

## Supplementary information

# Lignin-based biocomposite hydrogel for antimicrobial and wound healing applications

Jaskiran Preet,<sup>1,#</sup> Khushboo Pathania,<sup>1,#</sup> Jasdeep Kaur,<sup>2</sup> Rachna Singh,<sup>2</sup> Deepak B. Salunke,<sup>3,4</sup>

Sandip V. Pawar<sup>1\*</sup>

<sup>1</sup>University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh 160 014, India

<sup>2</sup>Department of Microbial Biotechnology, Panjab University, Chandigarh 160 014, India

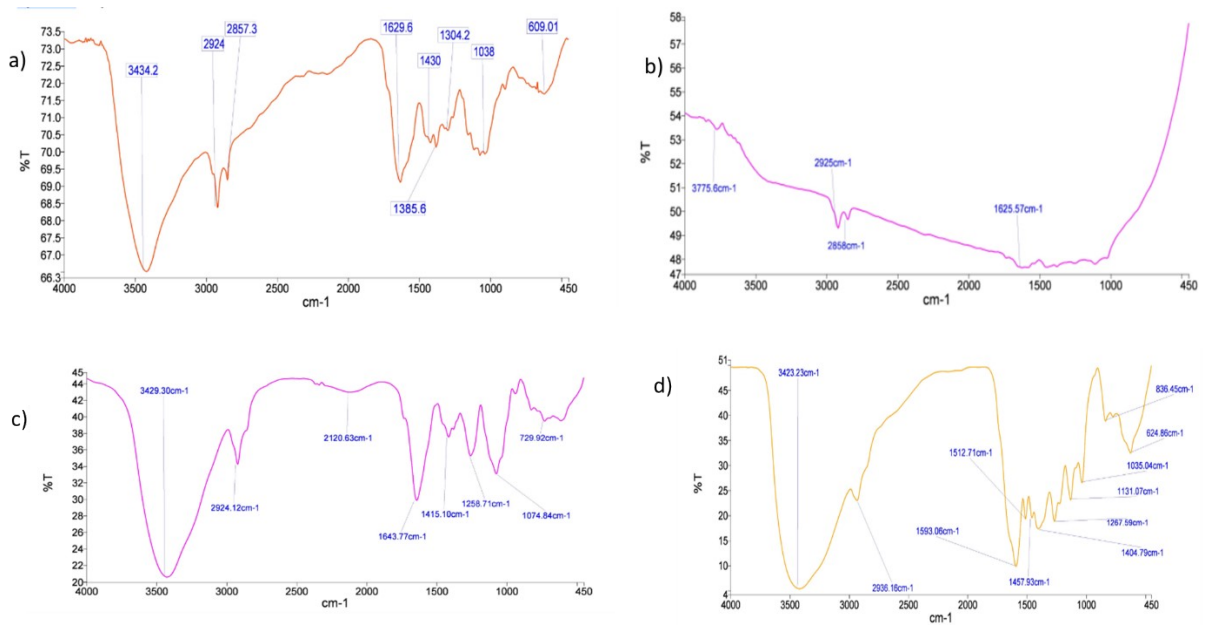
<sup>3</sup>Department of Chemistry and Centre for Advanced Studies, Panjab University, Chandigarh 160  
014, India

<sup>4</sup>National Interdisciplinary Centre of Vaccines, Immunotherapeutics and Antimicrobials, Panjab  
University, Chandigarh, 160 014, India

