



SUPPLEMENTARY MATERIAL TO
**Development of a sensitive extraction–spectrophotometric
method for Cu(II) based on 1-(*o*-tolylamino)- and
1-(phenylamino)propane-2-thiol complexes**

ALI Z. ZALOV^{1*}, NAZILE S. HUSEYNOVA², AFET T. HUSEYNOVA³
and ALEMDAR A. ALBANDOV⁴

¹Azerbaijan State Pedagogical University, Baku, Azerbaijan, ²Azerbaijan Medical University,
Baku, Azerbaijan, ³Baku State University, Baku, Azerbaijan and

⁴Azerbaijan Technological University, Ganja, Azerbaijan

J. Serb. Chem. Soc. 91 (0) (2026) 000–000

*1-(*o*-tolylamino)-propane-2-thiol*

Yield: 1.3 g (80 %), bp 96 °C (0.3 mmHg), n_D^{20} 1.0350, R_f =0.52, n_D^{20} 1.5690, Found, %: C 66.25; S 17.76; H 8.34; N 7.69. Calculated, %: C 64.95; S 19.83; H 7.57; N 8.31. HRMS: m/z [M + H⁺] Calculated for C₁₀H₁₅NS: 181.112; Found: 167.098. HPLC-PDA: λ_{max} , nm: 270 nm, MeCN : MeOH (1 : 1), Rt: 3.07 min, 99.56 %. IR spectrum, ν , cm⁻¹: (KBr, cm⁻¹): 1448; 1513; 1585; 1604; 2561; 3017; 3035; 3055; 3407. ¹H NMR spectrum (300 MHz DMSO d₆), δ , ppm: 1.26–1.31 s (3H, CH₃), 2.1–2.3 s (3H, CH₃-Ph), 2.8–3.6 s (3H-CHCH₂), 6.1–7.3 s (4H, Ph), 1.6 s (1H-SH), 8.05 s (1H, NH). ¹³C NMR spectrum (75 MHz, DMSO d₆), δ , ppm: 21.3, 33.1, 34.2, 36.3, 60.7, 66.9, 113.4, 129.5, 144.7.

1-(phenylamino)-propane-2-thiol

Yield: 0.8 g (80 %), bp 80 °C (0.3 mm Hg), n_D^{20} 1.0800, R_f =0.56, n_D^{20} 1.5830, Found, %: C 64.63; S 19.28; H 7.83; N 8.48. Calculated, %: C 64.49; S 19.83; H 7.83; N 8.34. N 8.38, S 19.17. HRMS: m/z [M + H⁺] Calculated for C₉H₁₃NS: 167.211; found: 167.189. HPLC-PDA: λ_{max} , nm: 255 nm, MeCN : MeOH (1 : 1), Rt: 3.03 min, 99.18%. IR (KBr, cm⁻¹): 1418; 1454; 1496; 1506; 1514; 1587; 1613; 2554; 3057; 3028; 3222; 3404. ¹H NMR spectrum (300 MHz DMSO d₆), δ , ppm: 0.91 s (3H, CH₃), 3.18, 3.45 d (2H, CH₂), 6.59–7.24 s (5H, Ph), 1.6 s (1H, SH), 8.07 s (H, NH), ¹³C NMR spectrum (75 MHz, DMSO d₆), δ , ppm: 11.25, 28, 26, 38.56, 60.29, 13.32, 113.42, 129.64, 144.66.

* Corresponding author. E-mail: zalov1966@mail.ru