

**Acute and Physical Effects of Water Based Drilling Mud in the
Marine Copepod *Calanus finmarchicus***

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Table S1: Method and instrument setting for XRD analysis.

Diffractometer type	PW1710 Based
Tube anode	Cu
Generator tension [kV]	40
Generator current [mA]	20
Wavelength Alpha1 [Å]	1.54056
Wavelength Alpha2 [Å]	1.54439
Intensity ratio (alpha2/alpha1)	0.500
Divergence slit	Automatic
Irradiated length [mm]	12
Receiving slit	0.2
Spinner	On
Monochromator used	Yes
Start angle [$^{\circ}2\theta$]	2.000
End angle [$^{\circ}2\theta$]	60.000
Step size [$^{\circ}2\theta$]	0.040
Maximum intensity	16154.41
Time per step [s]	2.000
Time of scan	Continuous
Peak position defined by	Minimum of 2 nd deriviate of peak
Minimum peak width	0.00
Maximum peak width	1.00
Peak base width	2.00
Minimum significance	0.65
Number of peaks	39

Table S2: Major compounds and chemical elements identified with X-ray fluorescence (XRF).

Compound	weight %
Fe ₂ O ₃	1.83
TiO ₂	0.3
CaO	2.72
K ₂ O	21.45
P ₂ O ₅	0.04
SiO ₂	16.94
Al ₂ O ₃	3.46
MgO	0.68
Na ₂ O	3.89
MnO	0.04
Element	µg/g
Zr	267
Sr	1832
Rb	103
Zn	50
Cu	31
Ni	8
Ba	64439
Co	1.5
Cr	16.6
V	4

Figure S1: Particle size distribution in particle exposures (red line) and removal of particles in the particle-free (dissolved components only) exposure (blue dotted line) dispersions measured by LISST-100X.

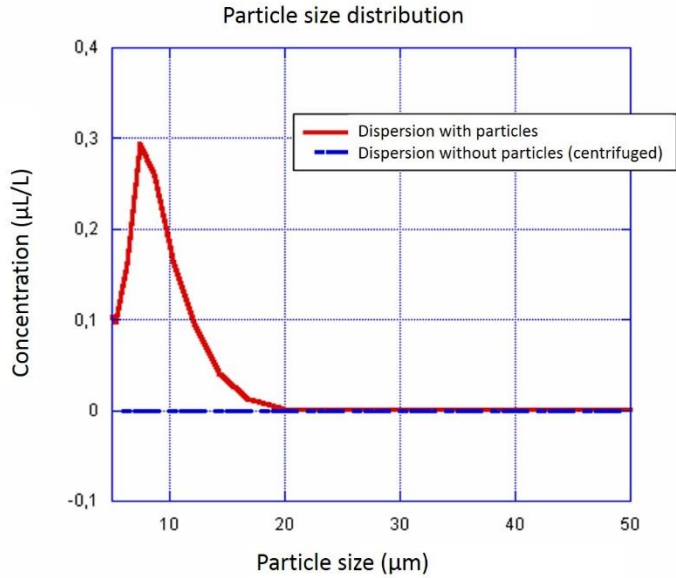


Figure S2: Exemplary X-ray diffraction (XRD) spectrum of the water based drilling mud used in this study.

