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A new method for rapid identification of traditional Chinese medicine based on new silver sol: Using SERS spectrum for quality control of flavonoids and flavonoid glycosides in Potentilla Discolor Bge.

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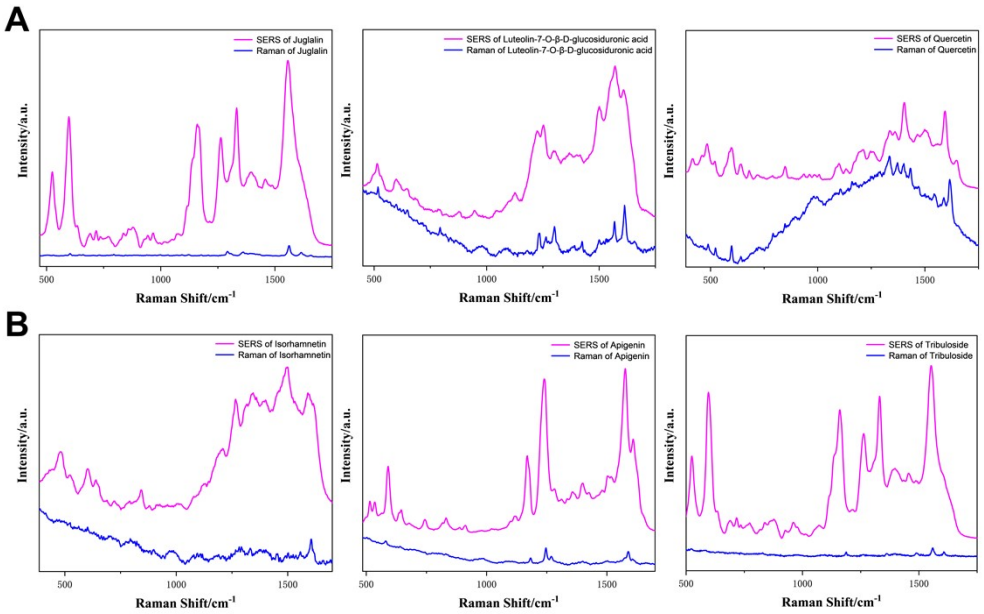

Fig. S1 Comparison of SERS spectra and Raman spectra of glycosides (A) such as Juglalin, luteolin-7-O-β-D-glucosiduronic acid, and quercetin, and glycogens (B) like isorhamnetin, apigenin, and Tribuloside

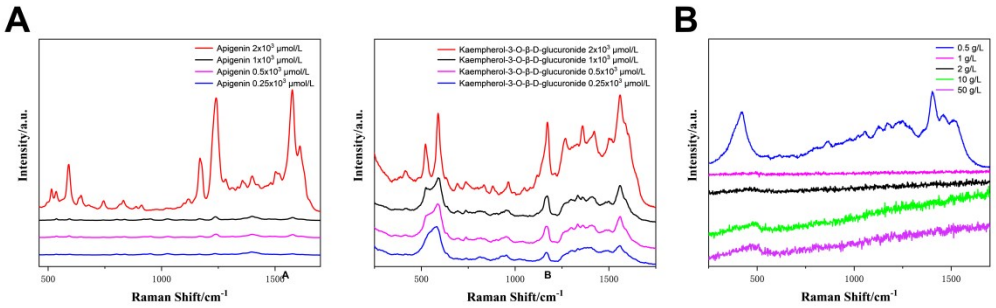

Fig. S2 An investigation into the dosage of standardized compounds (A), such as apigenin and kaempherol-3-O-β-D-glucuronide, and medical samples (B) for testing purposes.

