



# **OIL SPILL** **CONTINGENCY PLANNING**

## Specialised Services Support Decisions

SGS specialise in non-routine laboratory analysis. Independence and commitment to your project's **data quality objectives** enables us to suggest innovative and cost effective solutions. If it is high-tech, challenging, difficult or out of the ordinary - call us now.

### OIL SPILL DISPERSANT TRIALS

Laboratory studies on the performance of chemical dispersants can be undertaken under a range of environmental conditions using the internationally recognised **Mackay Test Procedure** as well as the **Swirling Flask Test**.

The tests determine how well chemical dispersants work on various types of oils and emulsions under given wind and wave conditions as well as water salinities and temperatures.

The method can also determine the relative performance of different chemical dispersants under the same conditions.

The results of the tests form the basis for deciding what types and amounts of dispersants are effective for treating oil spills. This information is especially useful in spill contingency planning as well as the actual treatment of oil spills.

### OIL SPILL WEATHERING STUDIES

In this way, the environmental risk posed by the crude oils and the various spill management and cleanup options available are better defined.

The laboratory studies, combined with a risk assessment, provide a basis for the accurate allocation of priorities and definition of environmental risk, together with an improved, efficient, and justifiable spill response

## FREQUENTLY ASKED QUESTIONS

### HOW MUCH OIL DO I NEED TO SUPPLY?

The amount of oil needed will depend on scope of study. Contact us to discuss the amount of oil needed for your study.

### WHAT CONTAINER SHOULD I USE?

Glass jars or metal tins are both fine. Fill the container so there is a small amount of headspace and ensure the container is securely packed to prevent breakages during shipping.

### HOW LONG WILL IT TAKE?

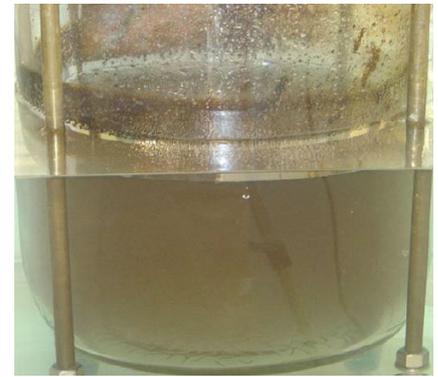
Results for dispersant trials are typically available 2 to 4 weeks after we receive the oil. Results of weathering trials are available after 4 to 6 weeks.

### WHAT KIND OF WEATHERING WILL IT BE?

It is recommended that the weathering trials and the dispersant trials are tested under two different sets of typical weather conditions. There can be a big difference in oil behaviour from summer to winter, or from wet season to dry season. For example, sea temperature and air temperature affect the viscosity and evaporation rate of the oil, while wind speed will change the amount of wave energy, and therefore the efficacy of the dispersant.

### WHAT WILL THE WEATHERING TRIAL RESULTS LOOK LIKE?

After a weathering trial, we will report the mass of oil that has been lost from the oil slick; so "40% loss" means



## CONTACTS:

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that 60% of the spilled oil remains on the water surface and 40% has either evaporated away, or (less likely) is dissolved in the water column.

### WHAT WILL THE DISPERSANT TRIAL RESULTS LOOK LIKE?

This trial will report dispersibility as the percentage of oil that is found in the water column after dispersant has been applied and the Mackay Chamber has agitated the water for ten minutes. A high figure indicates a dispersant that works well and would be suitable for use. These trials should also be conducted under two sets of weather conditions: a dispersant that works well in summer might not be as effective in cold water.