Geophysical Research Abstracts, Vol. 9, 02144, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-02144

Organic-walled dinoflagellate cysts and sedimentary organic matter as indicators of palaeo-hydrographic changes in the marine core sediments from the southeastern Mediterranean, Egypt

Suzan E.A. Kholeif

National Institute of Oceanography and Fisheries (NIOF), Marine geology department, El Anfoshy, Alexandria, Egypt.

Suzan E.A. Kholeif

suzan_kholeif@yahoo.com / Fax: 002 03 4801174 / Phone: 002 0106635389

Abstract

The relative abundance of various type of sedimentary organic matter as phytoclasts zooclasts, amorphous organic matter and palynomorphs in the marine core sediment samples from southeastern Mediterranean, Egypt have been related to palaeo-hydrographic changes of the overlying water column. It is used to assist in palaeoenvironmental and palaeo-hydrographic interpretation. Density of the cysts varied between 5000 and 9800 cysts g^{-1} dw, and the most commonly encountered species were *Lingulodinium polyedrum*, *protoperidium reticulatum*, *spiniferites ramosus*, *S. mirabilis.* The density of heterotrophic dinoflagellate cysts assemblages (>80%) was governed by nutrient rich. Based on the total sedimentary organic content, the sediments have been deposited at depths from 5-25 cm have been deposited under dysoxic bottom water conditions suggesting ventilation in water column, 30-70cm have been deposited under decreasing oxygen (anoxic) availability. Anoxic bottom water conditions characterized the sediments at depth 70-105 cm. However, Suboxic bottom water conditions characterized the lower part of the core sediments (105-140 cm depth). A qualitative approach was used for highlighting the Holocene sea-level changes based on the dinoflagelate cysts

Keywords: hydrography, dinoflagellate cysts, southeastern Mediterranean, palynofa-

cies, phytoclasts,