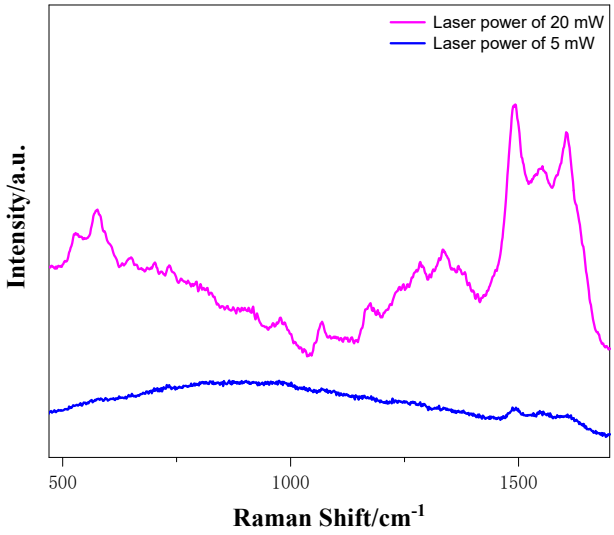

Fig. S3 The optimal detection power for SERS analysis of medical samples is 20 mW.

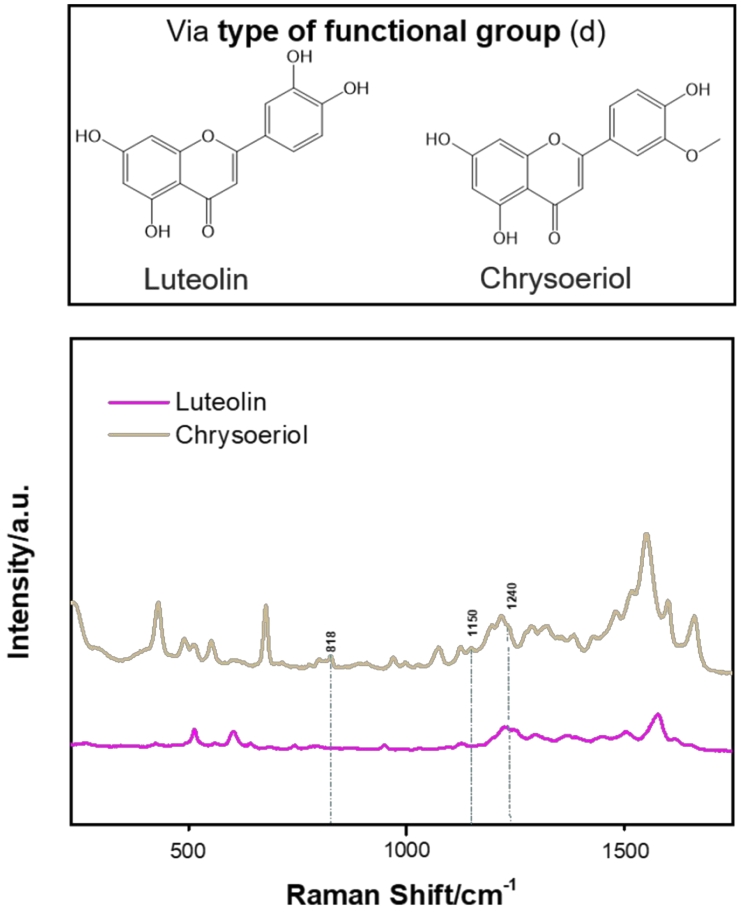

Fig. S4 The difference between the results of luteolin (3) and chrysoeriol (5) was

the type of functional group.

