THE MOBILE CELL TECHNOLOGY LAB – TRUCK AND LABORATORY CONTAINER

The mobile cell technology lab

The mobile cell technology lab of the Fraunhofer Research Institution for Marine Biotechnology (EMB) is combined of a cross-country truck and a laboratory in a self-unloading 20-foot container. On 14 m² there is a fully equipped cell culture laboratory electrically powered by an internal standby generator set and solar panels or by an external power source.

Laboratory container and trailer

The laboratory has the dimensions of a 20-foot container and can be set down separately in any terrain through four outriggers. During sample processing the room temperature can be kept constant by air conditioning. Therefore the mobile laboratory can be used in different climate zones. The laboratory facility of the container allows the analysis and preservation of samples on site. Research data and pictures can be sent through worldwide communication devices via UMTS and satellite. Furthermore, the mobile cell culture laboratory has a twin-axle trailer which offers an extra capacity, e.g. for an additional expedition equipment.

Truck – facilities

- four wheel drive, cross-country
- cable winch (front/back)
- heatable fuel tank
- pre-heating and air conditioning
- rearview and side mirror
- worldwide navigation system
- heat protection windows and double glazing

- hands-free kit
- refrigerator
- 14 x 2,4 x 4,0 m (LxWxH)
- 220 KW (300 HP, 80 km/h)
Advantages

- Processing a wide range of biological issues
- Increased quality of the samples due to short time between sampling and processing
- Laboratory container is self-unloading and self-leveling
- Independent operation of the laboratory container
- Laboratory unit is flexible in time and place

Laboratory container – facilities

Anteroom:
- Hand wash basin
- Disposable towels dispenser
- Soap and sanitizer dispenser
- Airlock

Laboratory:
- Internal dimension of the laboratory: 5,910 x 2,345 x 2,385 m (LxWxH)
- Hydraulic leveling system for adjusting to each position
- Air conditioning / pre-heating
- Awning
- Safety workbench (category 2)
- Liquid nitrogen tank
- Water quench
- Autoclave
- Incubator
- Refrigerator
- Centrifuge
- Mini-spin centrifuge
- Two microscopes, connected to computer and flatscreen monitor
- Shaker
- Stainless steel workbench
- Internet / telephone via satellite/ UMTS
- Sink with cold and hot water (constant) with display
- Sewage tank
- Solar panels / standby generator

Services and offer

The Fraunhofer EMB provides the cell laboratory and, if necessary, personnel support for your projects and needs. The mobile cell laboratory allows the sampling, processing of samples and preservation on site even in far-off areas.

Contact us

The applications of the mobile cell laboratory for research and development projects are almost unlimited. We will be glad to answer your questions and help to realize your project!

Possible applications

- Sampling and sending of data during expeditions to the backlands and rough areas
- Processing of fragile materials, e.g. fresh tissue aliquots of biological samples
- Placement of the laboratory container on research or container ships
- Alternative lab space for the case other labs are not available