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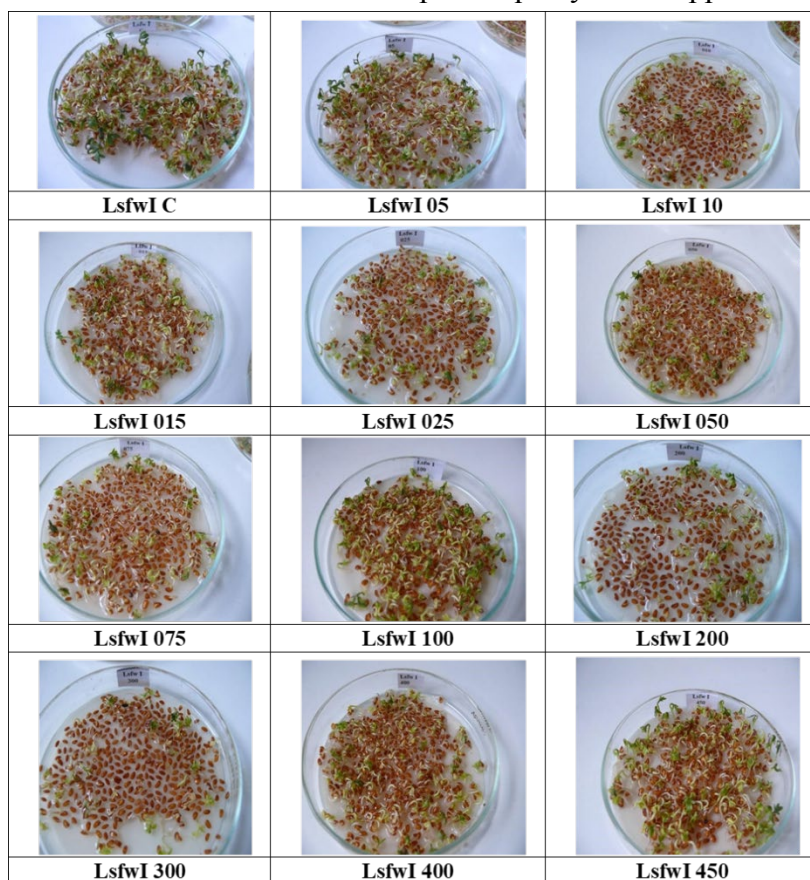
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**EFFECT OF ACTIVATED WATER CREATED BY THE IPS PREMIUM ACTIVE EQUIPMENT AT DIFFERENT FLOW PRESSURES ON THE GERMINATION AND EMERGENCE OF CRESS SEEDS *LEPIDIUM SATIVUM* L.**

**The aim of the experiment** - to determine the effect of activated water created by the IPS Premium Active equipment at 12 water flow pressures on the germination and emergence of cress seeds *Lepidium sativum* L. **Materials and methods** - for water activation we used the IPS Premium Active equipment, which was created by MERCI-M in Slovakia. The equipment ensures water activation using galvanization. We ensured the preparation of water samples at different flow pressures on the equipment developed by the research team. In the experiment, we tested activated water created from fresh tap water (fw) at 12 pressures (Pa), namely 5 Pa, 10 Pa, 15 Pa, 25 Pa, 50 Pa, 75 Pa, 100 Pa, 200 Pa, 300 Pa, 400 Pa and 450 Pa. For testing the samples, we used the seeds of the plant *Lepidium sativum* L. (Ls), which we grew in Petri dishes in laboratory conditions. We evaluated the first evaluation of germination and emergence 4 days after sowing. The control variant in the experiment was water obtained from the tap water without activation. **Results** - the evaluation of seeds and plants (Figure 1) showed that the seeds did not respond equally to the applied samples. Activated water created



at a flow pressure of 300 Pa showed the effect of blocking germination. Activated water samples produced at flow pressures of 10 Pa, 20 Pa, 75 Pa and 200 Pa were shown to slow seed germination. Certain differences were also determined in the other tested samples compared to the control variant. **Conclusions** - When creating activated water with various technical equipment, it is also required to evaluate the flow pressure of the water, which probably can have different specific effects on biological organisms.

**Figure 1** Comparison of the tested variants with activated water created by

the IPS Active equipment at different pressures for the germination and emergence of cress seeds *Lepidium sativum* L. after 4 days from the beginning of the experiment (Photo J. Šimková 2021)