PROCEDURES FOR THE APPROVAL OF OIL SPILL TREATMENT PRODUCTS IN THE UK

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Introduction

Oil spills in the marine environment may effect valuable resources (ecological, commercial fisheries, recreational amenities etc.).

In the event of a spillage it is important that response authorities have a choice of suitable treatment options to ensure that these impacts are minimised.

UK regulatory authorities acknowledge that the correct use of chemical, absorptive or biological media can help to remediate the detrimental effects and allow for faster post-spill recovery of the environment.

To ensure that products approved for use in UK waters are efficient and environmentally acceptable, all formulations must obtain official approval.

The oil spill treatment product approval scheme in the UK is administered by Defra (Department for Environment, Food and Rural Affairs).

The scheme assesses oil/product toxicology and how this is subject to change as a result of administered treatment.

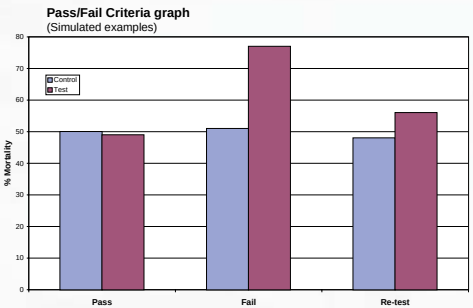
CEFAS is responsible for the development and continued conduct of these assessments (Kirby *et al*., 1996).

Types of Products covered under the Approval Scheme

- Chemical Dispersants
  - Type 1 (hydrocarbon solvent based)
  - Type 2 (water soluble concentrate)
  - Type 3 (concentrate used neat)
- Sorbents
- Bioremediation Agents
  - Bacterial
  - Nutrients
- Miscellaneous

Approval requirements

- Completion of application form
  - Exact chemical composition
  - Recommended product to oil ratio
- Efficacy testing
  - Dispersants (to requirements of LR448) and bioremediation
- Toxicity Testing
  - Sea test
  - Rocky Shore test
  - Agitation test (bioremediation products only)

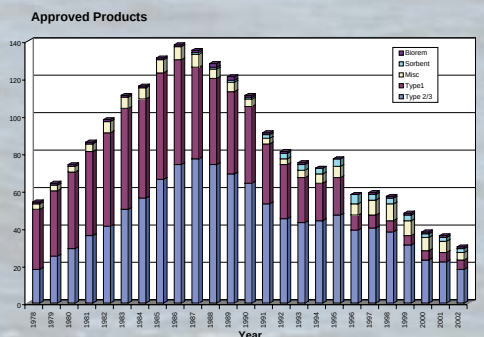


Sea test

- Species used – brown shrimp *Crangon crangon*
- 20 Crangon per tank
- 5 tanks oil alone (control)
- 5 tanks oil plus oil-treatment product
- Agitate 100 minutes
- 24 hour recovery period

Rocky Shore test

- Species used – limpet *Patella vulgata*
- 20 limpets per plate
- 5 plates sprayed with oil (control)
- Oil-treatment product applied to 5 plates
- 6 hours exposure
- 72 hours recovery period (with tidal simulation)



Pass / Fail Criteria

- Based on comparison of mean mortality between oil-control and treatment tanks
- Products pass if the mean mortality is not significantly higher in treatments than in oil-controls

Products MUST NOT increase the toxicity of the oil (Sea Test) or be more toxic than the oil alone (Rocky Shore test)

The Scheme aims to ensure:

- Approved products will work when used to treat oil
- Approved products are of acceptable risk to the marine environment
- Approved products are labelled and stored correctly
- Approval holders are held responsible for the quality of their product

The Future

As long as the production and transport of oil generates the potential for environmental damage, the development and usage of improved oil-spill treatment products remains a priority.

CEFAS is committed to providing the regulators (Defra) with informed advice regarding the appropriate use of oil-spill treatment products, and to assist the industry in their attempts to develop more efficient, specialised and, above all, environmentally acceptable options.

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Reference

M. F. Kirby, P. Matthiessen and R. J. Rycroft (1996) Procedures for the Approval of oil spill treatment products. Fisheries Research Technical Report No. 102.

Aknowledgements

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