

Determination of L-glutathione by spot test and spectrophotometric methods based on its interaction with phenazine

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Supporting Information

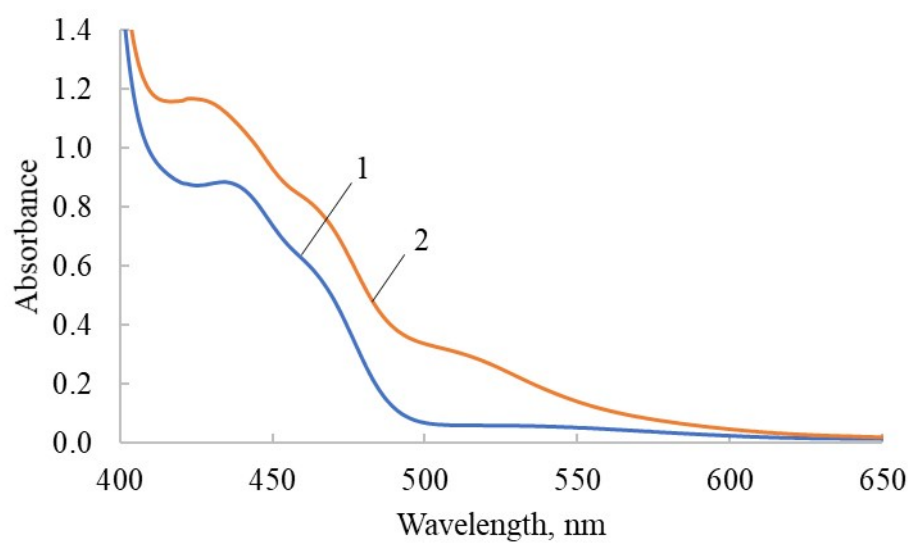


Fig. S1 UV-Vis spectra of PHNZ (1) and PHNZ-GSH (2). (Concentration of PHNZ $100 \mu\text{g mL}^{-1}$, concentration of GSH $40 \mu\text{g mL}^{-1}$, temperature $80 \text{ }^\circ\text{C}$, time 20 min, pH 6)

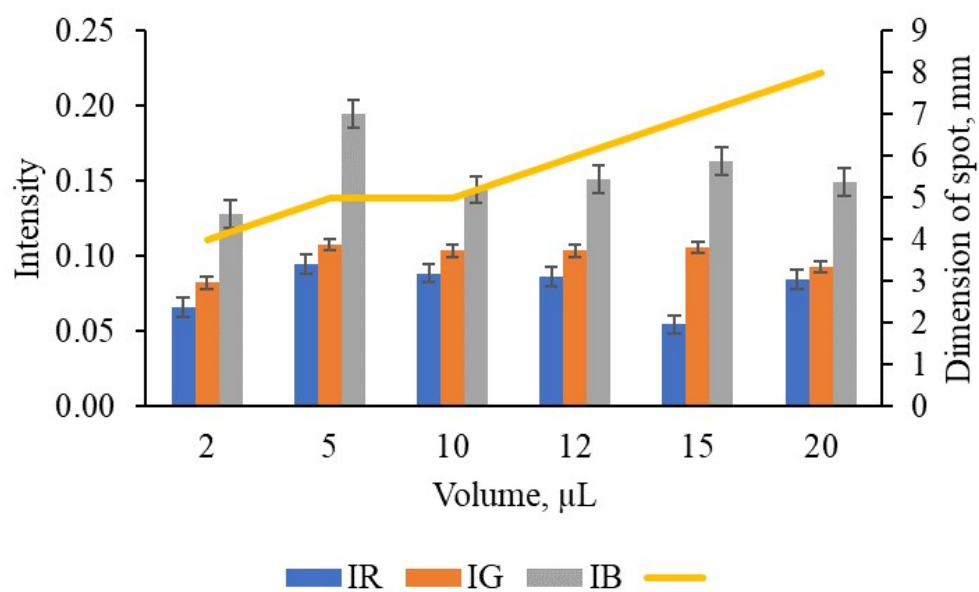


Fig. S2 Selection of reagents volume and dimension of spot, (concentration of PHNZ – $500 \mu\text{g mL}^{-1}$, concentration of GSH – $100 \mu\text{g mL}^{-1}$, volume of PHNZ and GSH – $5 \mu\text{L}$).

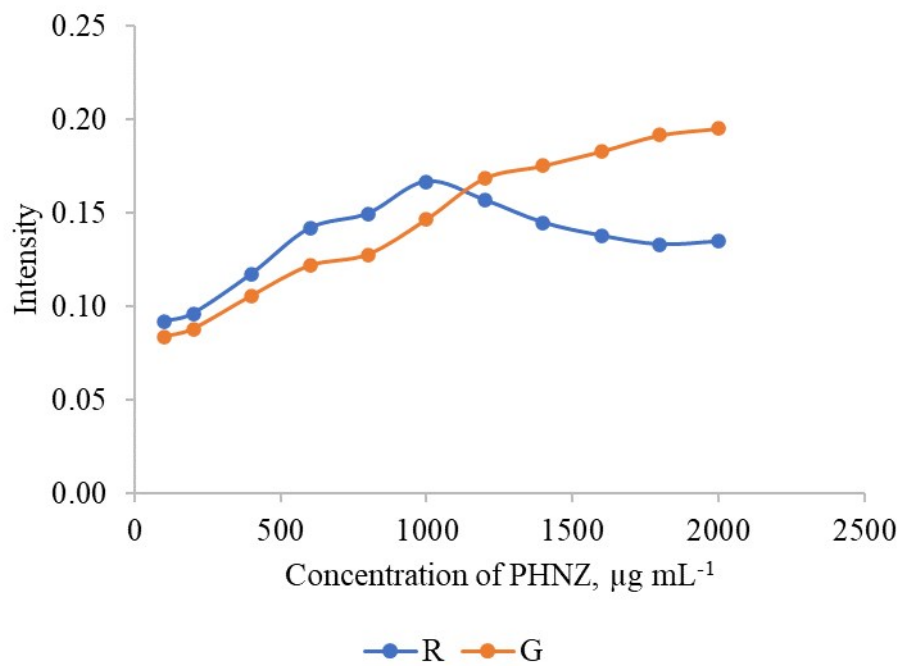


Fig. S3 Selection of PHNZ concentration (concentration of GSH – $100 \mu\text{g mL}^{-1}$, volume of PHNZ and GSH – $5 \mu\text{L}$).

