

PALYNOFACIES ANALYSES OF THE CLAUDEMIR RERTZ OUTCROP (LOWER PERMIAN) OF TACIBA FORMATION, ITAIÓPOLIS (SC): DEPOSITIONAL PALEOENVIRONMENTS

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The Taciba Formation comprises the final deposition of the Itararé Group and is formed by three members (Rio Segredo sandstone, Chapéu do Sol diamictite and Rio do Sul rhythmite, siltstone and shale). In the city of Itaiópolis, north of Santa Catarina State, there are larger portions of Taciba Formation outcrop. Then, using palynofacies technique, we have observed three depositional paleoenvironments to the Claudemir Rertz outcrop (26°28'13,85" S - 49°86'73,13" W). The site comprises five meters of turbidite (Te – Bouma sequence) overlaid by eight meters of sill, and it is assigned as marine by the presence of Porifera calcarean spicules. Nine samples were collected in intervals of approximately 50 cm, and each one was analyzed in microscope with transmitted white light, where 330 particles of kerogen components were counted. Three kerogen major group and subgroups were identified: Phytoclast Group (equidimensional opaque, elongated opaque, corroded opaque; non-opaque non-degraded non-biostructured, non-opaque non-degraded biostructured, non-opaque degraded non-biostructured, non-opaque degraded biostructured, Amorphous), Palynomorph Group (spores, pollen grains and Prasinophyte algae) and Amorphous Organic Matter Group (AOM). Amongst them, the Phytoclast predominates (in average varying from 48.02% to 97.86% of the total kerogen), while AOM (in media varying from 1.84% to 46.79% of total kerogen) and palynomorphs (in media varying from 0.31% to 5.19%) content are subordinated. The presence of the major kerogen groups varies between the levels, leading us to assigned three depositional paleoenvironments: Proximal suboxic-anoxic shelf to levels 0.5 m – 1.0 (AOM – 40.49 - 46.79%; Phytoclasts – 48.02 - 58.29%; Palynomorphs – 1.23 – 5.19%); Marginal dysoxic-anoxic basin to levels 1.5 m, 2.0 m and 2.5 m (AOM – 9.23 - 26.61%; Phytoclasts – 70.94 - 86.77%; Palynomorphs – 1.84 – 4.92%) and Highly proximal shelf or basin to levels 3.5, 4.0 and 4.5 (AOM – 1.84 – 4.60%; Phytoclasts – 95.40 – 97.86%; Palynomorphs – 0 – 0.61%). Despite the data shows three distinct depositional paleoenvironments, we suggest that the oscillation of turbidite feeding system may have promoted a masking effect on the kerogen groups, because the quantitative percentages of opaque and non-opaque change through the levels, while qualitative characters of Opaque – Non Opaque do not change. Then, we assigned the depositional paleoenvironment of the analyzed sequence only as proximal suboxic-anoxic shelf, which have been corroborated by the sedimentary description of sequence (silty deposition with sand layers).

KEY-WORDS: PALYNOFACIES; TACIBA FORMATION; DEPOSITIONAL PALEOENVIRONMENT