



TABLE-1  
CHARACTERISATION DATA AND ANTIBACTERIAL ACTIVITY OF QUINOXALINE  
DERIVATIVES

Compd.	R <sub>1</sub>	R <sub>2</sub>	m.f.	m.p. (°C)	Diameter of zone of inhibition (mm)	
					50 µg/mL	100 µg/mL
I <sub>a</sub>	H	H	C <sub>14</sub> H <sub>9</sub> N <sub>3</sub>	298	8.00	9.75
I <sub>b</sub>	H	NO <sub>2</sub>	C <sub>14</sub> H <sub>8</sub> N <sub>4</sub> O <sub>2</sub>	308	9.00	9.75
I <sub>c</sub>	Br	H	C <sub>14</sub> H <sub>8</sub> N <sub>3</sub> Br	318	8.50	9.50
I <sub>d</sub>	Br	NO <sub>2</sub>	C <sub>14</sub> H <sub>7</sub> N <sub>3</sub> O <sub>2</sub> Br	312	8.75	9.75
I <sub>e</sub>	NO <sub>2</sub>	H	C <sub>14</sub> H <sub>8</sub> N <sub>4</sub> O <sub>2</sub>	322	8.75	9.75
I <sub>f</sub>	NO <sub>2</sub>	NO <sub>2</sub>	C <sub>14</sub> H <sub>7</sub> N <sub>5</sub> O <sub>4</sub>	320	9.00	9.50

Test organism: *S. aureus*, Solvent: DMF, Standard amikacin: 30 µg/mL (zone of inhibition = 20 mm).

**Synthesis of 6-nitro isatin:** To isatin, a mixture of nitric acid and sulphuric acid (3 : 1) was added with continuous stirring until solids separate out. The product was filtered out and recrystallised with a mixture of chloroform and ethanol, 60%, m.p. 220°C.

**Characterisation of 2',3'[b]-indolyl-1,4-quinoxaline (1a):** IR (cm<sup>-1</sup>): 1615 ν(C=C), 1410 ν(C=N); <sup>1</sup>H-NMR (δ): 7.55 (4H, m, Ar—H), 8.13 (4H, m, Ar—H), 10.5 (1H, s, NH); MS: 219 (M<sup>+</sup>), 217 (100%), 191, 164, 129, 91, 75.

**Characterisation of 2',3'[b]-6-nitroindolyl-1,4-quinoxaline (1b):** IR (cm<sup>-1</sup>) 1619 ν(C=C), 1559 ν(NO<sub>2</sub>), 1410 ν(C=N); <sup>1</sup>H-NMR (δ): 7.50 (2H, m, Ar—H), 7.7 (2H, m, Ar—H), 7.9 (1H, m, Ar—H), 8.13 (2H, m, Ar—H), 10.0 (1H, s, NH); MS: 264 (M<sup>+</sup>), 263 (100%), 236, 209.

**Antibacterial activity:** The final compounds were evaluated for antibacterial activity by cup-plate method at a concentration of 50 and 100 µg/mL against the test organism, *Staphylococcus aureus*. The zone of inhibition was compared with standard amikacin (30 µg/mL). The results so obtained are recorded in Table-1.

## REFERENCES

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