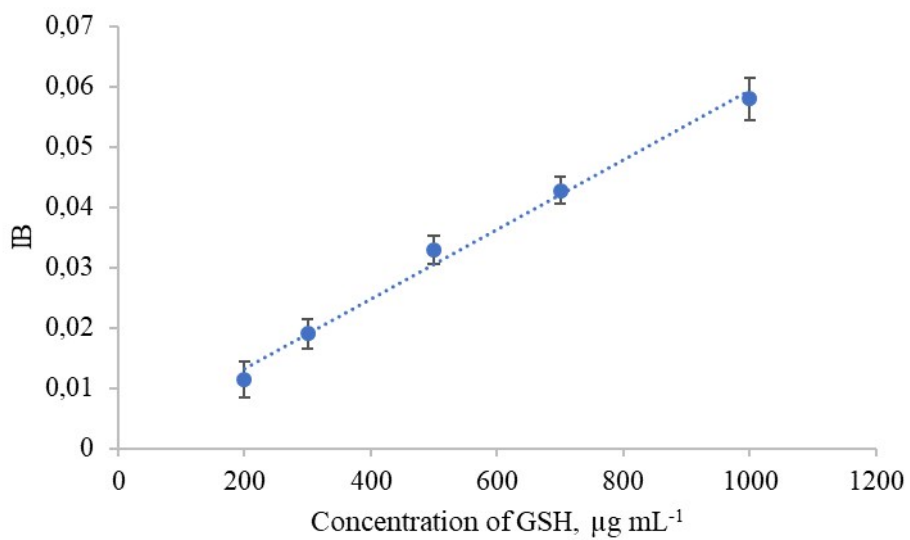
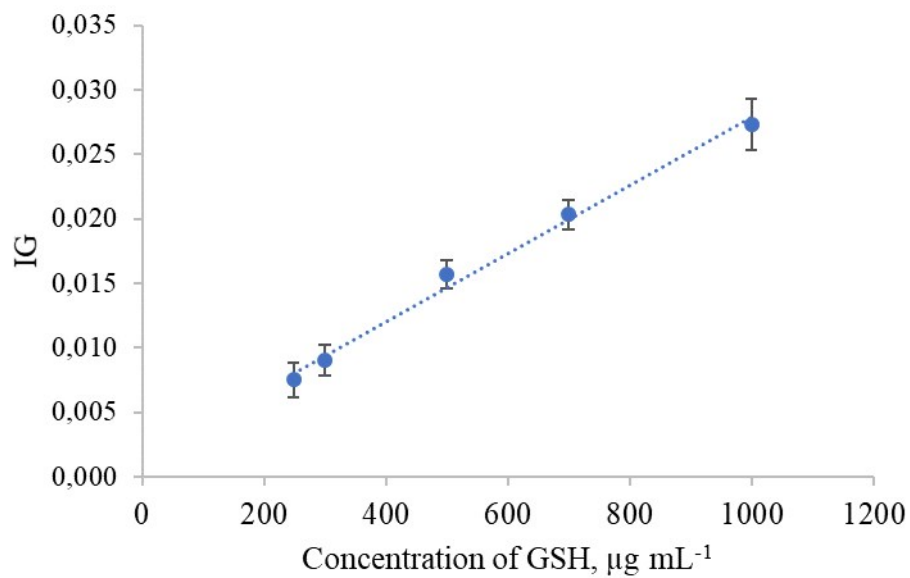


Fig. S4 Calibration curve for B and G channels (Concentration of PHNZ – $100 \mu\text{g mL}^{-1}$, volume of PHNZ and GSH – $5 \mu\text{L}$).



Fig. S5 A spot test platform spotted with increasing concentrations of GSH in the range 0-1000 $\mu\text{g mL}^{-1}$ (Spot test platform – TLC, concentration of PHNZ – 1200 $\mu\text{g mL}^{-1}$, volume of PHNZ and GSH – 5 μL).

Table S1 Green Analytical Procedure Index parameters

Category	Description	Color for spot test method	Color for spectrophotometric method
Sample preparation			
Collection (1)	None	Green	Green
Preservation (2)	None	Green	Green
Transport (3)	None	Green	Green
Storage (4)	None	Green	Green
Type of method (5)	Extraction does not required	Yellow	Yellow
Scale of extraction (6)	Non-extraction	Green	Green
Solvent used (7)	Green solvent	Green	Green
Additional treatment (8)	None	Green	Green
Reagent and solvents			
Amount (9)	10-100 mL (10-100 g)	Green	Yellow
Health hazard (10)	Slightly toxic	Green	Green
Safety hazard (11)	No special hazard	Green	Green
Instrumentation			
Energy (12)	≤0.1 kWh per sample	Green	Green
Occupational hazard (13)	-	Yellow	Yellow
Waste (14)	1–10 mL (1–10 g)	Yellow	Yellow
Waste treatment (15)	None	Red	Red