

Database construction

SILVA 128

<https://www.arb-silva.de>

Extraction of MGII
16S rRNA

K-mer binning of MGII
sequences

VizBin

Taxonomic affiliation
(MGIIa, b and
Thalassoarchaea)

BLASTn

Taxonomic analyses

TARA 16S rRNA

<http://ocean-microbiome.embl.de>

Taxonomic annotation

BLASTn against homemade
16S rRNA database

Bin abundance table and
normalization

All TARA metagenome
reads

www.ebi.ac.uk/ena/data/view/PRJEB402

Functional annotation

BWA-MEM against Ocean
Microbial Gene Catalog

Sequence clustering

Clusters abundance table

Co-occurrence between MGII
bins and all functional genes

MIC : MINEv2

Network construction

Cytoscape

Annotation of network
sequences

BLAST against nt, KEGG,
UniRef

Functional analyses

TARA Contigs

www.ebi.ac.uk/ena/about/tara-oceans-assemblies

MGII contig identification

BLAST against homemade
16S rRNA database

Selection of largest MGII
contigs

Contig annotation

RAST Platform

Contig comparison

EasyFig

