Synthesis, Spectroscopic Characterization, Thermal Analysis and *in vitro* Bioactivity Studies of the *N*-(Cinnamylidene) Tryptophan Schiff Base

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**Supplementary data:**

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Figure S1. Synthetic route of the CinTrp Schiff base



Figure S2. 1HNMR spectra of Tryptophan (Trp) in DMSO-d6



Figure S3. 13CNMR spectra of Tryptophan (Trp) in DMSO-d6



Figure S4. 1HNMR spectra of cinnamaldehyde (Cin) in DMSO-d6.



Figure S5. 13CNMR spectra of cinnamaldehyde (Cin) in DMSO-d6.



Figure S6. DSC thermograms of Trp and CinTrp



Figure S 7. Selected plate images of antibacterial activity tests against (A) *S. aureus*, (B) *E. coli*, (C) *P. aeruginosa*, and (D) *K. pneumonia*. Abbreviations: A, Ampicillin; C, ceftriaxone; D, DMSO; S, CinTrp

Table S1. Thermal decomposition of the Cin, Trp, and CinTrp compounds

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Compound** | **TGA (°C)** | **DTG (°C)** | **Mass loss wt% exp.** | **Mass loss wt% calc.** | **Assignment** | **Residue wt%** |
| Cin | 120–251 | 251 | 100 | 100 | Molecule evaporation | 0.0 |
| Trp | 273–328 | 315 | 16.9 | 16.2 | Loss of OH and NH2 | 83.1 |
| 329–505 | 410 | 61.5 | 65.1 | Backbone decomposition | 21.6 |
| 506–800 | 620 | 2.9 | 18.7 (3C = 17.7) |
| CinTrp | 25–233 | 89, 161 | 4.3 | - | Moisture | 95.7 |
| 234–527 | 369, 398 | 62.7 | 63.2 | Main decomposition, leaving 5C, and KOH | 33.0 |
| 528–800 | 694 | 6.0 | 6.7 | 2C | 27 (3C + KOH = 25.8) |

Cin, cinnamaldehyde; Trp, tryptophan; CinTrp, N-(cinnamylidene)tryptophan; TGA, thermogravimetric analysis; DTG, derivative-TGA; exp., experimental mass loss; calc., calculated mass loss.