DATA REPOSITORY ITEM 2007072

1. Materials and methods

1.1 Organic carbon isotope method

Organic carbon isotope compositions of the Vikinghøgda Fm. shales were determined using a Carlo-Erba elemental analyzer (NCS 2500) coupled in continuous flow to a MICROMASS-Optima isotope ratio mass spectrometer (IRMS) at the ETHZ (Zürich). Sample material was combusted in the presence of O_2 in an oxidation column at 1030°C, combustion gases were passed through a reduction column (650°C), and the produced CO_2 gas was separated chromatographically and transferred to the IRMS via an open split for on-line isotope measurements. Isotope ratios are reported in the conventional δ-notation with respect to VPDB (Vienna Pee Dee Belemnite) standard The method was calibrated with NBS22 for $\delta^{13}C_{org}$ using a value of -30.06 according to Coplen et al. (2006). Reproducibility, based on repeated measurements of a laboratory internal standard (atropina) is better than 0.1‰.

Table DR1 – Organic carbon isotope results (Vikinghøgda Fm., Spitsbergen)

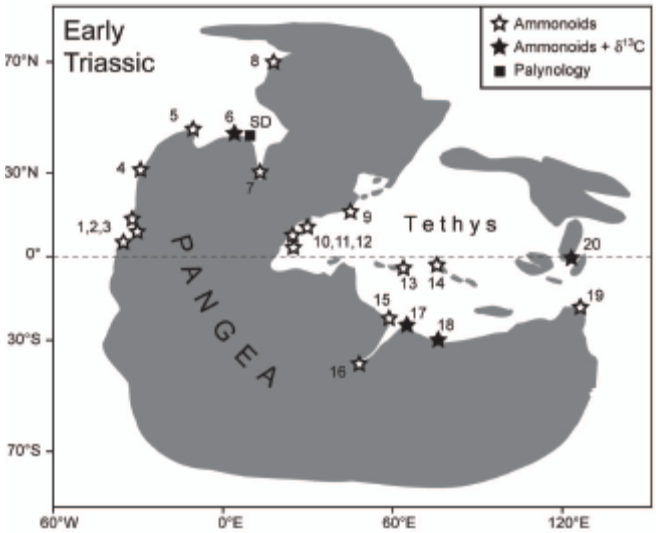
sample	meters	$\delta^{13}C_{org}$ [‰]$_{VPDB}$
DL2	0.00	-33.02
DL3	1.31	-34.35
DL24	2.22	-33.64
DL4	2.98	-34.00
DL25	5.03	-33.07
DL5	5.47	-32.98
DL26	7.17	-32.93
DL26bis	7.17	-33.38
DL27	8.77	-33.25
DL28	11.45	-30.11
DL7A	12.56	-28.19
DL7B	13.02	-27.87
DL8	14.48	-29.35
DL29	16.56	-29.53
DL30	18.68	-29.75
DL30bis	18.68	-29.54

Table DR1 – Organic carbon isotope results (Vikinghøgda Fm., Spitsbergen)

sample	meters	$\delta^{13}C_{org}$ [‰]$_{VPDB}$
DL10	20.80	-29.46
DL31	22.25	-29.61
DL11	23.80	-29.79
DL32	26.55	-31.48
DL33	30.17	-31.14
DL12	33.42	-31.08
DL34	37.78	-31.73
DL13	41.33	-31.67
DL14	42.24	-31.78
DL35	43.30	-31.57
DL15	44.54	-32.06
DL15bis	44.54	-32.16
DL36	46.41	-32.56
DL16	48.55	-32.42
DL37	50.40	-32.61
DL17	51.68	-32.49
DL19	53.22	-32.34
DL38	54.36	-32.26
DL21	55.32	-32.33
DL39	57.26	-32.17
DL22	58.57	-31.94
DL40	60.84	-31.81
DL41	62.80	-31.35
DL23	64.12	-31.81

Coplen, T.B., Brand, W.A., Gehre, M., Groning, M., Meijer, H.A.J., Toman, B., and Verkouteren, R.M., 2006, New guidelines for delta C-13 measurements: Analytical chemistry, v. 78, p. 2439-2441.

Figure DR1 – Early Triassic paleogeography and location of the studied sections (modified after Brayard et al., 2006).



Legend:

SD: Svalis Dome (Barents Sea); 1: California; 2: Nevada; 3: Idaho/Utah; 4: British Columbia; 5: Arctic Canada; 6: Spitsbergen; 7: Greenland; 8: Arctic Russia; 9: Caucasus; 10: Chios; 11: Balkans; 12: Albania; 13: Iran; 14: Afghanistan; 15: Oman; 16: Madagascar; 17: Pakistan; 18: Spiti/North India; 19: Timor; 20: South China.