

Production and new extraction method of polyketide red pigments produced by ascomycetous fungi from terrestrial and marine habitats

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Supplementary materials

Figure S1: Absorption spectrum and calibration curve (concentration vs. absorbance) of carmine standard solution in deionized water measured at λ_{\max} 276 nm (that has been found by first scanning the sample for λ_{\max})

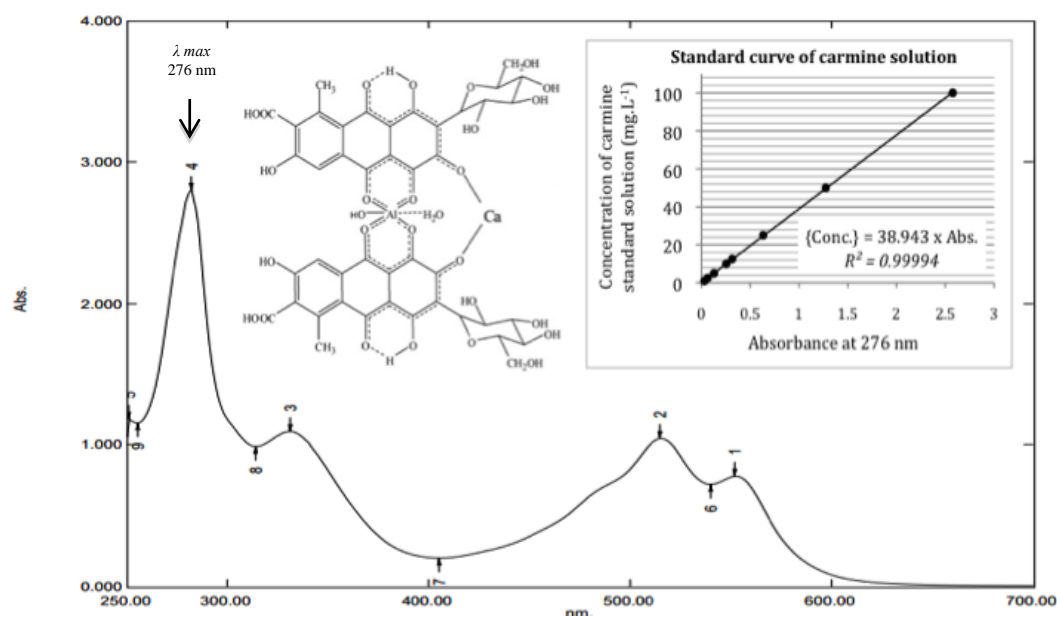
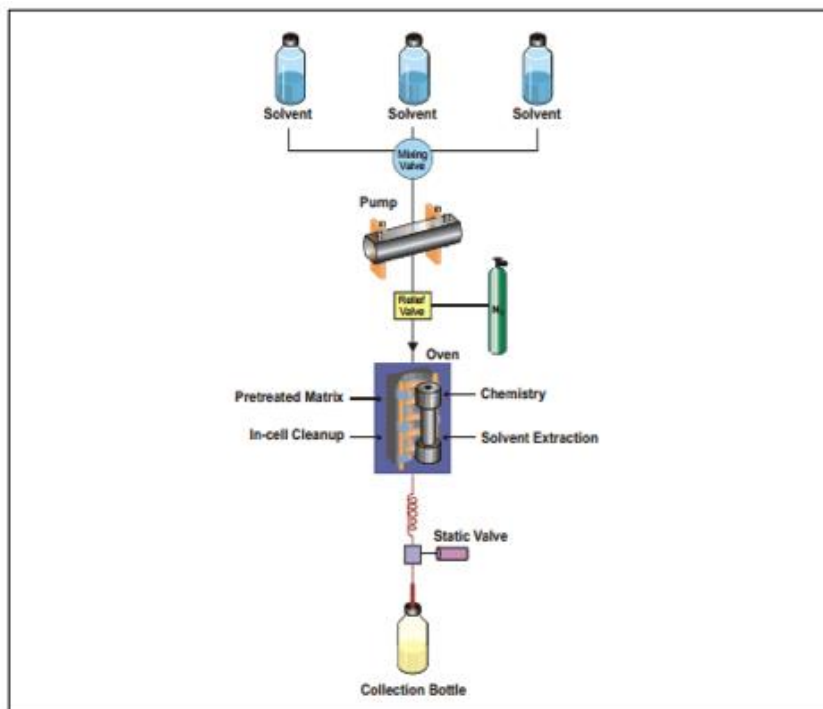


Figure S2: Schematic representation of the PLE (pressurized liquid extraction) protocol using a six-stage solvent extraction method with water, methanol and ethanol.



