**Macro and Micro elements in Animal Feeds and Natural Mineral Supplements as Indicators of Environmental Pollution**

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**Abstract:**

High mineral levels may lead to toxicity which is a major environmental problem facing human and animal production worldwide. Air and soil pollution are important issues received recently very much concern concern. The presence of heavy metals could indicate the degree of pollution that threatened human and animal's life. The current research aimed to investigate mineral content in different animal feeds as well as natural mineral supplements commonly used by the animal herders in Sudan. Animal feed samples were randomly collected for the purpose of the study from local markets in central Sudan (Khartoum) and western Sudan (El-Obied): alfa-alfa (*Medicago sativa*), groundnut cakes, groundnut hulls, groundnut hay, wheat bran and sorghum (*Feterita*) in addition to salt (NaCl) and lime stone (CaCo3). Samples were subjected to chemical analysis and detailed mineral composition tested using Inductively Coupled Plasma Optical Emission Spectrometry (ICPOES).The results indicated the presence of macro elements in high levels such as Na and K which recorded 431 and 23 g/ kg, respectively in animal feeds. Furthermore, high levels of macro elements mg/ kg: AL (5776), Fe (4889) and Mn (157) were found in animal feeds while, low levels of Cd (0.15), Cr (67) and Pb (10.3) were found in natural mineral supplements. Mineral analysis of animal feeds and natural mineral supplements in the present study showed high values compared to the results obtained from animal feed standard values in Sudan. In conclusion, the presence of heavy metals traces in animal feeds and mineral supplements would be indicators of soil pollution and could cause mineral toxicity/ death during time. شببثؤف mal death or passed to thtuff could contains high levels of toxic minerals which may lead to animal death or passed to thFurther investigation needed to examine the presence of such pollution in animal products mainly milk and meat to trace them back to their sources.

**Key words:** *Macro and micro minerals, mineral supplements, toxicity levels, environmental hazards.*