Extraction Method for Determining Florpyrauxifen-Benzyl Herbicide in Rice

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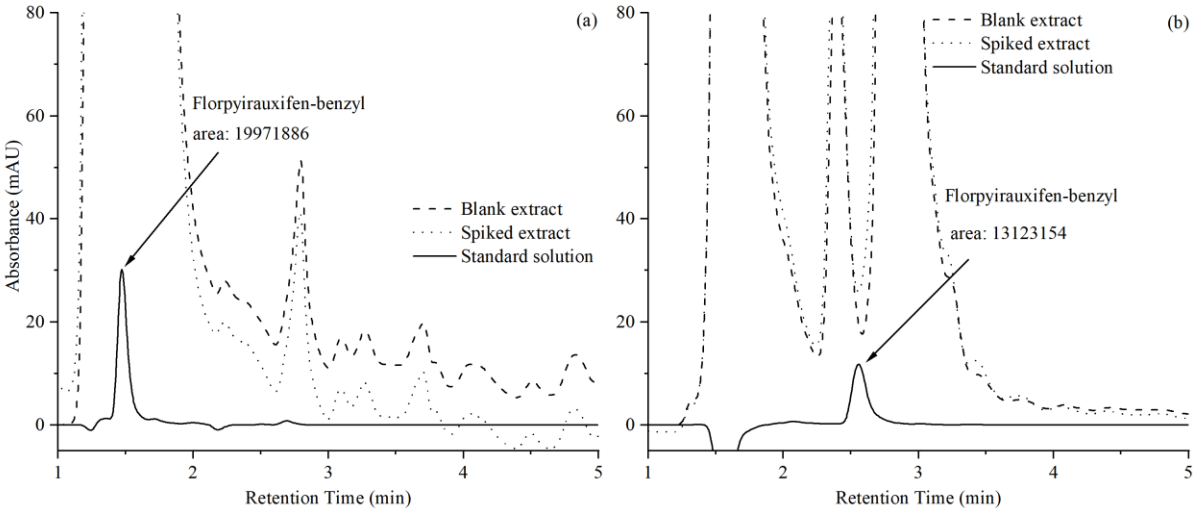

Fig. S1 Chromatogram of the matrix extract fortified with florpyrauxifen-benzyl for a concentration of 90 µg kg^{-1} (⋯), chromatogram of the florpyrauxifen-benzyl free matrix extract (blank extract) (--) and chromatogram of the florpyrauxifen-benzyl standard in acetonitrile solvent at a concentration of 500 µg kg^{-1} (—). Chromatographic conditions: Poroshell column, injection volume = 20 µL, acetonitrile:water (100:0) mobile phase, T = 30 ℃, flow rate = 0.4 mL min^{-1}, λ = 243 nm (a); Poroshell column, injection volume = 10 µL, acetonitrile acidified with 0.1% (v/v) formic acid:water (85:15) mobile phase, T = 30 ℃, flow rate = 0.3 mL min^{-1}, λ = 243 nm (b)