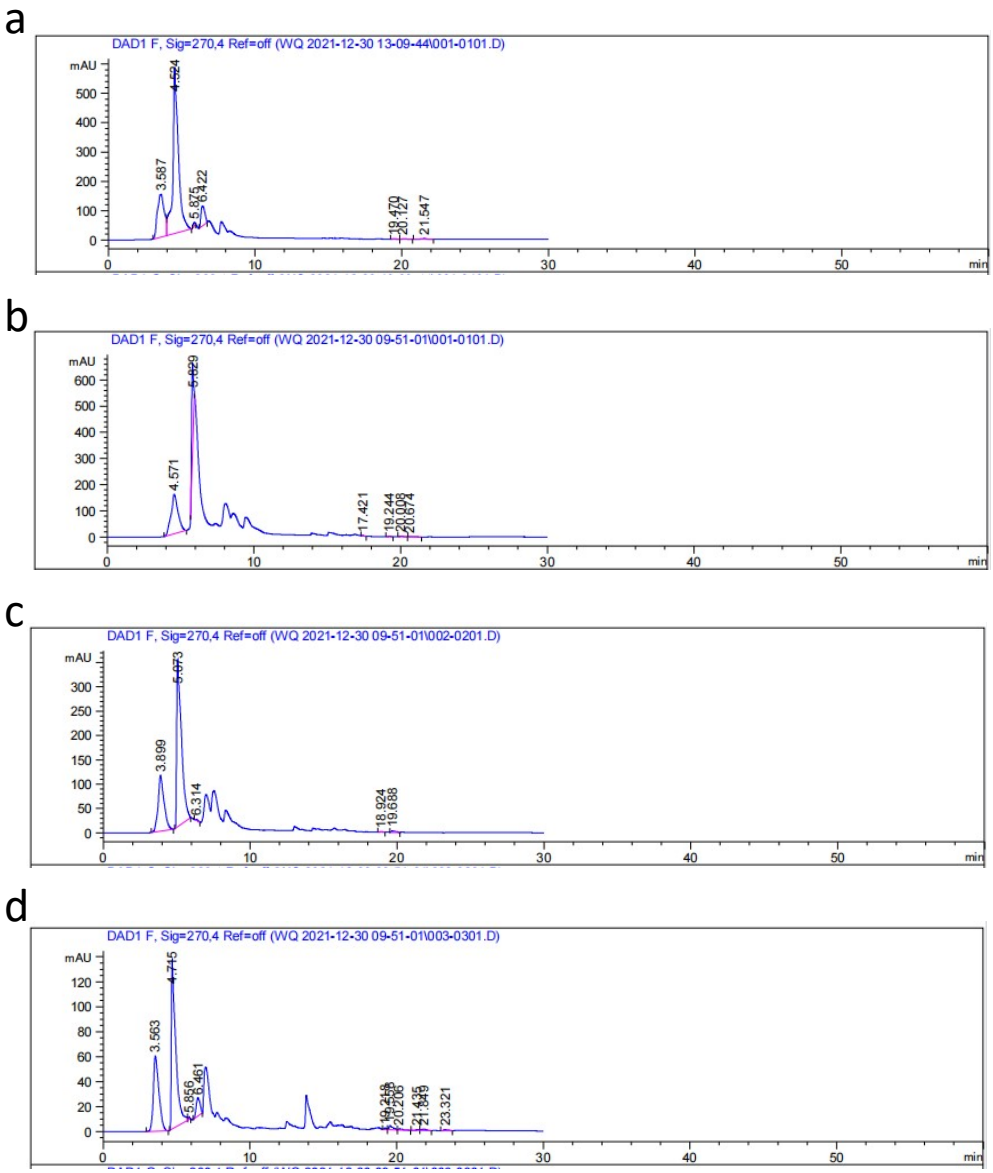

Fig. S5 The optimal solvent concentration was determined by HPLC as 50% methanol.

(A) HPLC determination of the crude extract of Potentilla Discolor Bge in 0% chromatographic methanol solvent. (B) HPLC determination of the crude extract of Potentilla Discolor Bge in 50% chromatographic methanol solvent. (C) HPLC determination of the crude extract of Potentilla Discolor Bge in 75% chromatographic methanol solvent. (D) HPLC determination of the crude extract of Potentilla Discolor Bge in 100% chromatographic methanol solvent.

