

**Preparative separation of a challenging anthocyanin from *Lycium
ruthenicum* Murr. by two-dimensional reversed-phase liquid
chromatography/hydrophilic interaction chromatography**

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1. The first-dimension separation of *L. ruthenicum*

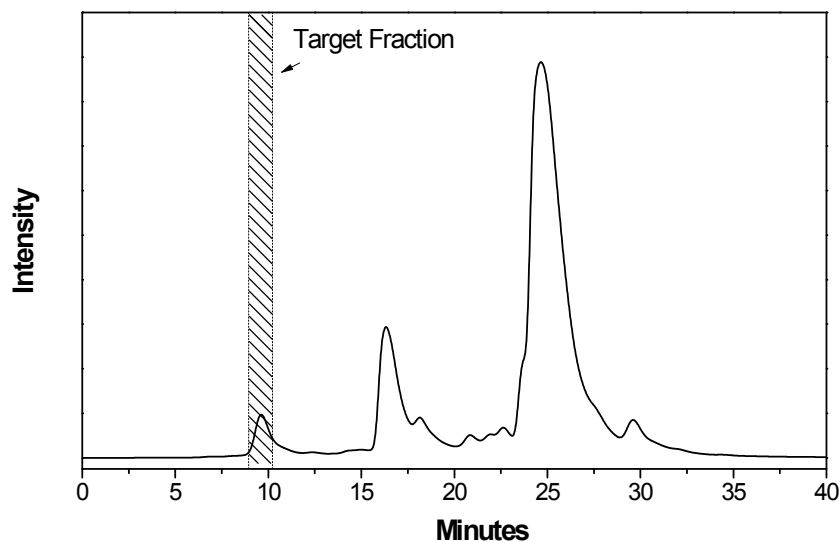


Fig. S1. The first-dimension preparation of on a prep XTerra MS C18 column

2. The second-dimension separation on a Click XIon column

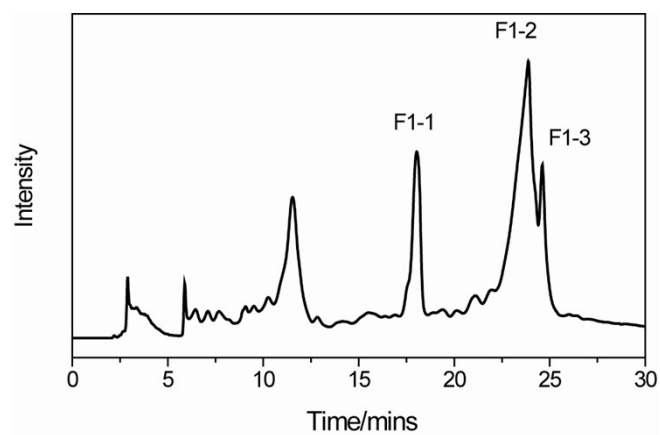


Fig. S2. The chromatogram of second-dimension preparation on the Click XIon column (20×250 mm, 10 μm). Mobile phase A: 1% v/v phosphoric acid in water and B: 1% v/v phosphoric acid in ACN; gradient: 0-30 min, 15%~35% A; flow rate: 19 mL/min; wavelength: 280 nm.

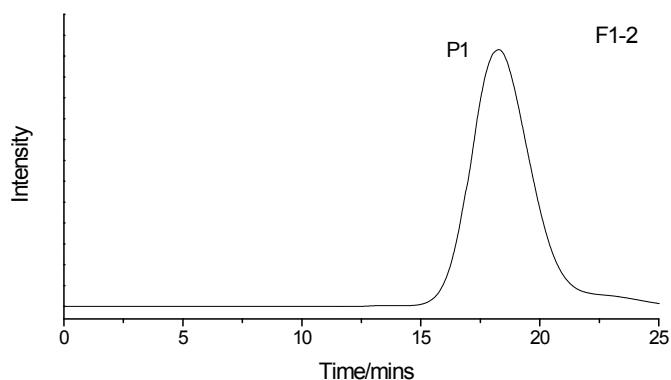


Fig. S3. The chromatogram of the preparation of F1-2 on the XCharge column (20×250 mm, 10 μ m). Mobile phase A: 5% v/v formic acid in water and B: 5% v/v formic acid in ACN; gradient: 6% B; flow rate: 19 mL/min; wavelength: 520 nm.