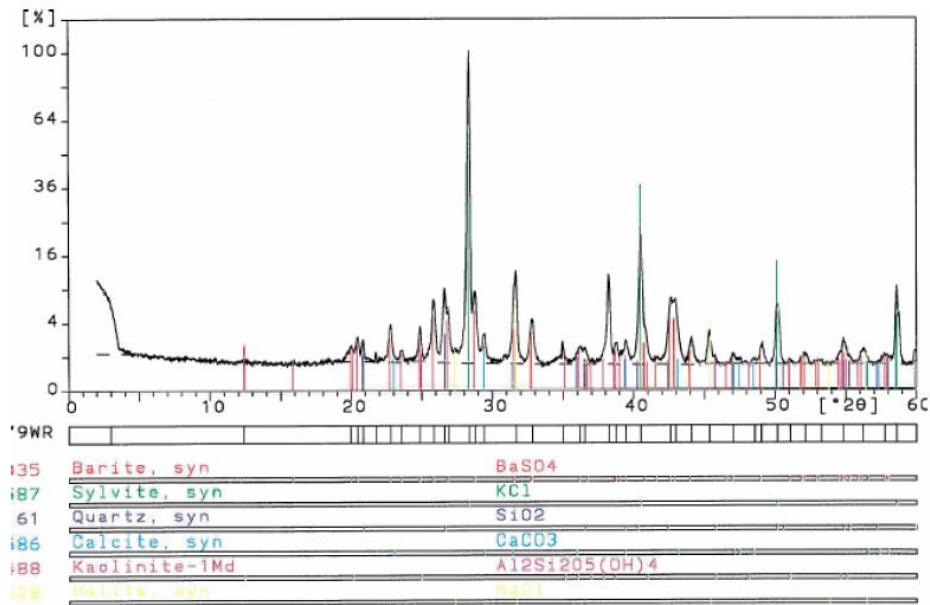


Figure S3: Microscopic image of the fine particle fraction of the water based drilling mud used in this study. Scale bar: 100 μm .

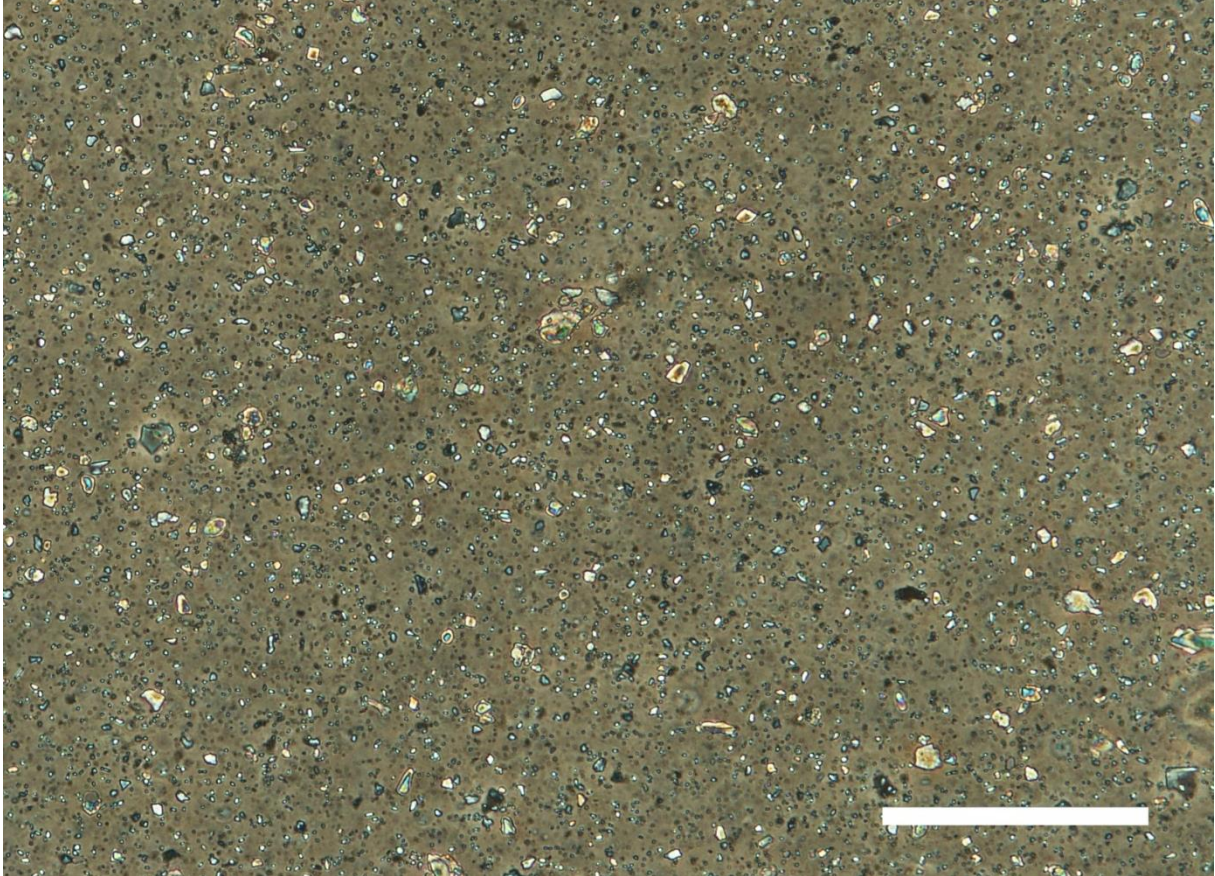


Figure S4: Percent of animals with dark coloured particles in their guts at different exposure times. Data is presented as mean±SD, *n*=96.