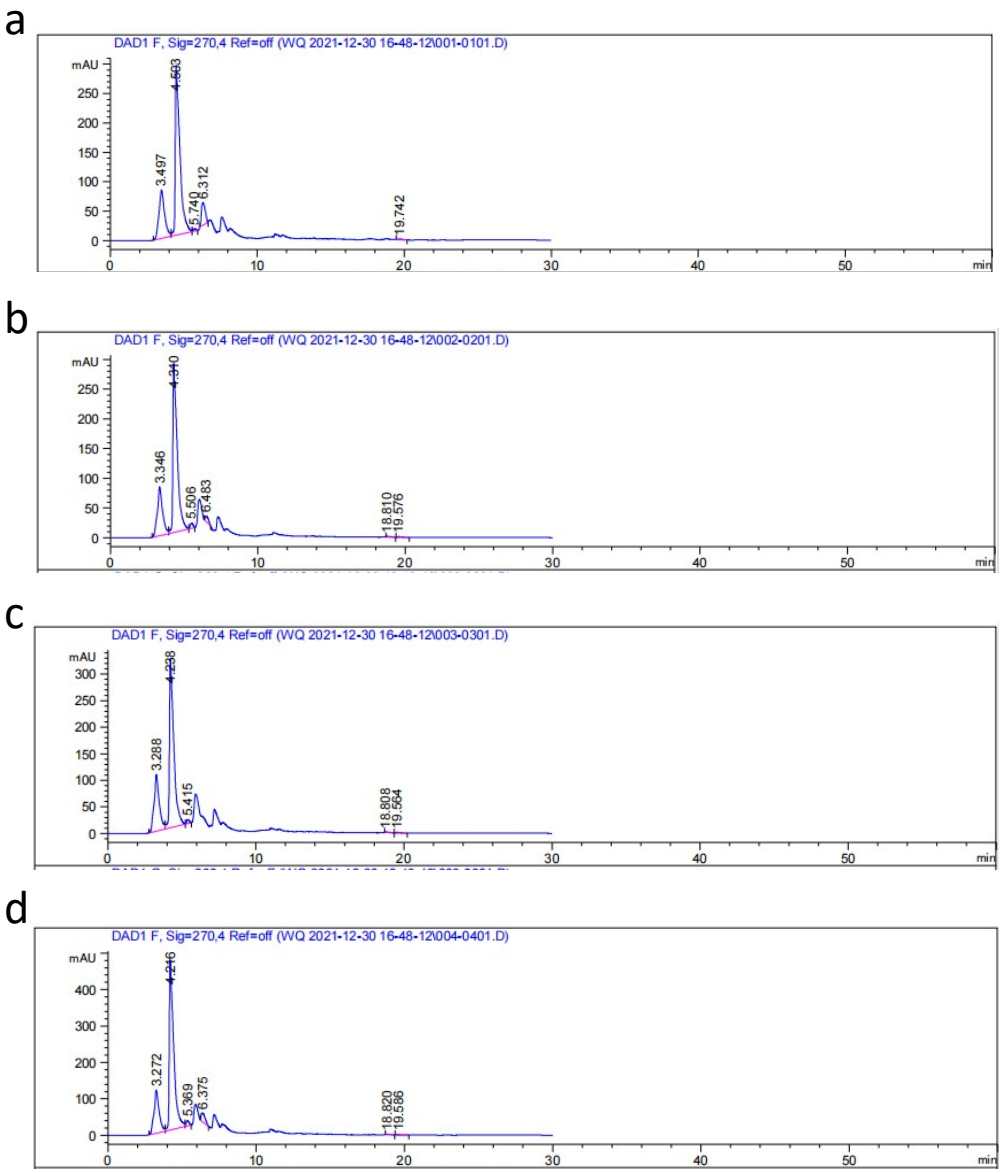

Fig. S6 The optimal extraction time was 60min by HPLC.

(A) HPLC was used to determine the extraction efficiency of the crude extract of Potentilla Discolor Bge in 50% chromatographic methanol solvent for 15 min. (B) HPLC was used to determine the extraction efficiency of the crude extract of Potentilla Discolor Bge in 50% chromatographic methanol solvent for 30 min. (C) HPLC was used to determine the extraction efficiency of the crude extract of Potentilla Discolor Bge in 50% chromatographic methanol solvent for 45 min. (D) HPLC was used to determine the extraction efficiency of the crude extract of Potentilla Discolor Bge in 50% chromatographic methanol solvent for 60 min.

