Geosciences Division
Physical Research Laboratory

Tuesday Seminar

Fluorometric detection of dissolved Zinc in seawater

Abstract

"Low Zinc (Zn) concentrations in surface seawater could limit growth of phytoplankton which in turn may limit primary production" – Zinc Hypothesis. Although like Iron (Fe), this hypothesis has not been verified in open oceans through field studies, but cultural experiments show growth of microorganism's (more than 300) is limited by the low concentrations of Zinc. Also, in the oceans, dissolved Zinc (DZn) has a nutrient like vertical profile with a particularly strong correlation with silicate. Checking the Zinc hypothesis (Whether it can limit primary production or not) and understanding its relation with silicon is the contemporary area of interest for many chemical and biological oceanographers. To understand these things one should have a better knowledge on the biogeochemical cycle of Zn which is poorly understood due to the sparse observations in the world Oceans especially in the Indian Ocean. Measuring Zn concentrations in the ocean is highly challenging due to its presence of sub nanomolar levels, high matrix and its ubiquitous nature of contaminating the samples.

In this talk, I will discuss about the sensitive flow injection method which has been established in the lab for the determination of sub nanomolar levels of DZn in seawater using fluorometric detection. Further, the new results on DZn obtained in the North-Eastern Indian Ocean andassociated Zinc biogeochemistry will be presented.

Speaker: Mr. Venkatesh Chinni
SRF, GSDN

Date	Time	Venue
26-July-2016	16:00 hrs	Ground Floor Lecture Hall

All are invited to attend and participate in discussion
Tea at 15:30 hrs

Neeraj Rastogi, Seminar Secretary, Geosciences Division