

Record ID - Sequential from 9,219 to 11,283.

Cruise Name – Name and number of individual sampling cruise.

Station - Designation of sampling station.

Depth of Sample – Nominal depth of sample. Most samples are from the surface (center of 10 L Niskin water bottle is usually 0.5 to 1.5 m below water line, depths are listed to nearest meter).

Date – date that station's sample(s) was collected.

JD - Julian Day - day of the year.

Time – Local time of collection (trip time for last surface sample bottle, also time for latitude and longitude

Lat, Long = Latitude and longitude – in degrees with decimal degrees. Locations initially determined from Loran fixes, later ones from satellite navigation, and most recent ones by GPS. Approximated distances used on occasion of poor fix – see list at end of this writeup.

Distance – Distance from mouth of Delaware Bay along estuarine axis in km – equivalent to DRBC River Mile as

Temperature (°C) is from CTD system (since mid-1980s); older ones from reversing thermometers on Niskin

Salinity – Originally listed as parts per thousand, currently this is a dimensionless parameter on the Practical Salinity Scale (psu). Measured by laboratory salinometer until 1990s; since then from CTD system. Salinity measurement prior to the Scenic cruises relied on an algorithm for converting from conductivity ratio with a remainder, giving negative salinity at very low ionic concentration. On those prior cruises, salinity data are removed for any values less than 0.05. After 1985, algorithms with no remainder were used for conversion of both conductivity ratio (laboratory salinometer) and direct conductivity measurements (CTD system).

DO = Dissolved oxygen (as $\mu\text{g-at O/L}$ – $2 \mu\text{gat O} = 1 \mu\text{M O}_2$).

O-Sat = Percent saturation of measured DO based on equilibration at ambient temperature and salinity of sample when collected.

DIC = total dissolved inorganic carbon (also referred to as TCO_2 or ΣCO_2) in $\mu\text{M C}$. DIC concentration was estimated from pH and alkalinity for earliest cruises and then by direct measurement with acid sparging and infrared analysis of CO_2 (1986 - present).

NO_2 = nitrite nitrogen – colorimetric method ($\mu\text{M N}$).

NO_3 = nitrate nitrogen – colorimetric method ($\mu\text{M N}$).

NH_4 = ammonium nitrogen – colorimetric method ($\mu\text{M N}$).

PO_4 = phosphate - also called soluble reactive phosphorus – colorimetric method ($\mu\text{M P}$).

Si = silicate – colorimetric method ($\mu\text{M Si}$).

DOC = dissolved organic carbon - (total organic carbon of filtered sample) (μMC).

Cl = chloride concentration – measured by argenometric titration, as $\mu\text{M Cl}$.

Ca = calcium concentration – measured by EDTA titration, as $\mu\text{M Ca}$.

pH = pH measured immediately upon collection in sample free of air space.

Akal = total alkalinity – measured by titration, as μ equivalents/L.

Fe = dissolved iron – measured by colorimetric method, as $\mu\text{M Fe}$.

Seston = total suspended sediments (gravimetric measure on 1 μm pore size Nuclepore filter), as mg/L net

PC = particulate carbon - (measured by high temperature combustion and micro-Pregl/micro-Dumas conversion with final measure as CO_2 , initially by gas chromatography, currently by mass spectrometry), as $\mu\text{M C}$.

PN = particulate nitrogen - (measured simultaneously with the PC as N_2 after conversion), as $\mu\text{M N}$.

Light = light attenuation calculated from – \ln of total visible light energy versus depth. Measured with PAR quantum meter. Listed as reciprocal of depth.

Secchi depth = disappearance depth of Secchi meter disc with manual lowering.

Chlor a = chlorophyll a concentration of filtered sample extracted in 90% acetone and measured by filter fluorometer, in $\mu\text{g chlorophyll/L}$.

APROD = areal production in $\text{mmoles C/m}^2/\text{d}$.

VPROD = maximum volumetric production in $\mu\text{moles C/L/d}$.

P/B = production (VPROD converted to $\mu\text{g C/L/d}$) divided by $\mu\text{g Chlor/L}$.

RECORD ID	10989
CRUISE NAME	DON 3
STATION	27
DEPTH (m)	2
DATE	1/13/98
JD	13
LOCAL TIME	18:39
LATITUDE N	38.730499
LONGITUDE W	75.032333
DISTANCE (km)	-13
TEMP (deg C)	6.90
SALINITY (psu)	30.49
O ($\mu\text{g-at O/L}$)	614
O-SAT (%)	98
DIC (μM)	
NO ₂ (μM)	0.06
NO ₃ (μM)	3.93
NH ₄ (μM)	0.26
PO ₄ (μM)	0.31
Si (μM)	0.86
DOC (μM)	127
Cl (μM)	
Ca (μM)	
pH	
Alkalinity ($\mu\text{eq/L}$)	
Fe (μM)	
SESTON (mg/L)	11.83
PC (μM)	
PN (μM)	
LIGHT ATTEN (-/m)	
SECCHI DEPTH (cm)	
CHL a ($\mu\text{g/L}$)	27.94
VPROD ($\mu\text{M C/day}$)	
APROD (mmol C/m ² /day)	
P/B ($\mu\text{g C/day}/\mu\text{g CHL}$)	