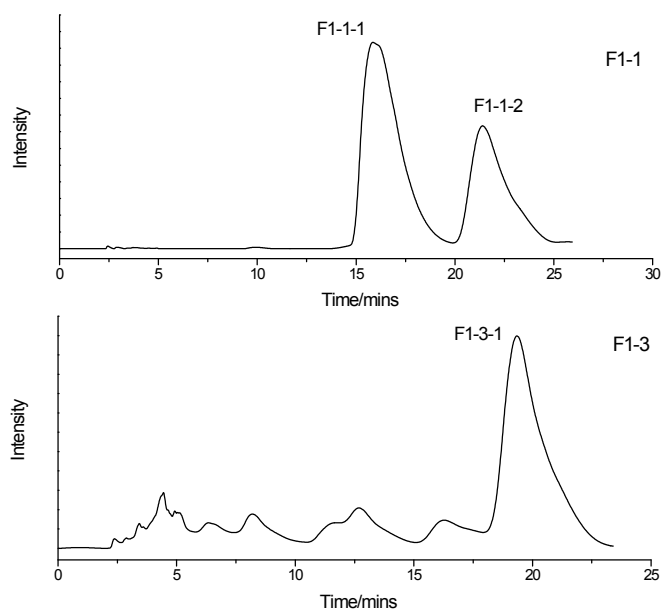


Fig. S4 The chromatogram of the preparation of F1-1 and F1-3 on the XCharge column (20×250 mm, 10 μ m). Mobile phase A: 5% v/v formic acid in water and B: 5% v/v formic acid in ACN; gradient: 6% B; flow rate: 19 mL/min; wavelength: 280 nm.

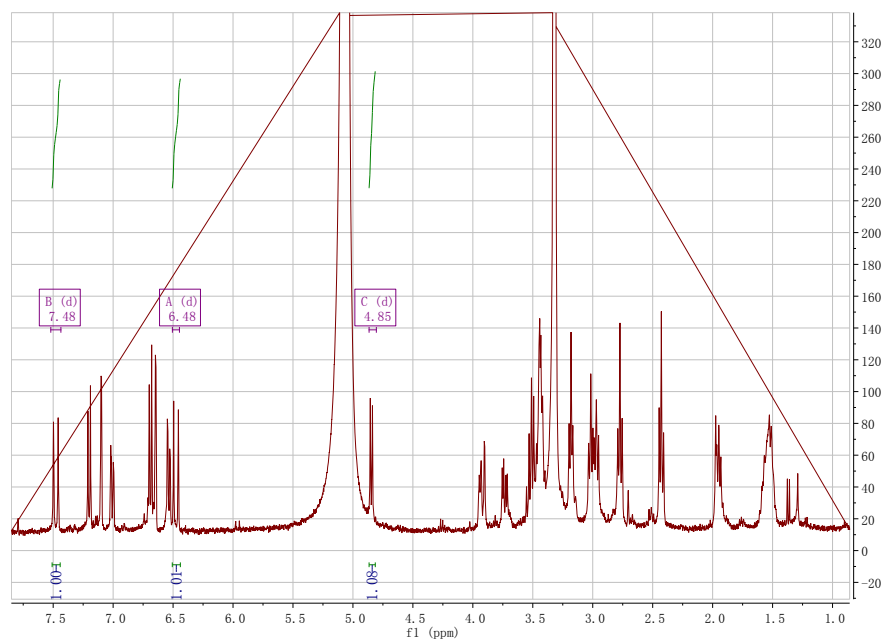


Fig. S5 ¹H NMR of F1-1-2

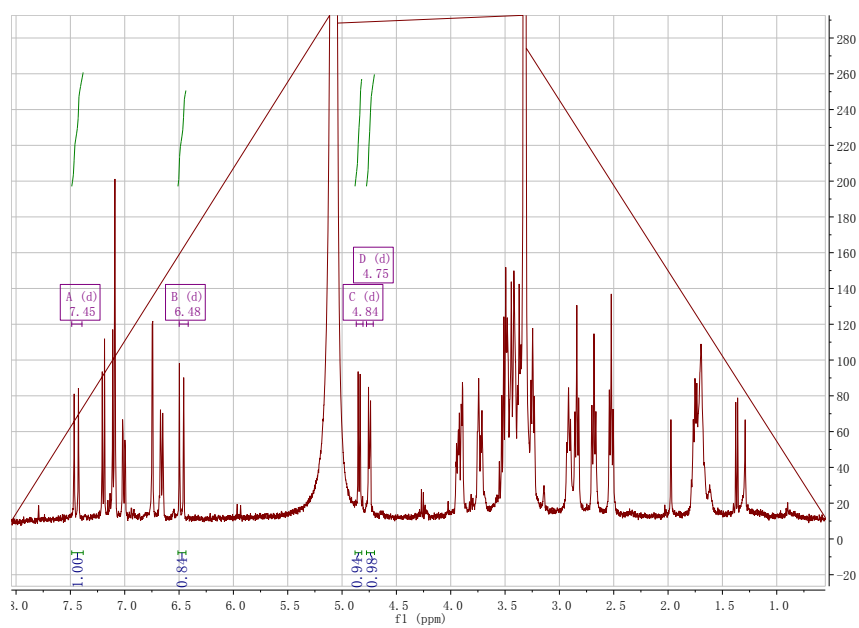


Fig. S6 ¹H NMR of F1-3-1