Comparative Study of Some Environmental Elements (Plants, Water, Soil) Parameters in Regions of North Baghdad.

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- **Abstract:** The current study focused on two plants that are found in great abundance in wetlands, which are Phragmites Australis (Reed) and Ricinus Communis (Castor), which are among the plants that have many uses in various fields. In addition, the focus was on soil and waterbodies in the study area. The main aim of the present study was to compare between some environmental elements (plant, water, soil) by studying and evaluating some physical and chemical properties and the presence of heavy metals. Many chemical and physical properties of plants, soil and water were measured in addition to the use of Flameless Atomic absorption spectrophotometer method by the technique of Graphite Furnace to determine heavy elements (iron, zinc, copper, lead and manganese). SHIMADZU AA7000 Atomic Absorption Spectrophotometer was used for determination of these elements. The results obtained from the current study showed that there are clear significant differences (P< 0.05) for the environmental elements under study, as the study showed that the parameters that were measured differ according to the region, location with all its contents, and the season of the year, as explained in detail in the body of the research. Reed and Castor is a valuable raw material for many products. Each product has specific requirements in terms of stem length, thickness, dryness or freshness, moisture content, ash, and nutrient content. Other factors affecting these plants quality is location, nutrients, climate, harvest frequency, water availability and management.

- **Keywords:** Phragmites Australis, determination, spectrophotometer