



## **Allium Test of Root Growth for Toxicity Assessment as a Standard in Environmental Monitoring of Some Aqueous Sources of Malësia e Madhe<sup>#</sup>**

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**Abstract:** Allium test (*Allium cepa* L.) as a plant bioassay is a short-term and sensitive tool for scoring the effects of water chemicals. The aim of this study was the monitoring of the toxicity degree of some Malësia e Madhe aqueous sources, by measuring macroscopical parameters (length, form, turgescence and change of color) and microscopical parameters (mitotic index MI) of the onion bulb root bundles grown on top of test tubes. Test tubes were filled with water from Dobër wells, Vraka runnel, and Shegan waterside sampling points. Results were compared with test tubes filled with pure tap water from Koplak reservoir (control test), distilled water, CuSO<sub>4</sub> and acetone solutions. It has been observed: a slight bending of root tips in the series of Shegan; bending and brownish of root tips and colour change to slight blue-green in the series of bulbs treated with Cu solution. Rating of samples for root length and MI values was (increasingly): distilled water, CuSO<sub>4</sub> solution, acetone solution, Shegan, Vraka, Dobër: readily lower in Dobër and Vraka, compared to the control test, showing that there is not a relevant root growth inhibition caused by chemical water pollution, acetone and Shegan values were approximate to each-other and significantly different from control test. These are preliminary results and should be followed by further and periodic Allium test investigations especially for organic pollutants of agricultural areas closed to Shkodra Lake and alternative drinking water sources of Malësia e Madhe.

**Key words:** *Allium test, root growth, MI, water pollution*

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