

Supplement to

**SOCIAL BEHAVIOUR AND MASS MORTALITY IN
THE BASAL CERATOPSIDIAN DINOSAUR
PSITTACOSAURUS (EARLY CRETACEOUS,
PEOPLE'S REPUBLIC OF CHINA)**

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XRD MINERALOGICAL ANALYSES OF BULK AND CLAY SMEAR FRACTION SAMPLES

Table 1. Full results of X-ray diffraction (XRD) analysis of bulk matrix sample taken from IVPP V14341.

	2 Theta	Density	Intensity	Factor	Weight Fraction	Volume Fraction
Quartz	20.9	2.65	121	1.00	0.39	0.40
K-feldspar	25.8	2.58	0	3.12	0.00	0.00
K-feldspar	27.5	2.58	41	1.10	0.15	0.15
Plagioclase	22.1	2.63	0	1.63	0.00	0.00
Plagioclase	28.0	2.63	86	0.66	0.27	0.28
Calcite	29.5	2.71	tr	0.33	0.00	0.00
Dolomite	30.8	2.84	tr	0.40	0.00	0.00
Aragonite	26.2	2.93	0	1.80	0.00	0.00
Siderite	32.0	3.80	0	0.84	0.00	0.00
Apatite	25.9	3.20	0	1.88	0.00	0.00
Anhydrite	25.5	2.95	0	0.13	0.00	0.00
Gypsum	11.7	2.33	0	0.85	0.00	0.00
Barite	26.0	4.50	0	0.96	0.00	0.00
Halite	31.7	2.16	0	0.25	0.00	0.00
Pyrite	33.1	5.00	39	0.60	0.08	0.04
Kaolinite	12.5	2.65	0	1.20	0.00	0.00
Illite	8.9	2.75	0	2.07	0.00	0.00
Illite	19.8	2.75	0	4.20	0.00	0.00
Chlorite	6.2	3.00	0	5.00	0.00	0.00
Smectite	5.0	2.50	36	1.00	0.12	0.13
Mica	8.9	2.75	0	1.00	0.00	0.00
Berthierine	12.5	3.03	0	1.00	0.00	0.00
Total					1.00	1.00

Table 2. Full results of XRD analysis of clay smear sample taken from IVPP V14341.

	2 Theta	Density	Intensity	Factor	Weight Fraction	Volume Fraction
Quartz	20.9	2.65	55	1.00	0.03	0.03
K-feldspar	25.8	2.58	0	3.12	0.00	0.00
K-feldspar	27.5	2.58	0	0.62	0.00	0.00
Plagioclase	22.1	2.63	0	1.63	0.00	0.00
Plagioclase	28.0	2.63	12	0.66	0.00	0.00
Calcite	29.5	2.71	0	0.69	0.00	0.00
Dolomite	30.8	2.84	0	0.64	0.00	0.00
Aragonite	26.2	2.93	0	1.80	0.00	0.00
Siderite	32.0	3.80	0	0.84	0.00	0.00
Apatite	25.9	3.20	0	1.88	0.00	0.00
Anhydrite	25.5	2.95	0	0.13	0.00	0.00
Gypsum	11.7	2.33	0	0.85	0.00	0.00
Barite	26.0	4.50	0	0.96	0.00	0.00
Halite	31.7	2.16	0	0.25	0.00	0.00
Pyrite	33.1	5.00	0	0.60	0.00	0.00
Hematite	33.3	5.27	0	1.00	0.00	0.00
Kaolinite	12.5	2.65	0	1.20	0.00	0.00
Illite	8.9	2.75	35	7.20	0.13	0.12
Illite	19.8	2.75	0	4.20	0.00	0.00
Chlorite	6.2	3.00	0	5.00	0.00	0.00
Smectite	5.0	2.50	1613	1.00	0.84	0.85
Illite/ smectite	5.2	2.50	0	1.00	0.00	0.00
Mica	8.9	2.75	0	1.00	0.00	0.00
Berthierine	12.5	3.03	0	1.00	0.00	0.00
Total					1.00	1.00