

Supplementary information

A synchronous-fluorescence analysis method combining with simple one-step extraction for determination of Leonurine in traditional Chinese medicine

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1. The Chemical structures of homologous compounds

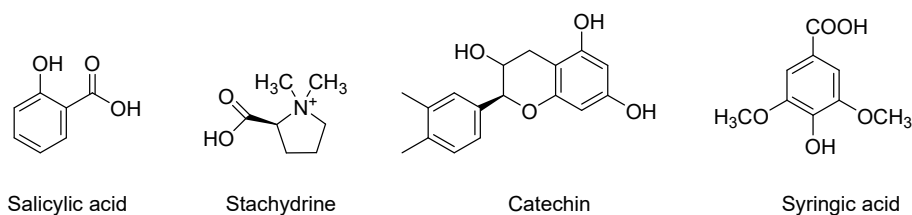


Fig. S1 The chemical structures of salicylic acid, stachydrine, catechin and syringic acid

2. The studies of solvents, pH values and stability

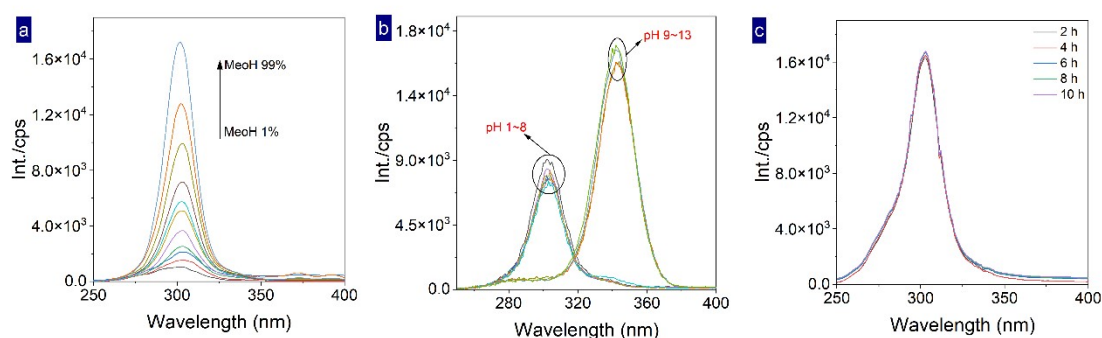


Fig. S2 (a) Synchronous fluorescence spectra of leonurine (10 μM) in different ratio of MeOH/H₂O solutions, $\Delta\lambda = 30$ nm; (b) Synchronous fluorescence spectra of leonurine (10 μM) at different pH values (Methanol/H₂O, 7:3, v/v), $\Delta\lambda = 30$ nm; (c) Synchronous fluorescence spectra of leonurine (10 μM) for 10 hours in (Methanol/H₂O, 7:3, v/v, pH=7.4), $\Delta\lambda = 30$ nm, 25°C

3. Steps for handling leonurus medicines

Considering the insolubility of leonurus ointments and pills in methanol solution, two samples of the same weight were taken from the same location of the samples were immersed in methanol solution containing leonurine (10 μM) for 24 h; the samples were dried, and then the powdered samples were added to Methanol/H₂O (7:3, v/v) solution, and the solution was filtered, and the filtrate was kept for testing.

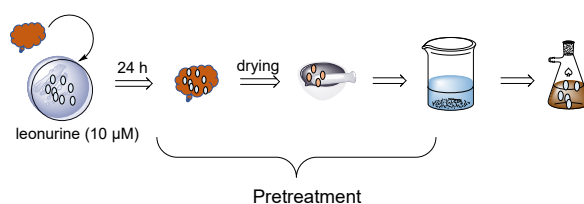


Fig. S3 The flowchart for leonurine detection in real samples of *Leonurus ointments* and *pills*.