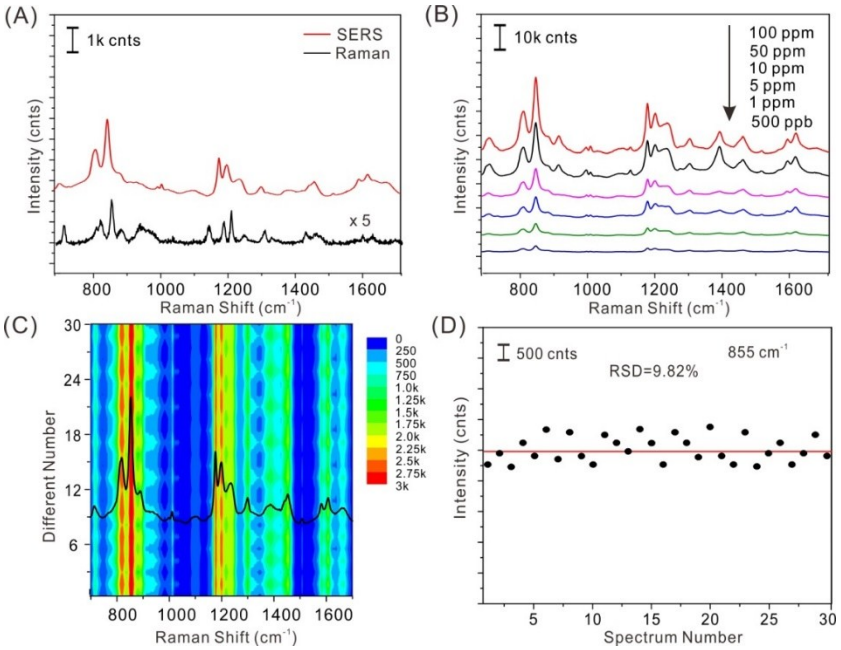

Fig. S4 (A) SERS spectra of ATN (1 ppm) and the corresponding Raman spectra of power. (B) SERS detection of ATN with the alteration of concentration from 100 ppm to 500 ppb. (C) 2D presentation of 30 spectra of ATN (1 ppm) randomly collected from 30 spots. (D) The calculation of RSD for the main vibrations of ATN (1 ppm) at 855 cm^{-1}.

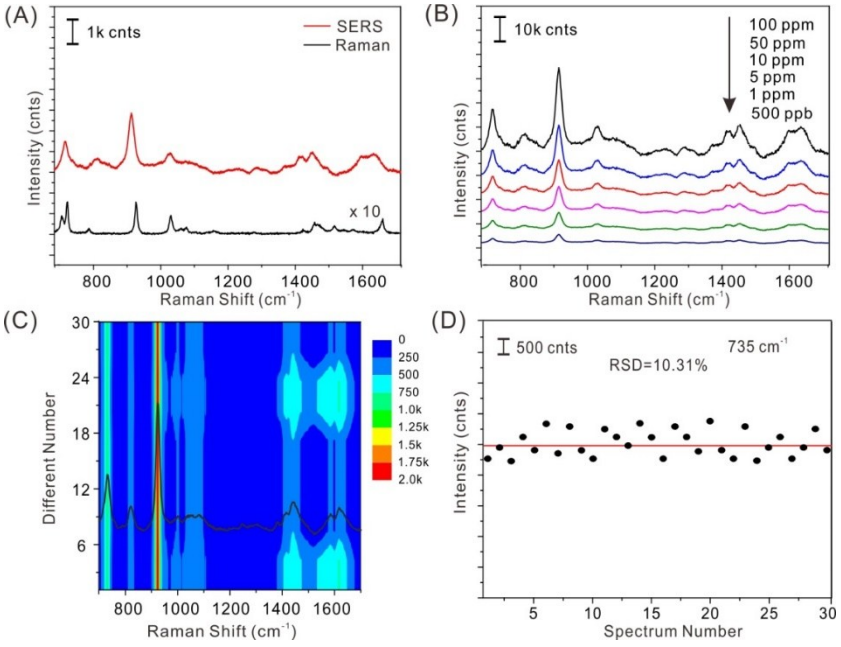

Fig. S5 (A) SERS spectra of MET (1 ppm) and the corresponding Raman spectra of power. (B) SERS detection of MET with the alteration of concentration from 100 ppm to 500 ppb. (C) 2D presentation of 30 spectra of MET (1 ppm) randomly collected from 30 spots. (D) The calculation of RSD for the main vibrations of MET (1 ppm) at 735 cm^{-1}.

