TARA-MED (June - September 2014)

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Notes:

1 Filters extracted in 100% methanol, disrupted by sonication and clarified by filtration

2 Analysis by HPLC was carried out the same day. Instrument: HPLC Agilent Technologie

3 undetected pigments are represented by "LOD" (Limit of detection, see Note 7)

4 The analytical procedure is described in:
Ras J, Uitz, J, and H. Claustre (2008). Spatial variability of phytoplankton pigment distributions in the Subtropical South Pacific Ocean: comparison between in situ and

5 Detection of carotenoids and chlorophylls c and b: 450 nm, chlorophyll a and derivati

6 Performance metrics:

Tchla injection precision : 0.91%
Tchla accuracy (SeaHARRE-6): 3.72%
Retention time precision: 0.54%

7 Limits of detection : calculated in ng per injection and as the concentrations correspo

8 Analysts: Celine Dimier and Josephine Ras

9 Quality control evaluation of the peaks: QA=1 = "good"
QA=2 = "acceptable"
QA=3 = "questionnable"

10 9 samples were deleted from the database during quality control procedures (see "de

Titles	Description	Units
Date of analysis	UTC	dd/mm/yyyy
Cruise or Project		
Ship		
Latitude		
Longitude		
Sampling date	UTC	dd/mm/yyyy
Sampling time		hh:mm

Sample code		
Station		
Depth	Sampling depth	metres
Filtered Vol	Filtered volume	Litres
Chlorophyll c3		mg per cubic metre
Chlc3-QA	quality control evaluation	1, 2 or 3
sum Chlorophyll c2+c1	sum of chlorophyll c1 and c2	mg per cubic metre
Chlc2c1-QA	quality control evaluation	1, 2 or 3
Sum Chlorophyllide a	Chlda + Chlda-like	mg per cubic metre
Chlda-QA	quality control evaluation	1, 2 or 3
Peridinin		mg per cubic metre
Peri-QA	quality control evaluation	1, 2 or 3
Sum Phaeophorbid a	Phda + Phda-like	mg per cubic metre
Phda-QA	quality control evaluation	1, 2 or 3
19'-Butanoyloxyfucoxanthin		mg per cubic metre
But-QA	quality control evaluation	1, 2 or 3
Fucoxanthin		mg per cubic metre
Fuco-QA	quality control evaluation	1, 2 or 3
Neoxanthin		mg per cubic metre
Neo-QA	quality control evaluation	1, 2 or 3
Prasinoxanthin		mg per cubic metre
Pras-QA	quality control evaluation	1, 2 or 3
Violaxanthin		mg per cubic metre
Viola-QA	quality control evaluation	1, 2 or 3
19'-Hexanoyloxyfucoxanthin		mg per cubic metre
Hex-QA	quality control evaluation	1, 2 or 3
Diadinoxanthin		mg per cubic metre
Diadino-QA	quality control evaluation	1, 2 or 3
Alloxanthin		mg per cubic metre
Allo-QA	quality control evaluation	1, 2 or 3
Diatoxanthin		mg per cubic metre
Diato-QA	quality control evaluation	1, 2 or 3
Zeaxanthin		mg per cubic metre
Zea-QA	quality control evaluation	1, 2 or 3
Lutein		mg per cubic metre
Lut-QA	quality control evaluation	1, 2 or 3
Bacteriochlorophyll a		mg per cubic metre
Bchla-QA	quality control evaluation	1, 2 or 3
Total Chlorophyll b	DV Chlb + Chlb	mg per cubic metre
TChlb-QA	quality control evaluation	1, 2 or 3
Divinyl Chlorophyll a		mg per cubic metre
DVChla-QA	quality control evaluation	1, 2 or 3
Chlorophyll a	Chlorophyll a + allomers + epimers	mg per cubic metre
Chla-QA	quality control evaluation	1, 2 or 3
Total Chlorophyll a	Chla + DV Chla + Chlorophyllid a	mg per cubic metre
Tchla-QA	quality control evaluation	1, 2 or 3
sum Phaeophytin a	Phytna + Phytna-like	mg per cubic metre

Phytna-QA	quality control evaluation	1, 2 or 3
Sum carotenes	beta carotene + a-carotene	mg per cubic metre
Tcar-QA	quality control evaluation	1, 2 or 3
Observations		

(GF/F Whatman). Extraction time lasted 2 hours.

ɛs 1200

ves: 676 nm, bchla : 770 nm.

	Calibration precision: 0.4%	
	Calibration accuracy: 0.3%	

nding to a signal:noise ratio of 3 and for a filtered volume of 1 L.

eleted samples" sheet)

detection wavelength (nm)	LOD ng/inj	LOD for 1 L filtered (in $mg.m^{-3}$)

450	0.015	0.0002
450	0.018	0.0002
667	0.019	0.0002
450	0.007	0.0001
667	0.011	0.0001
450	0.009	0.0001
450	0.009	0.0001
450	0.010	0.0001
450	0.009	0.0001
450	0.012	0.0002
450	0.009	0.0001
450	0.014	0.0002
450	0.015	0.0002
450	0.014	0.0002
450	0.014	0.0002
450	0.014	0.0002
770	0.015	0.0002
450	0.004	0.0001
667	0.013	0.0002
667	0.013	0.0002
667	0.013	0.0002
667	0.008	0.0001

450	0.014	0.0002