



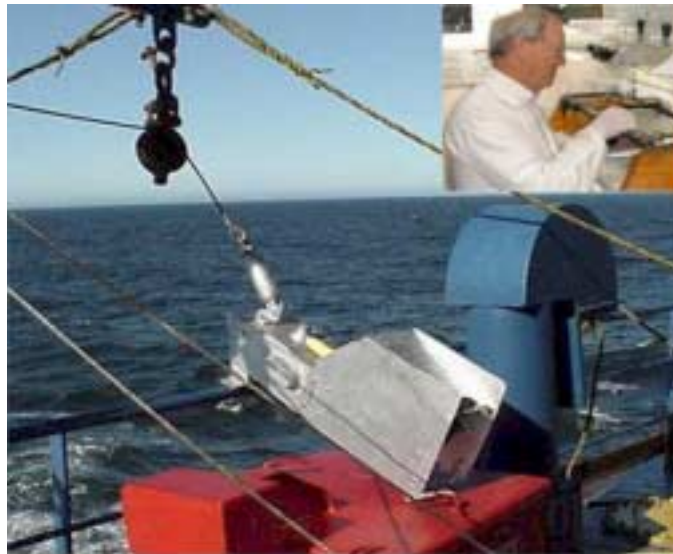
CONTINUOUS PLANKTON RECORDER (CPR)



A plankton collection and analysis system for use
on ships of opportunity

APPLICATIONS

- Fish Stock Analysis
- Marine Management
- Climate Change Studies
- Biomass Studies



*CPR being deployed.
Scientist analysing plankton samples at the SAHFOS laboratory*

FEATURES

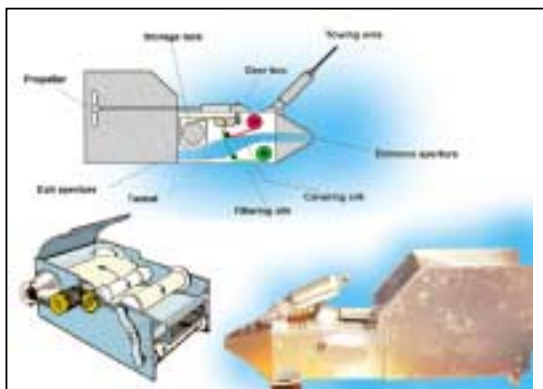
- Proven, Robust Tow System
- 500 nautical mile tow range
- Designed for use on Ships of Opportunity (SOOPS)
- Fully autonomous system

SYSTEM DESCRIPTION

The Continuous Plankton Recorder (CPR) Survey managed at the Sir Alister Hardy Foundation for Ocean Science (SAHFOS) is the largest multi-decadal plankton monitoring programme in the world. Data from this Survey, which commenced in 1931, has been a consistent and frequently referenced knowledge base that has fed into many major scientific studies, from fish stock analysis to Climate Change Studies.

The CPR has an extremely robust construction and its proven design allows deployment at speed (up to 25 knots) from ships of opportunity where it can be left unattended and recovered prior to entering port. The CPR is towed with a 10mm diameter wire rope at a depth of typically 7 metres. Data gathered with the CPR is compatible with the long time series survey conducted at the Sir Alister Hardy Foundation for Ocean Science (SAHFOS).

As the CPR is towed, water enters into a 1.27cm square aperture at the nose of the vehicle. The filtration tunnel increases in cross section to a 10.2 x 5cm filtering area, which reduces pressure to minimize damage to the captured plankton. Plankton are captured onto a continuously advancing silk gauze, which advances continuously via an external propeller, drive shaft and gear system. A second band of silk covers this, and the 'sandwiched' samples are advanced into a preserving tank containing formalin. A 10 mile sample will retain the organisms from approximately 3m³ of seawater irrespective of towing speed.



The silk mesh size is 270µm, which is optimal for the collection of such zooplankton as copepods, cladocera, pteropods and chaetognaths, but also retain large numbers of phytoplankton.

As part of the supply of the CPR system, training is provided in both deployment at sea and subsequent analysis within the laboratory. This is conducted at SAHFOS premises in Plymouth, UK.

SPECIFICATION

CPR Vehicle Overall Size:	105cm x 30.5cm x 46cm.
Weight in Air:	90 kg
Tow Speed:	up to 25 knots
Tow Range:	500 miles
Material:	Stainless Steel
Silk Length Capacity:	6 metres (equivalent to 500 nautical mile tow)



Chelsea Technologies Group Ltd

**Chelsea
Technologies
Group Ltd**

55 Central Avenue
West Molesey
Surrey KT8 2OZ
United Kingdom
Tel: +44 (0)20 8481 9000
Fax: +44 (0)20 8941 9319
sales@chelsea.co.uk
www.chelsea.co.uk



In view of our continual improvement programme, the designs and specifications of our products may vary from those described. 8/09