



“Reef Safe” Sunscreen

The **toxicity** and the **biodegradability** of a substance are the two main characteristics needed to be studied in order to confirm lack of impact of a substance or a product on the marine ecosystems. Adding to a toxicity tests, the ecotoxicity assays and the biodegradability parameter give more details regarding a product, such as a sunscreen, which has the potential to end up in the up environment,.

Crassostrea gigas): NF ISO 17244

- Echinoids (*Paracentrotus lividus*): from EPA 1008 Purple urchin
- Coral test (*Seriatopora hystrix*): Intern Method

Biodegradability Tests

There are a number of these to choose from and at least one should be considered ...

- **OECD 301** Readily biodegradability:
- **OECD 301A**: DOC Die-Away
- **OECD 301B**: CO2 Evoluton (Modified Sturm Test)
- **OECD 301D**: Closed Bo^le
- **OECD 301F**: Manometric Respirometry
- **OECD 302** Inherent Biodegradability:
- **OECD 302B**: Zahn-Wellens/ EVPA Test



1. PARACENTROTUS LIVIDUS



SERIATOPORA HYSTRIX

Ecotoxicity Tests in Marine Environment

- Marine Algae (*Phaeodactylum tricornutum*): NF EN ISO 10253
- Crusteceans copepods (*Acar3a tonsa*): FD ISO 14669
- Crusteceans (*Artemia salina*): from FD ISO 14669
- Amphipods (*Corophium arenarium*) : NF ISO 16712
- Bacteria (*Vibrio fischeri*): NF EN ISO 11348-3
- Bivalves (Oysters :