

Lipid Content in Surface Water of Arabian Sea

N B BHOSLE, C D'SILVA & C V G REDDY

National Institute of Oceanography, Dona Paula, Goa 403 004

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Total lipid values varied from 165 - 293 $\mu\text{g}\cdot\text{l}^{-1}$. Polar fraction was the major constituent (57 - 85%) of total lipid.

Composition and concentration of organic matter play a significant role in influencing the chemical composition of aquatic environment¹. Though lipid forms an important constituent of organic matter, very little is known about its distribution and composition as compared to amino acids and carbohydrates². Lipid content of waters in the Gulf of Mexico^{1,3} and Wadden Sea⁴ is reported.

reported earlier for the Gulf of Mexico^{1,3} and Wadden Sea⁴. Fractionation of lipid (Table 1) revealed that the polar fraction (57 - 85%) was most dominant as compared to aliphatic (6.8 - 18.1%) and ester/aromatic (4.9 - 22.2%) fraction. Each fraction of lipid varied from station to station probably due to differences in the source and solubility.

The data reveal the need for more extensive studies

Table 1—Total Lipid and Its Composition in Surface Waters of Arabian Sea

Date (1983)	St No.	Lat. (N)	Long. (E)	Depth (m)	Total lipid ($\mu\text{g}\cdot\text{l}^{-1}$)	Composition of Lipid					
						Aliphatic		Ester/Aromatic		Polar	
						A	B	A	B	A	B
19 Jan	2569	18° 20'	72° 30'	52	174.19	20.97	12.03	20.97	12.03	129.25	74.20
20 Jan	2573	18° 20'	70° 40'	88	165.71	20.00	12.06	27.14	16.37	114.05	68.82
20 Jan	2575	18° 50'	71° 10'	88	168.33	16.66	9.89	8.33	4.94	141.14	83.84
20 Jan	2578	18° 50'	72° 30'	40	293.33	29.00	6.81	22.22	7.57	250.01	85.23
21 Jan	2580	19° 20'	72° 60'	52	252.50	27.50	10.89	57.50	22.77	163.50	64.75
21 Jan	2584	19° 20'	70° 40'	90	221.53	40.00	18.05	49.23	22.22	127.70	57.65

A = conc. $\mu\text{g}\cdot\text{l}^{-1}$; B = % of total

Surface water samples were collected from 6 stations during 115th cruise of *R V Gaveshani* using stainless steel bucket. Samples were extracted using chloroform¹. The chloroform extracts were pooled and dried over anhydrous sodium sulphate. Chloroform was evaporated at 40°C under reduced pressure and the residue was weighed. It was then dissolved in hexane and fractionated on silica column chromatography⁵ to get aliphatic, ester/aromatic and polar compounds which were concentrated and weighed as above.

Total lipid content varied from 165 - 293 $\mu\text{g}\cdot\text{l}^{-1}$ (Table 1). These values are comparable to those

on the distribution of lipid in the Arabian Sea in order to understand the contribution of anthropogenic/biogenic sources to the lipid pool in seawater.

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