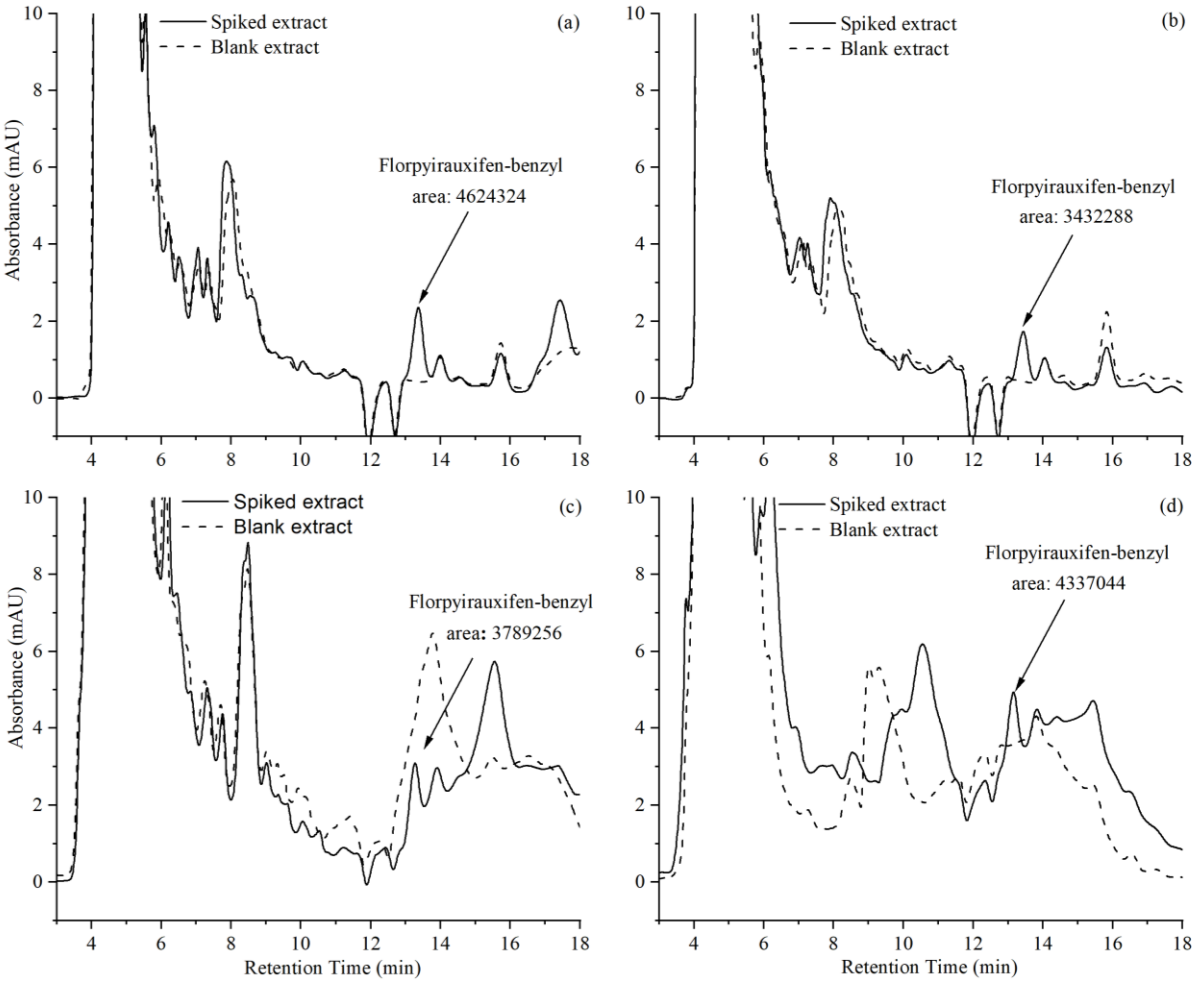

Fig. S2 Chromatogram of the matrix extract fortified with florpyrauxifen-benzyl for a concentration of 90 µg kg^{-1} (–) and chromatogram of the florpyrauxifen-benzyl free matrix extract (blank extract) (- -). Chromatographic conditions: Kinetex column, injection volume = 10 µL, T = 25 °C, flow rate = 0.3 mL min^{-1}, λ = 260 nm and methanol:water (78:22) mobile phase. (a) Acetonitrile:water (8:4 v/v), (b) Acetonitrile acidified with 0.1% formic acid:water (8:4 v/v), (c) Acetonitrile acidified with 0.1% hydrochloric acid:water (8:4 v/v), (d) acetonitrile + ethyl acetate:water (6.5+1.5:4 v/v)

