

Dirck Gerritsz Laboratory

Netherlands Organization for Scientific Research

67°34'11.8"S 68°74'63.0"W

Type: Laboratory

Operational period:
October–March

Location

Dirck Gerritsz Laboratory is located at Rothera Research station, run by the British Antarctic Survey, Adelaide Island, Western Antarctic Peninsula.

Biodiversity and natural environment

As per Rothera Research station information, the Flora mainly limited to lichen. Breeding colonies of South polar skua, terns and Imperial Cormorants in the area. Large transitory populations of other bird species (petrels, gulls etc). Regular visits from Adélie penguins although no breeding colonies close by. Occasional sightings of Chinstrap and Emperor penguins. Regular sightings of Weddell, Crabeater, Fur, Elephant and Leopard seals. Regular sightings of Minke whale and Orca, occasionally Humpbacks.

History and facilities

Officially opened January 2013, four flexible high tech mobile labs built in standard ISO 20 feet high cube containers. All four housed in a specially designed docking station.

1. A dry lab suitable for the use of a wide range of analytical instruments (e.g. flow cytometry) that need to be run at room temperature (15-22 °C).
2. A dry lab suitable for culturing using a cabinet with plasma lamps that provide the daylight spectrum. The temperature in this container is kept between 0 °C and 22 °C.
3. A wet lab suitable for processing water samples and biological rate measurements at the temperature of the sample of interest. The temperature in this container is kept between 2 °C and 15 °C.

CLIMATE	
Climate zone	Coastal Antarctica
Permafrost	Continuous
Mean annual wind speed (km/h)	
Max wind speed (km/h)	
Dominant wind direction	
Sea Ice Break Up	
Snow free period	
Total annual precipitation (mm)	
Precipitation type	
Mean annual temperature (°C)	-5
Mean temperature in February (°C)	-0.1
Mean temperature in July (°C)	-11.6
ENVIRONMENT	
Region	Antarctic Peninsula
Antarctic Environmental Domain: G – Antarctic Peninsula offshore island geologic	
Antarctic Conservation Biogeographic Region: 4 Central South Antarctic Peninsula	
Altitude of facility (m)	16
Type of surface facility built on	Ice-free ground
Long term monitoring	No data
Waste management	No data
Hazard(ous) management	No data
Fuel spill response capability	No data



4. A clean room laboratory suitable for trace metal research. It is equipped with special filters in the air-processing system to ensure that the air entering the container is completely particle free. The temperature in this container can be controlled between 5 °C and 20 °C.

General research and databases

Chemical oceanography, terrestrial and marine ecology. To view all the data collected, please visit www.npdc.nl.

FACILITIES INFRASTRUCTURE	
Area under roof (m ²)	48
Area scientific laboratories (m ²)	48
Type of scientific laboratories: Biology, Chemistry	
Conference room (capacity)	
Logistic area (m ²)	0
Number of beds	0
Showers	
Laundry facilities	
Power supply type	Fossil fuel, Renewable
Power supply (V)	
Power supply (hours per day)	
Hydroponics facilities	
Number of staff on station (peak/summer season)	2
Number of scientists on station (peak/summer season)	8
Number of staff on station (off peak/winter season)	
Number of scientists on station (off peak/winter season)	
Max number of personnel at a time (staff, scientists and others)	10
Specific device/Scientific equipment:	
Scientific services possible:	
Long-term monitoring/observations:	
MEDICAL FACILITIES	
Area of medical facility (m ²)	0
Staff with basic medical training or doctor (Summer)	0
Staff with basic medical training or doctor (Winter)	

Features in the facility area

Bird colonies, Coast, Crevasse, Fjord, Ice cap or glacier, Ice shelf, Mountain, Other Biological, Permanent snowpatches, Rock, Sea, Sea ice, Seal colonies, Shoreline, Snow.

Main science disciplines

Climate change, Climatology, Ecology, Environmental sciences, Glaciology, Isotopic chemistry, Marine biology, Microbiology, Oceanography, Terrestrial biology.

Capability: None	
Equipment: None	
Distance to hospital (km)	
Closest emergency facility in Antarctica (km)	
Closest emergency facility external (km)	
Medical research capabilities	
Medical screening requirements	
VEHICLES AT FACILITY	
Sea transportation:	
Land transportation:	
WORKSHOP FACILITIES	
None	
COMMUNICATIONS	
E-mail, Telephone	
TRANSPORT AND FREIGHT	
Access	Air, Sea
Transport to facility: Airplane, Ship	
Number of airstrips	0
Length (m) of longest runway	
Width (m) of longest runway	
Number of flight visits per year	
Period of flight visits per year:	
Helipad	
Number of ship visits per year	
Period of ship visits per year:	
Ship landing facilities:	



Photos: D. van der Kreef