Six-stage solvent extraction	Polarity index*
Solvent n°1 - water	10.0
Solvent n°2 – 50% aqueous methanol	7.5
Solvent n°3 – 50% aqueous ethanol	7.0
Solvent n°4 - methanol	5.0
Solvent n°5 – methanol/ethanol (50:50, v/v)	4.5
Solvent n°6 - ethanol	4.0

Figure S3: Pictures and shades of the submerged cultures of the fungal strains after 7 days of fermentation.

Legends: PDB (Potato Dextrose Broth), YCD (Yeast Casamino Dextrose broth), DMD (Defined Minimal Dextrose broth), MH: strains isolated from Reunion Island marine habitats; TE: strains from terrestrial environments; For composition of the media, see section 'Materials & Methods'; *Strains collected from marine biotopes of La Reunion island's reef flat.

Strains	PDB medium		YCD medium		DMD medium		
	culture	shade	culture	shade	culture	shade	
LCP4464 (TE) ① <i>Penicillium purpurogenum rubisclerotium</i>		purple		purple		pink-red	
305_70 (MH) ② <i>Talaromyces sp</i>		purple		pink-red		dark-pink	
LCP531 (TE) ③ <i>Fusarium oxysporum</i>		red		pinkish		red	
305_55 (MH) ④ <i>Trichoderma atroviride</i>		orange-red		orange-red (only in light)		pale yellow	
LCP4890 (TE) <i>Penicillium purpurogenum</i>		pinkish		pinkish		white-pinkish	
LCP2226 (TE) <i>Dreschlera cynodontis</i>		brown		brown		black	
LCP3684 (TE) <i>Penicillium erythromellis</i>		yellow		yellow		creamy white	
T22 (TE) <i>Trichoderma harzianum</i>					yellow		
LCP4158 (TE) <i>Penicillium oxalicum</i>					orange		
LCP5511 (TE) <i>Aspergillus repens</i>							
PA9 (MH) <i>Talaromyces verruculosus</i>			yellow				yellow
LCP3404 (TE) <i>Trichoderma harzianum</i>					pale yellow		
LCP3391 (TE) <i>Paecilomyces farinosus</i>				yellow		Pale green	
B34 (MH) <i>Aspergillus sydowii</i> (B)				yellow		white-pinkish	
LCP3531 (TE) <i>Trichoderma polysporum</i>		dark green					

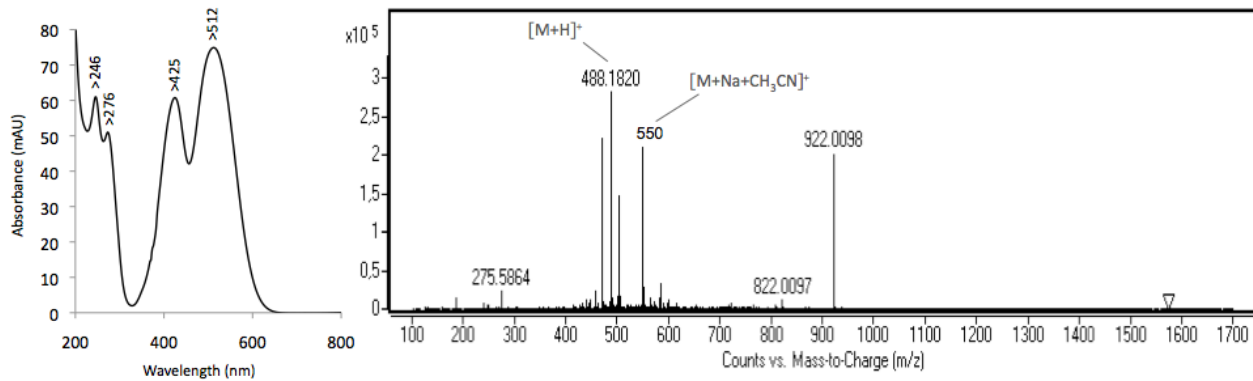
Figure S4: Color of the liquid samples obtained after 6-stage pressurized liquid solvent extraction (PLE) of pigments from mycelium of *Penicillium purpurogenum rubisclerotium* (LCP4464) and marine isolate of *Talaromyces sp* (305_70) cultivated in submerged culture after 7 days of fermentation.

Legends: PDB (Potato Dextrose Broth), DMD (Defined Minimal Dextrose broth), YCD (Yeast Casamino Dextrose broth)

Strain identification	Pigments extracted from mycelium cultivated in PDB						Pigments extracted from mycelium cultivated in DMD						Pigments extracted from mycelium cultivated in YCD					
LCP4464																		
305_70																		
Solvent Polarity index (p.i.)	10	7.5	7	5	4.5	4	10	7.5	7	5	4.5	4	10	7.5	7	5	4.5	4

Figure S5: UV-visible absorption and mass spectra of the not tentatively identified compound **2** and compound **5** from intracellular extracts of *Talaromyces spp.*

Compound no 02 : Not tentatively identified in this study



Compound no 05 : Not tentatively identified in this study

