

Oily substance. IR spectrum, ν , cm^{-1} : 1156, 1344 (SO_2 , ring); 1136, 1308 (SO_2); 3300–3600 (OH). ^1H NMR spectrum, δ , ppm: 2.3 (2H, CH_2Cl , AB system, $^2J = 23.2$, $^3J = 5.15$ Hz), 3.4–3.8 m (8H, CH_2 , ring), 4.4–4.6 br.s (1H, OH), 4.7 q (1H, CHOH, $^3J = 5.15$ Hz), 5.2 m (8H, CH_2 , ring). Found, %: Cl 11.02; S 29.66. $\text{C}_7\text{H}_{13}\text{ClNO}_5\text{S}_3$. Calculated, %: Cl 11.48; S 31.15.

S-(3-Chloro-2-hydroxypropyl) 4-acetylamino-benzenethiosulfonate (IIc). Yield 84%, mp 210°C . IR spectrum, ν , cm^{-1} : 1112, 1306 (SO_2); 1562, 1584, 1598 (Ar); 1628 (NH); 1678 (C=O); 3300–3600 (OH). ^1H NMR spectrum, δ , ppm: 2.0 s (3H, COCH_3), 2.8 (2H, CH_2Cl , AB system, $^2J = 21.3$, $^3J = 5.5$ Hz), 3.6 (2H, SCH_2 , AB system, $^2J = 21$, $^3J = 5.5$ Hz), 4.4 br.s (1H, OH), 4.7 q (1H, CH, $^3J = 5.5$ Hz), 7.4 d (2H, H_{arom} , $^3J = 9.3$ Hz), 8.1 d (2H, H_{arom} , $^3J = 9.3$ Hz), 10.1 s (1H, NH). Found, %: Cl 10.52; N 4.28; S 20.04. $\text{C}_{11}\text{H}_{14}\text{ClNO}_4\text{S}_2$. Calculated, %: Cl 10.95; N 4.32; S 19.80.

S-(3-Chloro-2-hydroxypropyl) 4-toluenethiosulfonate (IIId). Yield 72%, mp $49\text{--}50^\circ\text{C}$. IR spectrum, ν , cm^{-1} : 1142, 1324 (SO_2); 1580, 1590, 1594 (Ar); 3200–3600 (OH). ^1H NMR spectrum, δ , ppm: 1.7 s

(3H, CH_3), 2.8 (2H, CH_2Cl , AB system, $^2J = 23.2$, $^3J = 5.3$ Hz), 3.6 (2H, CH_2S , AB system, $^2J = 23$, $^3J = 5.3$ Hz), 4.1–4.3 br.s (1H, OH), 4.5 q (1H, CHOH, $^3J = 5.3$ Hz), 7.3 d (2H, H_{arom} , $^3J = 8.3$ Hz), 8.0 d (2H, H_{arom} , $^3J = 8.3$ Hz). Found, %: Cl 12.18; S 22.58. $\text{C}_{10}\text{H}_{13}\text{ClO}_3\text{S}_2$. Calculated, %: Cl 12.58; S 22.84.

S-(3-Chloro-2-hydroxypropyl) benzenethiosulfonate (IIe). Yield 75%, oily substance. IR spectrum, ν , cm^{-1} : 1146, 1306 (SO_2); 1586, 1594, 1606 (Ar); 3200–3600 (OH). ^1H NMR spectrum, δ , ppm: 2.7 (2H, CH_2Cl , AB system, $^2J = 25$, $^3J = 5.5$ Hz), 3.6 (2H, SCH_2 , AB system, $^2J = 25$, $^3J = 5.5$ Hz), 4.1–4.3 br.s (1H, OH), 4.7 q (1H, CH, $^3J = 5.5$ Hz), 7.4–7.8 m (5H, H_{arom}). Found, %: Cl 13.18; S 23.86. $\text{C}_9\text{H}_{11}\text{ClO}_3\text{S}_2$. Calculated, %: Cl 13.29; S 24.04.

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