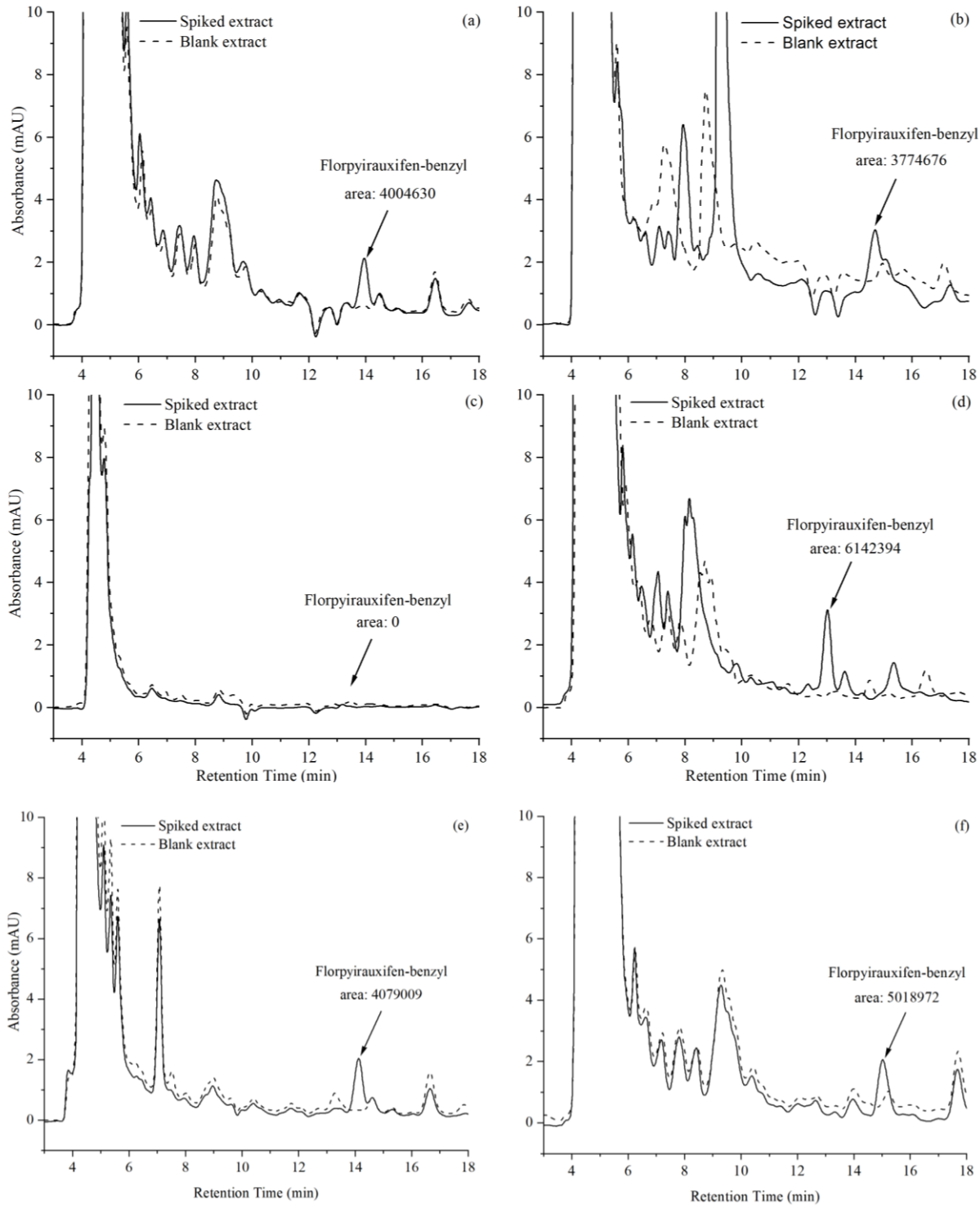

Fig. S3 Chromatogram of the matrix extract fortified with florpyrauxifen-benzyl for a concentration of 90 µg kg^{-1} (–) and chromatogram of the florpyrauxifen-benzyl free matrix extract (blank extract) (- -). Chromatographic conditions: Kinetex column, injection volume = 10 µL, T = 25 °C, flow rate = 0.3 mL min^{-1}, λ = 260 nm and methanol:water (78:22) mobile phase. Clean-up performed with 50 mg of adsorbent per mL of matrix extract. (a) C18 adsorbent, (b) florisil, (c) activated charcoal (Act. Charc), (d) alumina, (e) PSA and (f) silica gel 60

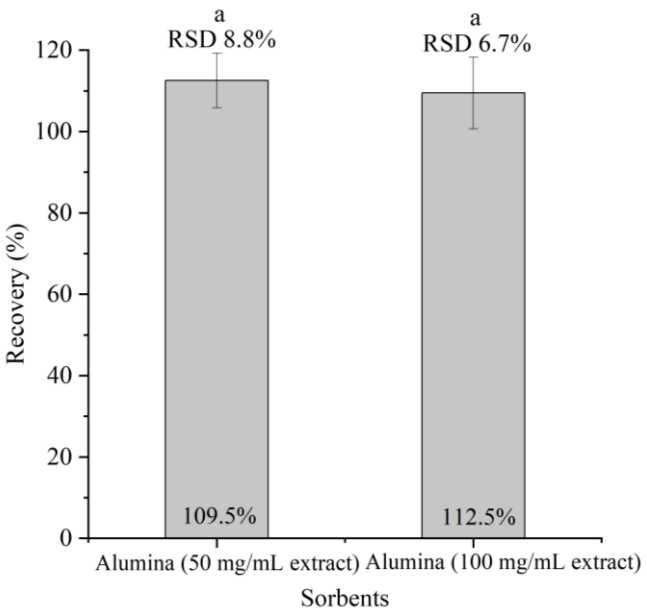

Fig. S4 Florpyrauxifen-benzyl extraction percentage from the rice matrix using the SLE-LTP method under optimized conditions: acetonitrile:water (8:4 v/v) extracting phase and clean-up using alumina adsorbent at concentrations of 50 and 100 mg of adsorbent per mL of rice matrix extract

