VERSION 2
NOV 14, 2023

Protocol Citation: Kathleen Pitz, Raissa.meyer 2023. PCR Protocol Template. **protocols.io** https://protocols.io/view/pcr-protocol-template-c4wbyxanVersion created by Kathleen Pitz

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

Created: Nov 10, 2023

Last Modified: Nov 14, 2023

PROTOCOL integer ID: 90787

PCR Protocol Template V.2

Kathleen Pitz[1], Raissa.meyer[2]

[1]MBARI; [2]AWI

Kathleen Pitz

ABSTRACT

A protocol template created through the BeBOP project for PCR.

MIOP: Minimum Information about an Omics Protocol

1

MIOP Term	Value
methodology category	
project	
purpose	
analyses	
geographic location	
broad-scale environmental context	
local environmental context	
environmental medium	
target	
creator	
materials required	
skills required	
time required	
personnel required	

MIOP Term	Value
language	
issued	
audience	
publisher	
hasVersion	
license	
maturity level	

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 https://orcid.org/ to registe
Content Cell	Content Cell	Content Cell
Content Cell	Content Cell	Content Cell

RELATED PROTOCOLS

3

PROTOCOL NAME AND LINK	ISSUER / AUTHOR	RELEASE DATE This is the date corresponding to the version listed to the lef
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. For regional term guidance see here. 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**

Insert 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 Provi
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 before you collected the samples and note what equipment was needed to do so (e.g. disinfection of work surfaces, preparations to the equipment you intend to use later on).

Step

16 Step

17 Step

PCR

18 Please specify the actions you took to amplify the previously extracted DNA and the equipment and primers you used (ingredients for the PCR reaction, number of triplicates, PCR cycle parameter)

PCR Primer Name	Direction	Sequence (5’ -> 3’)
content	forward	content
content	reverse	content

19

PCR step	Temperature	Duration	Repetition
content	content	content	content
content	content	content	content

20 Step

PCR clean-up

21 Please specify the actions you took to confirm the quality of the PCR output, to clean up the PCR output and the equipment you used (e.g. agarose gel to confirm quality, purification of PCR products).

QUALITY CONTROL

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

BASIC TROUBLESHOOTING GUIDE

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

Provide troubleshooting guidelines when available.

REFERENCES

24 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

25 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.