**Contact Information**

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**Manuscript Information (if applicable)**

Title:

Cadmium-induced changes of *Spirodela polyrhiza* photosynthetic efficiency

Journal:

submitted to Aquatic Toxicology

Authors:

Vesna Peršić, Jasenka Antunović Dunić, Lucija Domjan, Guenther Zellnig, Vera Cesar

**Species Identification Information**

Name Of Species:

*Spirodela polyrhiza* (L.) Schleiden

Morphological Classification was made by professor Jasenka Topić, Faculty of Science, University of Zagreb

<https://www.bib.irb.hr/pretraga/?operators=and|Topi%C4%87,%20Jasenka%20(28612)|text|profile>

Plants were isolated from the As. Spirodelo-Salvinietum natantis (NKS: A.3.2.1.4. Flora Croatica Database). Leaf-like fronds (3-10 mm) with a multiple root system on each frond. A mother frond produces daughter fronds from two meristematic regions several times during growth. Mother and daughter fronds are connected with a stipe, and turions are formed within the mother frond toward the end of the growing season as dormant or overwintering structures.



Photographed in the laboratory, growing on Steinberg nutrient medium

Molecular Classification:

atpF-atpH barcode:

psbK-psbI barcode:

AFLP-Lemna Genotype:

AFLP-Wolffia Genotype:

Other Sequence:

**Species Collection And Cultivation Information**

Date:

2010

Location:

Nature Park Kopački Rit (Special Zoological Reserve) in Eastern Croatia (45° 37′ 51″ N, 18° 53′ 31″ E)

Cultivation Information:

The collected plants were washed thoroughly with mercury chloride followed by 70% ethanol and sterile distilled water. The stock culture was initiated from the surviving individuals and has been maintained aseptically since then on the Pirson-Seidel's nutrient growth medium. The culture was grown in an incubator chamber (Innova R 43, New Brunswick at the University of Osijek, Department of Biology) at 25±1°C under a 16 h photoperiod (70 µmol photons m-2s-1) followed by eight hours in the dark. Since 2015 the stock culture is also maintained on modified Steinberg nutrient solution (pH 5.5, the medium description in Test No. 221: Lemna sp. Growth Inhibition Test, CSN EN ISO 20227, 2017), temperature 25/21 C° and photoperiod 16/8 light/dark (with light intensity in average 120 mol m-2 s-1). Turions are kept in aseptic conditons at 4°C for longer storage. No genetic modifications have been performed on plants.

**To which Duckweed collection are you able to submit your clone?**

(One of the goals of the RDSC is to have its registered clones available to the community to promote research and applications.)

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