

Electrospun scaffolds loaded with *Stryphnodendron adstringens* extract and *Melaleuca alternifolia* oil

Lailla Daiana Soltau Missio Pinheiro¹ , Vinícius Rodrigues Oviedo^{1*} , Daniela Tiepo Gomes² ,
Lisiara Ouriques Carvalho³ , Liana da Silva Fernandes¹ , Michele Rorato Sagrillo¹ ,
Daniel Assumpção Bertuol⁴  and Luiz Fernando Rodrigues Jr.³ 

¹Programa de Pós-graduação em Nanociências – PPGNano, Universidade Franciscana – UFN, Santa Maria, RS, Brasil

²Departamento de Engenharia Biomédica, Universidade Franciscana – UFN, Santa Maria, RS, Brasil

³Programa de Pós-graduação em Saúde Materno Infantil, Universidade Franciscana – UFN, Santa Maria, RS, Brasil

⁴Laboratório de Processos Ambientais – LAPAM, Universidade Federal de Santa Maria – UFSM, Santa Maria, RS, Brasil

*vinicius.oviedo@ufn.edu.br

How to cite: Pinheiro, L. D. S. M., Oviedo, V. R., Gomes, D. T., Carvalho, L. O., Fernandes, L. S., Sagrillo, M. R., Bertuol, D. A., & Rodrigues Jr., L. F. (2026). Electrospun scaffolds loaded with *Stryphnodendron adstringens* extract and *Melaleuca alternifolia* oil. *Polímeros: Ciência e Tecnologia*, 36(3), e20260031. <https://doi.org/10.1590/0104-1428.20250123>

SUPPLEMENTARY MATERIAL

Table S1. Shapiro-Wilk's normality test results for mechanical assay.

Sample	Statistic	p-value
PCL	0.923	0.463
20 _B /80 _M	0.750	< 0.0001
80 _B /20 _M	0.750	< 0.0001

Table S3. Shapiro-Wilk's normality test results for antibiofilm assay against *Staphylococcus aureus*.

Sample	Statistic	p-value
Control	0.954	0.328
PCL	0.954	0.328
20 _B /80 _M	0.959	0.639
80 _B /20 _M	0.948	0.328

Table S2. Shapiro-Wilk's normality test results for MTT assay.

Sample	Statistic	p-value
Control	0.855	0.253
PCL	0.984	0.981
20 _B /80 _M	0.949	0.679
80 _B /20 _M	0.866	0.111

Table S4. Shapiro-Wilk's normality test results for antibiofilm assay against *Pseudomonas aeruginosa*.

Sample	Statistic	p-value
Control	0.833	< 0.001
PCL	0.905	0.028
20 _B /80 _M	0.762	< 0.0001
80 _B /20 _M	0.721	< 0.0001

Table S5. Kruskal-Wallis' test results for antibiofilm assay against *P. aeruginosa*.

Bacteria	Median OD	Statistic	p-value
Control	0.140	0.321	0.965
PCL	0.133		
20 _B /80 _M	0.135		
80 _B /20 _M	0.140		

Table S6. Kruskal-Wallis' test results for antibiofilm assay against *S. aureus*.

Bacteria	Median OD	Statistic	p-value
Control	0.228	26.224	<0.0001
PCL	0.254		
20 _B /80 _M	0.220		
80 _B /20 _M	0.152		

Table S7. Dunn's *post-hoc* test results for antibiofilm assay against *S. aureus*.

Comparison	Z	p-value
Control vs PCL	-0.438	0.661
Control vs 20 _B /80 _M	-0.454	0.780
Control vs 80 _B /20 _M	-4.150	< 0.0001

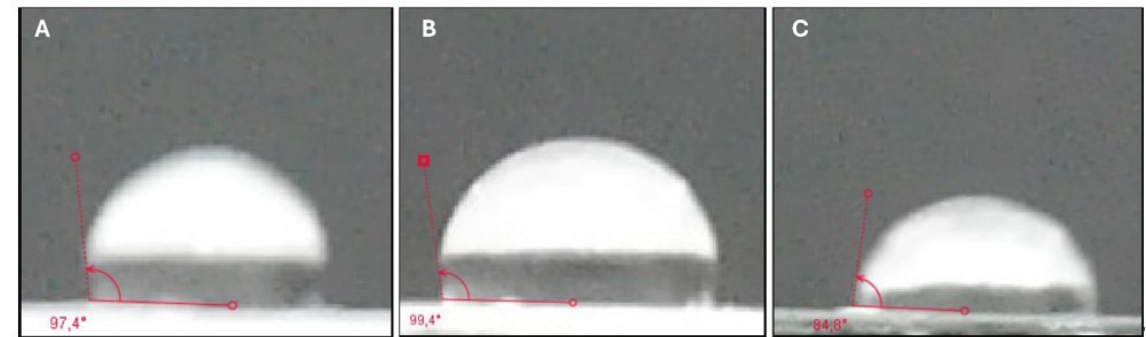


Figure S1. Contact angle measurements for PCL (A), 20_B/80_M (B), and 80_B/20_M (C).