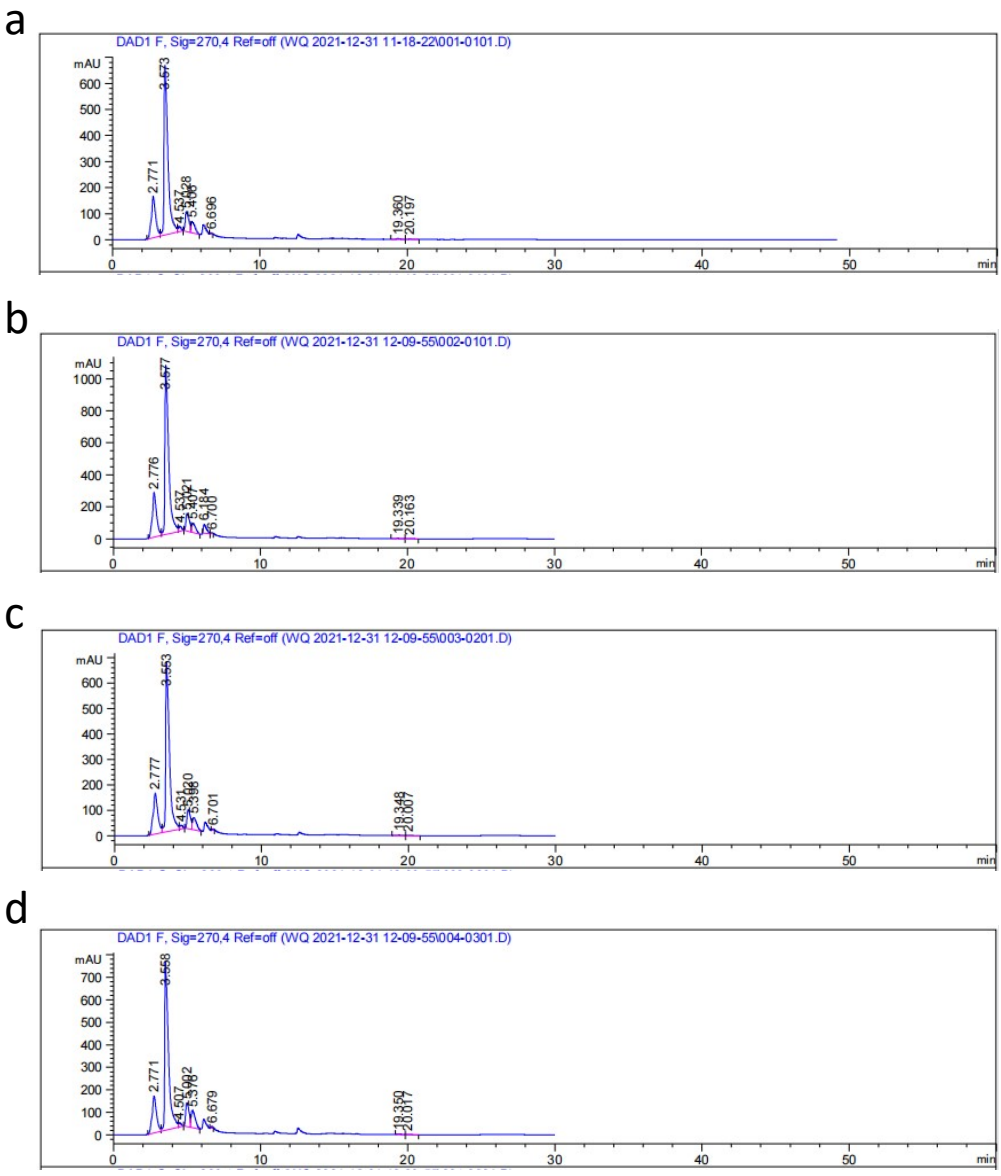

Fig. S7 The optimum extraction condition was determined by HPLC as six times the amount.

(A) HPLC was used to test the extraction effect of the crude extract of Potentilla Discolor Bge under four times of fixed solvent percentage and ultrasonic time. (B) HPLC was used to test the extraction effect of the crude extract of Potentilla Discolor Bge under six times of fixed solvent percentage and ultrasonic time. (C) HPLC was used to test the extraction effect of the crude extract of Potentilla Discolor Bge under eigh times of fixed solvent percentage and ultrasonic time. (D) HPLC was used to test the extraction effect of the crude extract of Potentilla Discolor Bge under ten times of fixed solvent percentage and ultrasonic time.