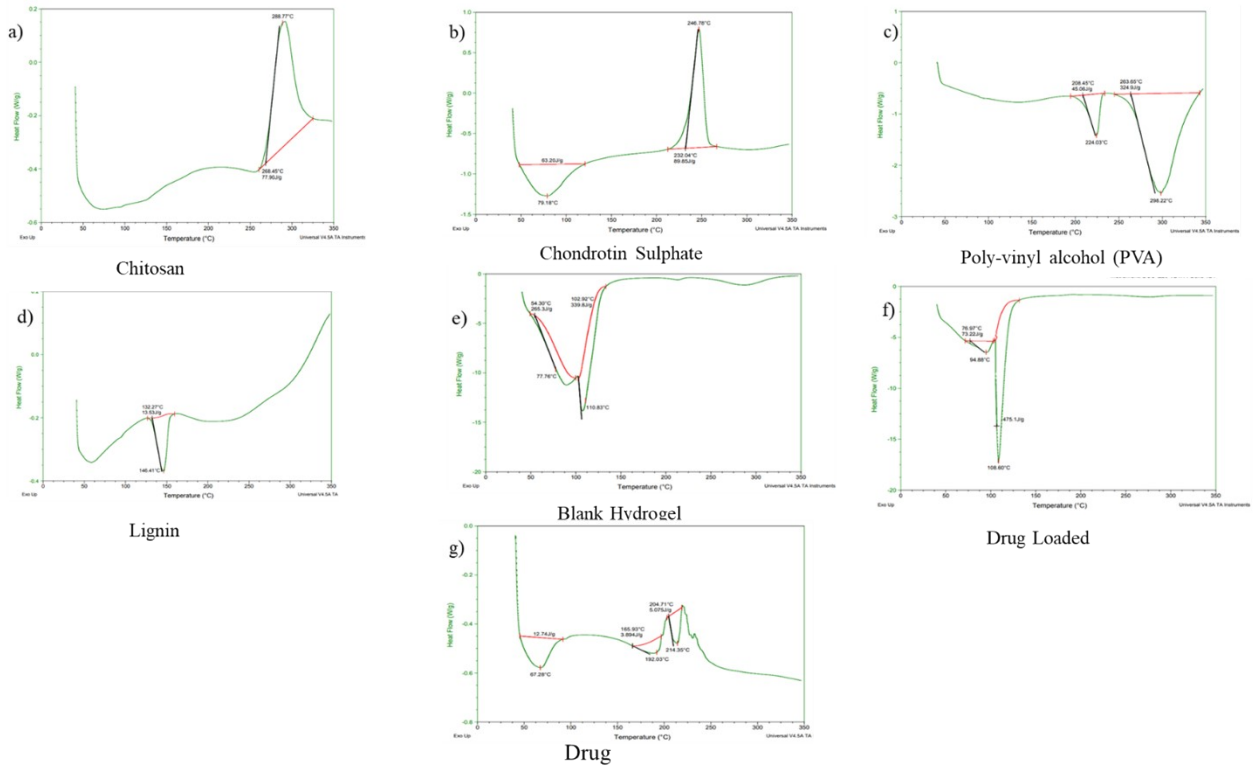
#Authors contributed equally

Corresponding author: Dr. Sandip V. Pawar,

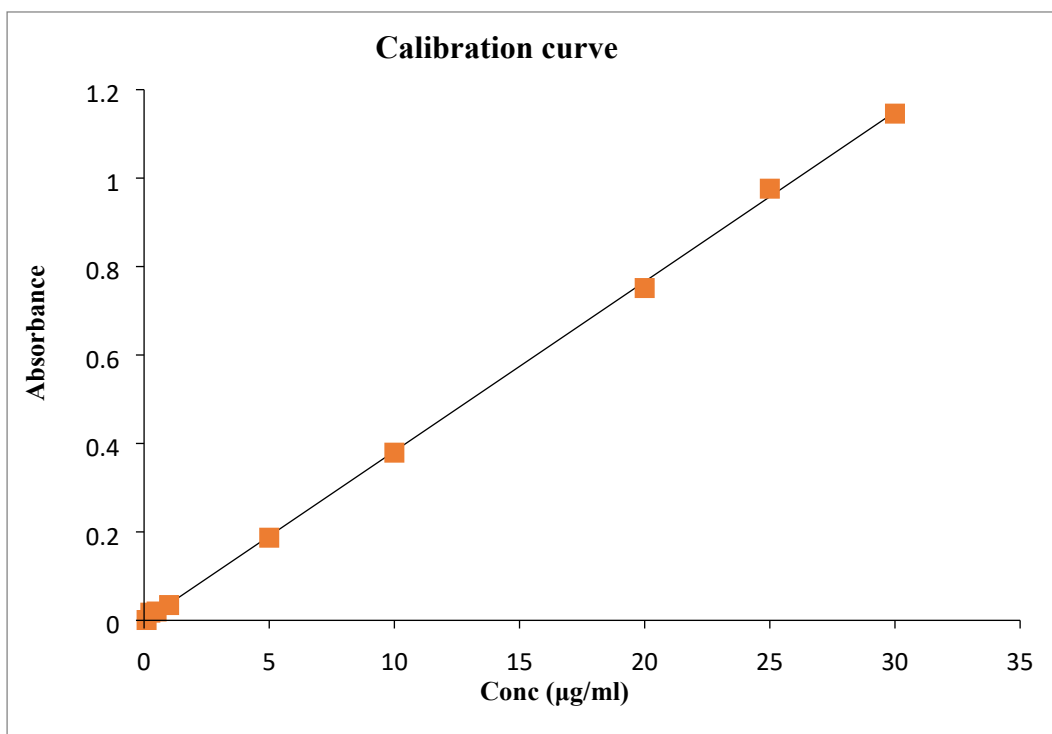
Email: [pawars@pu.ac.in](mailto:pawars@pu.ac.in)



**Fig. 1** FTIR graph of a) Chitosan b) PVA c) CS (Chondroitin Sulphate) d) Lignin



**Fig. 2** DSC graphs



**Fig.3** Calibration curve of oxytetracycline

**Table 1.** Observed pH value of blank and drug-loaded hydrogel.

S. No	Formulation	pH of water used	pH after 24 hours
1	Blank Hydrogel	7.00	5.23
2	Drug-loaded Hydrogel (100 mg)		4.74
3	Drug-loaded Hydrogel (200 mg)		4.53
4	Drug-loaded Hydrogel (300 mg)		4.35
5	Drug solution (1 mg/mL)		3.97