



VERSION 2  
NOV 07, 2023

DNA EXTRACTION Protocol Template V.2

Kathleen Pitz<sup>1</sup>, Raissa.meyer<sup>2</sup>  
<sup>1</sup>MBARI; <sup>2</sup>AWI

Better Biomolecular Ocean Practices (BeBOP)

 Kathleen Pitz

ABSTRACT  
A protocol template created through the BeBOP project for DNA Extraction.

OPEN ACCESS



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**Protocol status:** In development  
We are still developing and optimizing this protocol

**Created:** Nov 07, 2023

**Last Modified:** Nov 07, 2023

**PROTOCOL integer ID:** 90565

MIOP: Minimum Information about an Omics Protocol

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MIOP Term	Value
analyses	
audience	
broad-scale environmental context	
creator	
environmental medium	
geographic location	
hasVersion	
issued	
language	
license	
local environmental context	
materials required	
maturity level	
methodology category	

MIOP Term	Value
personnel required	
project	
publisher	
purpose	
skills required	
target	
time required	

See <https://github.com/BeBOP-OBON/miop/blob/main/model/schema/terms.yaml> for list and definitions.

## AUTHORS

2

PREPARED BY All authors known to have contributed to the preparation of this protocol, including those who filled in the template	AFFILIATION	ORCID (visit <a href="https://orcid.org/">https://orcid.org/</a> to register)
Content Cell	Content Cell	Content Cell
Content Cell	Content Cell	Content Cell

## RELATED PROTOCOLS

3

PROTOCOL NAME AND LINK	ISSUER / AUTHOR	RELEASE / ACCESS DATE
Content Cell	Content Cell	yyyy-mm-dd
Content Cell	Content Cell	yyyy-mm-dd

This is a list of other protocols which should be known to users of this protocol. Please include the link to each related protocol.

## ACRONYMS AND ABBREVIATIONS

4

ACRONYM / ABBREVIATION	DEFINITION
Content Cell	Content Cell

## GLOSSARY

5

SPECIALISED TERM	DEFINITION
Content Cell	Content Cell
Content Cell	Content Cell

## BACKGROUND

6

### Summary

Insert a short description of the background for the method/protocol (e.g. why and for which purpose do you perform water sampling).

Please provide a brief summary of your method including, as appropriate, a brief description of what techniques your best practice is about, which ocean environments or regions it targets, the primary sensors covered, what type of data/measurements/observing platform it covers, limits to its applicability.

7

### Method description and rationale

Insert a short description of the functioning principal of the methodology used in the protocol (i.e. how does the method work?). Please note that this is different from the step-by-step description of the protocol procedure.

Insert a short statement explaining why the specific methodology used in the protocol has been selected (e.g. it is highly reproducible, highly accurate, procedures are easy to execute etc....).

8

### Spatial coverage and environment(s) of relevance

If applicable, please specify the region where the protocol is applied. If applicable, please indicate here the environment(s) of relevance for the protocol, e.g. Abyssal plain. Select from the ENVO terminology.

<https://www.ebi.ac.uk/ols/ontologies/envo>

## 9 Personnel Required

Describe the number of technicians, data managers, and scientists required for the good execution of the procedure

## 10 Safety

Identify hazards associated with the procedure and specify protective equipment and safety training required to safely execute the procedure

## 11 Training requirements

Specify technical training required for the good execution of the procedure.

## 12 Time needed to execute the procedure

Specify how much time is necessary to execute the procedure.

## EQUIPMENT

### 13

DESCRIPTION e.g. filter	PRODUCT NAME AND MODEL Provide the official name of the product	MANUFACTURER Provide the name of the manufacturer of the product	QUANTITY Provide the quantity of the product
Durable equipment			
Content Cell	Content Cell	Content Cell	Content Cell
Content Cell	Content Cell	Content Cell	Content Cell
Consumable equipment			
Content Cell	Content Cell	Content Cell	Content Cell
Content Cell	Content Cell	Content Cell	Content Cell
Chemicals			
Content Cell	Content Cell	Content Cell	Content Cell
Content Cell	Content Cell	Content Cell	Content Cell

## STANDARD OPERATING PROCEDURE

### 14 In the following SOP, please use the exact names of equipment as noted in the table above.

Provide a step-by-step description of the protocol. The identification of difficult steps in the protocol and the provision of recommendations for the execution of those steps are encouraged.

## PREPARATION

### 15 Please specify the preparatory actions you took prior to running this protocol and note what equipment was used to do so (e.g. disinfection of work surfaces, preparations to the equipment you intend to use later on).

Step

### 16 Step

### 17 Step

## EXTRACTION

### 18 Please specify the actions you took to extract the DNA from your samples and note what equipment was used to do so (e.g. incubation, vortexing, washing, elution, use of controls).

Step

18.1 Sub-Step

18.2 Sub-Step

19 Step

## QUALITY CONTROL

20 Describe and explain criteria used to validate results of the standard operating procedure.

## BASIC TROUBLESHOOTING GUIDE

21 Identify known issues associated with the procedure, if any.

Provide troubleshooting guidelines when available.

## REFERENCES

22 Insert all references cited in the document.

Please insert full DOI address when available, e.g. <http://doi.dx.org/10.1007/s11258-014-0404-1>

## APPENDIX A: DATASHEETS

23 Link templates (e.g. preformatted spreadsheets) used to record measurements and report on the quality of the data as well as any documents such as manufacturer specifications, images, etc that support this protocol. Please include a short note describing the document's relevance.