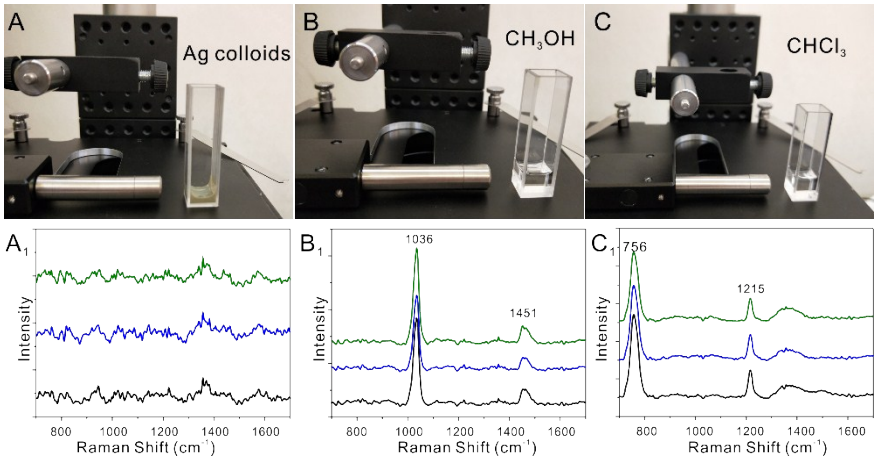

Fig. S6 The optical images of SERS measurements and the corresponding Raman spectra od Ag colloids, CH_3OH and $CHCl_3$.

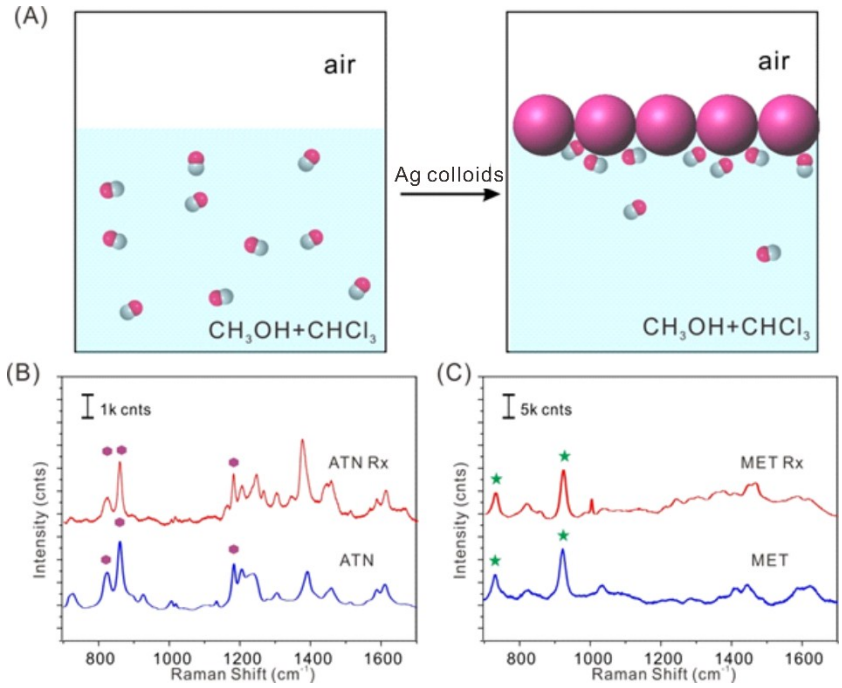

Fig. S7 (A) Schematic of SME-SERS analysis. (B) SERS spectra of ATN Rx, and the corresponding SERS spectra of ATN. (C) SERS spectra of MET Rx, and the corresponding SERS spectra of MET.

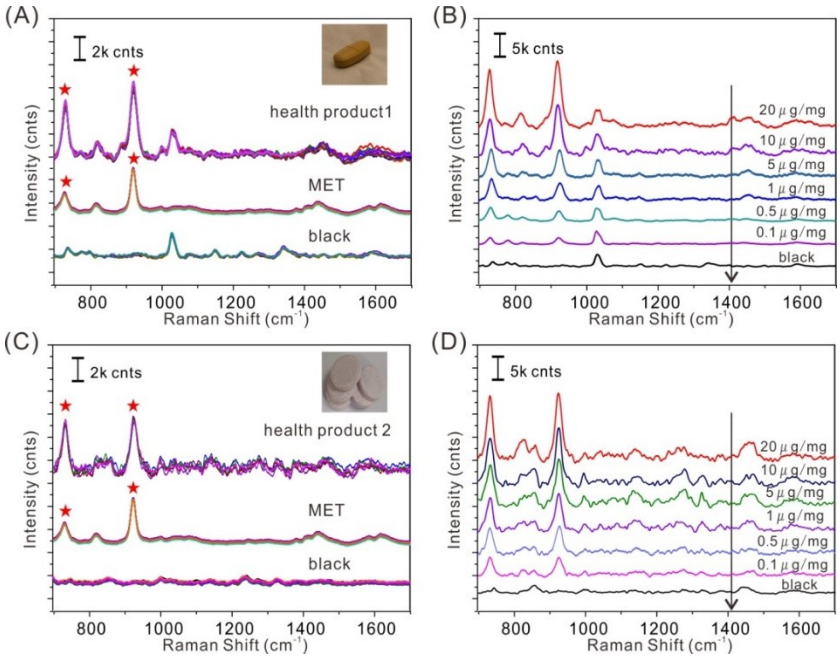

Fig. S8 (A) and (C) SERS detection of MET drug spiked into the different health products (B) and (D) The SERS spectra of MET spiked into health products with the concentrations ranging from 20, 10, 5, 1, 0.5 to 0.1 μg/mg, respectively.