

Naphthoquinones are less common secondary metabolites of some fungi, plants, but also bacteria, usually based on skeleton of 1,4-naphthoquinone. They are very interesting compounds with wide range of biological actions, including antibiotic, antiviral, antifungal, anti-inflammatory, antiproliferative and cytotoxic effects¹. Cytotoxicity is one of the most important properties of naphthoquinones, which is based on generation of reactive oxygen species (ROS), disruption of mitochondrial functions as well as DNA intercalation^{2,3}. Complexes of naphthoquinones with heavy metal ions may represent very interesting possibility of modification of their biological properties. For this purpose, new complexes of lawsone (2-hydroxy-1,4-naphthoquinone) with copper (Cu(II)) were synthesized and subsequently characterized using cell model of suspension cell culture of tobacco BY-2, which is compared to HeLA cells⁴. Submitted work is focused on characterization of the chemically simplest complex - $\text{Cu(Law)}_2(\text{H}_2\text{O})_2 \cdot 1/2\text{H}_2\text{O}$ – using plant cell model of tobacco BY-2 cells.