

## Deep-sea microbial oceanography: a complete high-pressure facility to study microbes under *in situ* conditions

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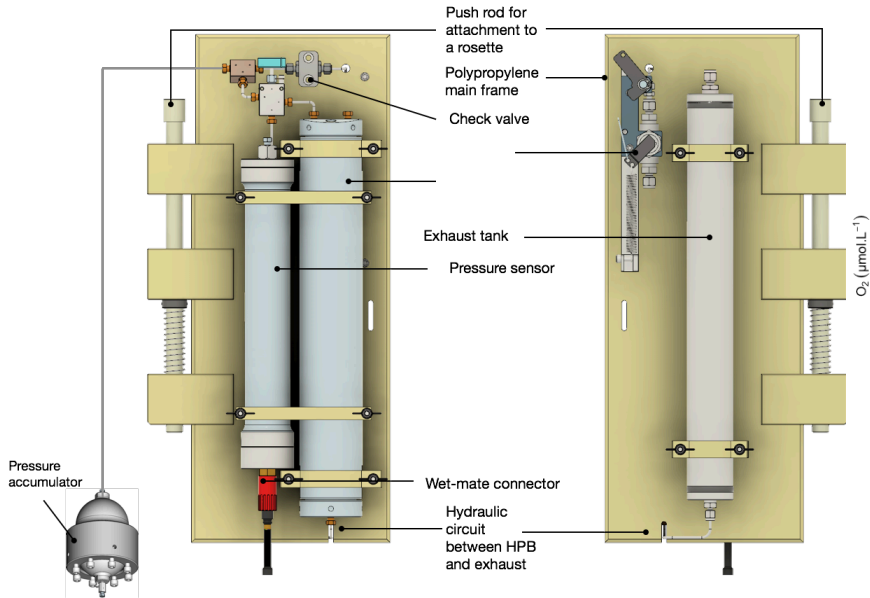
### Contexte et Objectifs:

- Ocean containing the largest reservoir of microbes (Whitman et al., 1998)
- 5% of the ocean has been explored using remote instruments and **less than 0.01% has been sampled** and studied
- To study deep-sea environment, it is necessary to perform *in situ* measurements

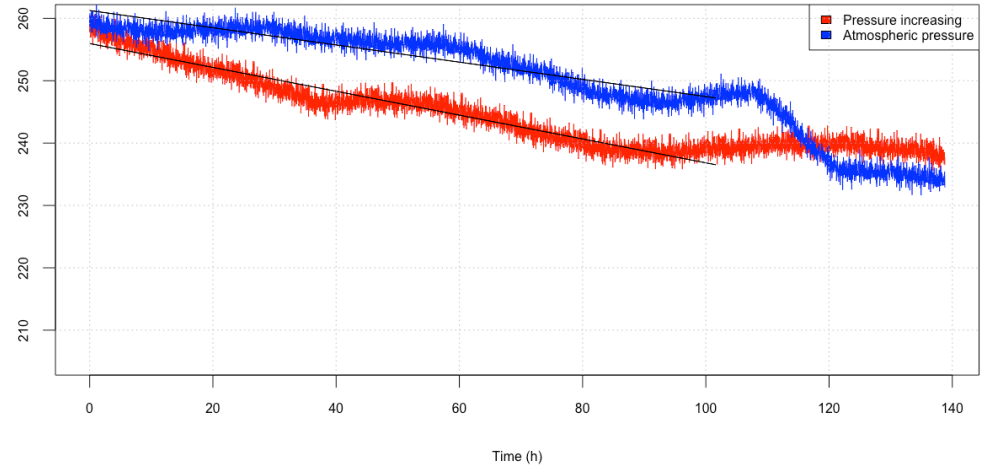
### Méthodologie:

- High Pressure Sampler Unit to collect deep-sea water sample under high hydrostatic pressure in order measure microbial activity.
- Field application about high pressure activity : oxygen consumption under PASS experiment.

## Résultats:



HPSU : a new and commercially available device to perform high-pressure sampling



Field application of HPB : PASS experiment and dissolved oxygen consumption measurement

## Conclusions/Prospective:

- This methodological development provide a “plug and play” tools to sample and study deep-sea ocean taking into account physical constraint.
- Then it offers a large field of application to study microbial activities