

Supplementary material

Photoprotective Potential of Mycosporine-like Amino Acids in red algae (Rhodophyta) from San Andrés and Providencia islands, Colombian Caribbean

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Table SM1. Algal samples collected on the islands of San Andrés and Providencia. Voucher specimens have been deposited in the Herbarium of Pontificia Universidad Javeriana (HPUJ) and in the Jiwukori Herbarium (JIW) of the Universidad Nacional de Colombia, Bogotá.

Order	Taxonomic identity	Collection date (month /year)	Collection site	Voucher number	Littoral zone
Ceramiales	<i>Spyridia filamentosa</i> (Wulfen) Harvey 1833	09/2021	Providencia Island	JIW0005022	Infralittoral
Gracilariales	<i>Gracilaria</i> sp. Greville, 1830	09/2021	Providencia Island	No voucher available	Intertidal
Ceramiales	<i>Acanthophora spicifera</i> (Vahl) Børgesen, 1910	10/2023	San Andres Island (Chamei beach)	HPUJ30848	Intertidal
	<i>Acanthophora spicifera</i> (Vahl) Børgesen, 1910	10/2023	San Andres Island (Chamei beach)	HPUJ30851	Intertidal
	<i>Laurencia obtusa</i> (Hudson) J.V.Lamouroux, 1813	10/2023	San Andres Island (San Luis)	No voucher; ID verified by comparison with JIW00003417	Intertidal
	<i>Gracilariopsis</i> cf. <i>tenuifrons</i> (C.J.Bird & E.C.Oliveira) Fredericq & Hommersand, 1989	10/2023	San Andres Island (San Luis)	No voucher available	Intertidal
	<i>Ceramium</i> cf. <i>nitens</i> (C.Agardh) J.Agardh, 1851	10/2023	San Andres Island (San Luis)	HPUJ30849	Infralittoral
Ceramiales	<i>Dasya</i> sp. C.Agardh, 1824	10/2023	San Andres Island (San Luis)	No voucher available	Infralittoral
	<i>Ceramium</i> sp. 1 Gaertner ex Stackhouse, 1797	10/2023	San Andres Island (La Rocosa cove)	HPUJ30845	Infralittoral
	<i>Ceramium</i> sp. 2 Gaertner ex Stackhouse, 1797	10/2023	San Andres Island (La Rocosa cove)	No voucher available	Infralittoral

Table SM2. MAAs identified in extracts of red algae from San Andrés and Providencia Islands

MAAs	rt (min)	λ maximum (nm)	Chemical formula (Exact mass calculated)	[M + H] ⁺ (m/z) (calculated)	Error (ppm)	Measured fragments (m/z)	Samples ID	Ref.
Shinorine (1)	1.6	334	C ₁₃ H ₂₀ N ₂ O ₈ (332.1220)	333.1269	-6.9	138, 230, 255	P2, S1, S2, S3, S4, S5, S6, S7, S8	(Cardozo 2008; Gerald et al. 2021)
Palythine (2)	1.9	320	C ₁₀ H ₁₆ N ₂ O ₅ (244.1059)	245.1130	-3.2	138, 198, 208, 236	P2, S1, S2, S3, S4, S8	(Cardozo 2008; Gerald et al. 2021)
Asterine-330 (3)	2.2	330	C ₁₂ H ₂₀ N ₂ O ₆ (288.1321)	289.1386	-4.8	136, 198, 230, 245	S3, S4	(Cardozo 2008; Gerald et al. 2021)
Porphyra-334 (4)	2.8	334	C ₁₄ H ₂₂ N ₂ O ₈ (346.1376)	347.1444	-2.9	137, 151, 168, 244, 288, 303	P2, S1, S2, S3, S4, S5, S7, S8	(Cardozo 2008; Gerald et al. 2021)
Palythine- threonine (5)	3.6	320	C ₁₂ H ₂₀ N ₂ O ₆ (288.1321)	289.1399	1.7	170, 231, 245, 274	S2	(Carignan et al. (2009)
Palythanol (6)	3.7	330	C ₁₃ H ₂₂ N ₂ O ₆ (302.1478)	303.1549	-2.3	114, 188, 199, 235, 243, 279,	P2, S3	(Cardozo 2008; Gerald et al. 2021)

rt: retention time; ID Samples: Sample identification from Table 1.

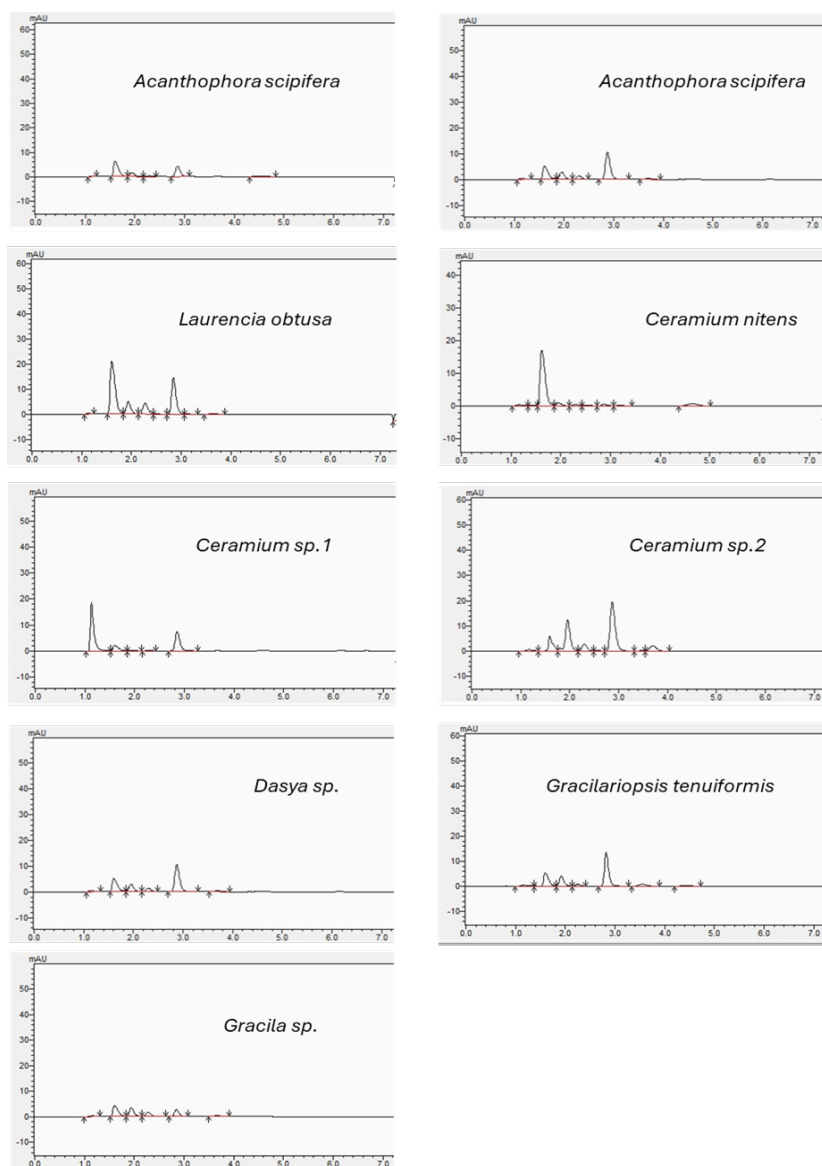


Figure SM1. UHPLC-DAD chromatograms of red algae from San Andrés and Providencia islands.