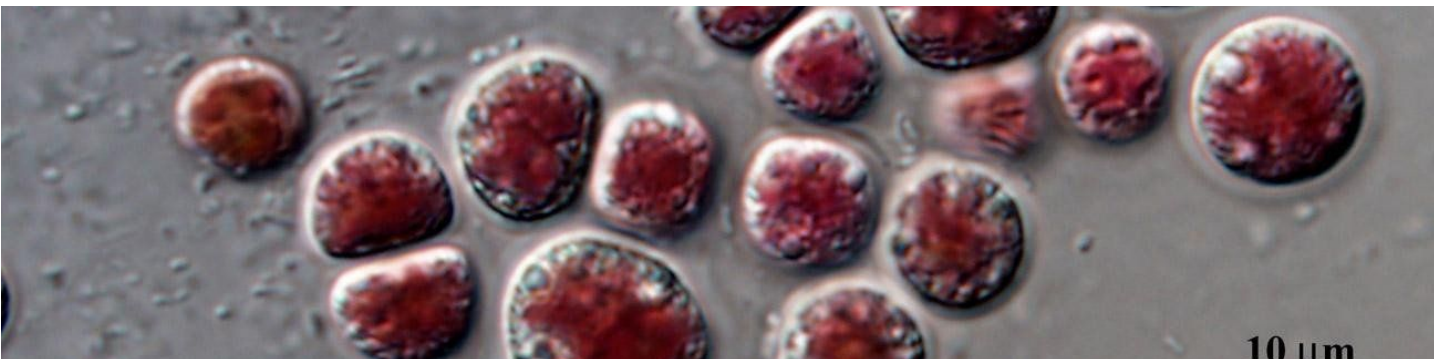


## PURIFICATION OF B-PHYCOERYTHRIN PRODUCED BY *PORPHYRIDIUM CRUENTUM* USING TWO-AQUEOUS-PHASE SYSTEMS

Platform for the recovery of biomolecules from microalgae.



### BACKGROUND

The use of artificial colorants in the industry has decreased considerably as a result of adverse health effects that some colorants have presented. For this reason and because of consumer pressure, the use of colorants of natural origin has become popular. B-phycoerythrin is an intense red colored protein produced by the marine microalgae *Porphyridium cruentum*. This dye has applications in the food, cosmetic, and detergent industry as a natural colorant, but the methods to obtain use solvents and may be expensive.

### TECHNOLOGY

This is a novel process in which *Porphyridium cruentum* biomass undergoes a first stage of cellular disruption and subsequently stages of recovery and purification in order to achieve the purified B-phycoerythrin protein dye, using isoelectric precipitation and two-aqueous-phase systems. The steps of recovery and purification include isoelectric precipitation followed by a step of liquid/liquid extraction by means of two-aqueous-phase systems that use polyethylene glycol (PEG) and phosphate salts.

### KEY BENEFITS

- The obtained product has high purity (+90%) and molecular biology applications.
- The process saves time in the recovery and purification process.

### DEVELOPMENT STATUS

Technology Readiness Level: 3/9

### INTELLECTUAL PROPERTY

Patent Number: MX 293974 B

This technology is available for licensing. More opportunities on our website: <http://redottec.com>

