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Introduction

Wild life plays an important role in eco balance, In fact there are more economical and social importance associated with the wild animals. The use of hair for studying environmental factors and work culture have been explored by many researchers from all over the world, some researchers have established a purest association between hair and the environment[1-3]. Microelements play vital role in the functioning of all living organisms and also in pathological status. Cu, Zn, Mn, Fe, Ca, Ba and many other elements are necessary for animals and in humans [4]. One of the substrata accessible for investigation of these elements are hairs. Feeding habits, external environment and metabolism associated processes leads to the origin of these elements in hair. These elements have been selected for biomonitoring worldwide in global environment monitoring system (GEMS) of the united nations environment programme in EPA 2001[5]. In recent years, elemental study of the hair composition has become the subject of interest for forensic investigation of chronic toxicity due to heavy metals, toxicants, ecological aspects and clinical aspects [6-12].

Many studies have been done on hair for elemental analysis has revealed about the level of trace elements in hair reflects, the degree of environmental concentration like soil, water, food and metabolism. Higher levels of these elements in the environmental concentration like soil, water, food intake and metabolism lead the organism for strong natural selection for tolerance. As environmental contaminants are of

general for any living organism. To achieve this, the soil samples, those have been collected from the ambience of the specific animals that are under study were examined for the quality and quantity of various elements which include the macro and micro nutrients. These samples have been examined for barium, calcium, iron, silicon, titanium and manganese. The soil samples from Indroda and Kankaria region have been examined. Among the soil samples of Indroda region showed no trace of barium, silicon. There were predominantly high concentrations of calcium and iron, less significant quantities of manganese and titanium were noted.

From Table 1 and Figures 1 and 2, it is possible to establish that soil samples from Junagadh region showed significantly higher concentrations of the barium and silicon. These have been much consistent and uniform in all the sample groups. In case of calcium and iron, it has been shown that there was least significant difference in the concentration of these two elements. The same types of the results were available for titanium and manganese as they also did not show much of the significant differences.

In case of hair samples from Indroda and Kankaria Region, it was found to have contained no trace of barium at all, so barium does not have any presence both in the ambient atmosphere and so also in case of hair samples as shown in Figure 3.

In case of iron and calcium that was less significant concentration of these metals was noted. Sulfur and potassium were also found to have in different concentrations in hair samples. This also could not be taken into consideration for the co-relation of elements present in ambient (soil, and the hairs) as shown in detail in Table 2.

In case of Junagadh region, presence of barium was found in significant quantities. The same kind of significant levels of concentrations of barium were observed in the hair samples of animals of this region shown in Figure 4.

The major elements such as iron and calcium were found in higher concentration levels, both in the soil as well as in hair samples of that region. This may not be taken for consideration as they don't show much of significant differences which are showed in detail in Table 3.

References

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