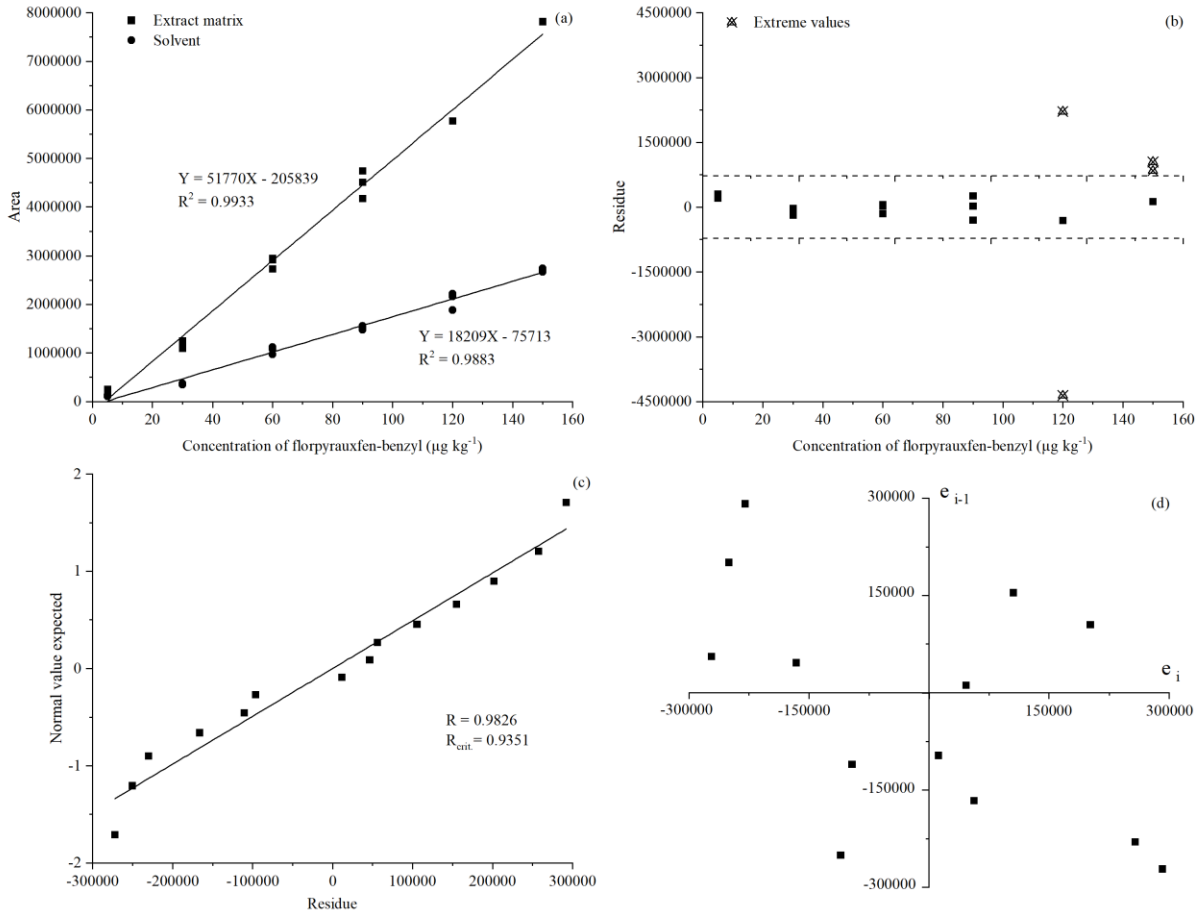

Fig. S5 Graphs obtained from the linear study of the optimized methodology for florpyrauxifen-benzyl. (a) Analytical calibration curves of this compound in solvent and matrix extract. (b) Linear regression residuals excluding extreme values. (c) Normal probability of regression residuals. (d) Autocorrelation plot of regression residuals by the Durbin-Watson test. R^2: coefficient of determination; R: Ryan-Joiner test correlation coefficient; e_i: residual