**Novel 2-mercaptobenzimidazole derivatives: synthesis and evaluation of its antibacterial and antioxidant activities**

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**Schemes, tables and Figures**



**Scheme 1**

|  |  |  |
| --- | --- | --- |
| Compound | R | Yield % |
| 3a | -CH2(CH2)6CH3 | 88 |
| 3b | -CH2(CH2)7CH3 | 91 |
| 3c | -CH2(CH2)8CH3 | 93 |
| 3d | -CH2(CH2)10CH3 | 93 |

**Table 1**



**Scheme 2**

|  |  |  |
| --- | --- | --- |
| Compound | R | Yield % |
| 4a | -CH2(CH2)6CH3  -CH2(CH2)7CH3 | 88 |
| 4b | 80 |
| 4c | -CH2(CH2)8CH3 | 83 |
| 4d | -CH2(CH2)10CH3 | 78 |

**Table 2**

**Fig. 1**

**Fig. 2**

**Fig. 3**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entry | *E. coli* | | *S. aureus* | |
| MIC (mg/mL) | MBC (mg/mL) | MIC (mg/mL) | MBC (mg/mL) |
| 3b | 13 | ˃15 | 11.5 | ˃15 |
| 4b | 13 | ˃15 | 6.5 | ˃15 |

**Table 3**

**Fig. 4**

**Fig. 5**

**Fig. 6**

**Fig. 7**

**Table 4**

|  |  |
| --- | --- |
| **Compound** | **IC50 (mg/mL)** |
| **3a** | 37,5 |
| **3b** | 39,06 |
| **3c** | 19,53 |
| **3d** | 43,75 |
| **4a** | 29,68 |
| **4b** | 34,37 |
| **4c** | 62,5 |
| **4d** | 71,87 |