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HEAVY METALS AND HYDRO BIOLOGICAL ANALYSIS OF RIVER “GANGA” AT HARIDWAR IN DHANPURA VILLAGE (LUXAR)

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ABSTRACT

Heavy metals are important environmental pollutants and many of them are toxic even at very low concentration. Toxic metal contamination of soil, aqueous, waste streams a major environmental and human health problem which is still in need of an effective and a fordable technological solutions large quantities of heavy metals are present in many regions of the globe. These metals include copper magnesium and iron. Many free floating emergent and submerged species have been identified as potential accumulators of heavy metals due to these toxic metals phy-to-toxicity in plants are seen. The water bodies are major life reporting systems facing ecological degradation today due to irrational human inter feryence and unsustainable development keywords heavy metals, dhanpura village.

INTRODUCTION

Industrial effluents are constantly adding up, toxic substances into water bodies at a very high vate, especially in industrial zones. How ever anthropogenic impacts associated with agricultural practices mineral exploration industrial processes and solid waste management are important contribution to heavy metals contamination of natural ecosystems (A ima etcl. 2002). Heavy metals and pesticides further aggravate the situation. The gangas river covers a stretch upto 1 to 5 kms in village site area water in this area are commonly used for agricultural purposes water become necessary to find out the impact of pollution on water sources and examine the hazardous effects on health of human who consume water. Natural quality reflects the type and amount of soluble and insoluble substances with which water has come in contact. Against the background information desire above, the aim of this investigate the levels and causes of heavy metals contamination in water.

MATERIALS AND METHODS

Effluent samples were collected from dhanpura village of haridwar (luxar). Three times during 2005. The sampling was done during 6:00 am in morning hours sample is analyzed to the laboratory of kanya gurukul campus haridiwar. The effluent samples from the sampling locations were collected in well cleaned B.O.D. Bottles or jericanes. Before collection of the samples the bottles were washed with fresh running water. At least finually bottles were tightly closed and brought to the laboratory for further analyses methods by adopting standards methods (APHA (1995). Statistical analysis various methods and graph are used to study and inter prèt the water analysis data copper and iron are analyzed by atomic absorption spectrophotometer (AAS) (ECIL).

RESULTS AND DISCUSSION

The copper in river water at sampling station was minimum 0.02 mg/l 0.00 in the month of February, march in the year 2003-2004, and November in the year 2004-2005, the maximum value of copper was observed 0.67 mg/l 0.00 in the month of September in the years 2004-2005. The average value in the years 2003-2004 was 0.16 mg/l 0.00 and 0.10 mg/l 0.04 in the year 2004-2005.

Iron

The concentration of iron in river at sampling station was observed minimum of 0.17 mg/l 0.00 in January month in the year 2003-2004 and maximum of 0.76 mg/l 0.05 in the month of July in the year 2003-2004. The average value observed in the year 2003-2004 was 0.44 mg/l 0.05 and 0.47 mg/l 0.06 in the year 2004-2005.

Representation of data of Heavy Metals in table 1.1

Heavy Metals	Copper		Iron	
	2003-04	2004-05	2003-04	2004-05
Years				
Month				
January	0.03±0.00	0.03±0.02	0.17±0.00	0.21±0.00
February	0.02±0.00	0.08±0.18	0.32±0.00	0.36±0.12
March	0.02±0.00	0.02±0.02	0.38±0.15	0.35±0.05
April	0.04±0.00	0.05±0.00	0.27±0.00	0.56±0.03
May	0.05±0.00	0.076±0.02	0.52±0.02	0.58±0.06
June	0.05±0.00	0.08±0.05	0.62±0.04	0.63±0.18
July	0.58±0.00	0.36±0.00	0.76±0.05	0.72±0.00
August	0.67±0.00	0.33±0.03	0.64±0.17	0.53±0.05
September	0.06±0.00	0.06±0.5	0.56±0.02	0.69±0.20
October	0.04±0.00	0.03±0.03	0.52±0.00	0.48±0.02
November	0.04±0.00	0.02±0.02	0.37±0.00	0.32±0.02
December	0.27±0.00	0.03±0.00	0.20±0.01	0.21±0.01
Average	0.16±0.00	0.10±0.04	0.44±0.05	0.47±0.06

CONCLUSIONS

Iron deficiency causes in man diabetic, nervous instability, disorder of cartiligenous growth in infants and children. Rheumatid arthritis and anemia. Excess of iron causes haemochromatosis, iron bioaccumulates in living beings, causes rapid increase in respiration, pulse rate, coagulation of blood vessels, hypertension and drowsiness.

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