

Supplementary Materials



Figure S1. General view of the containers with the incubation mixture.



Figure S2. Assessment of the phytotoxicity of aqueous extracts of different hydrochar variants on radish (*Raphanus sativus*) seeds.

Table S1. Effect of hydrochar on morphometric indicators of radish seed.

	Germination	Length of Shoots	Length of Roots	Index of the Toxicity Factor
Control	$23 \pm 0.6^*$	34 ± 1.0	61 ± 3.5	
H 180_30	19 ± 1.2	26 ± 1.4	30 ± 2.2	0.63
H 180_60	17 ± 0.9	22 ± 1.3	22 ± 2.1	0.50
H 180_90	19 ± 1.8	33 ± 1.7	60 ± 4.9	0.98
H 200_30	17 ± 1.2	29 ± 1.6	28 ± 2.6	0.66
H 200_60	18 ± 0.9	25 ± 1.4	32 ± 2.3	0.63
H 200_90	21 ± 0.9	33 ± 1.2	47 ± 3.0	0.87
H 220_30	17 ± 2.0	34 ± 2.1	36 ± 3.1	0.80
H 220_60	18 ± 0.9	27 ± 1.3	27 ± 2.2	0.62
H 220_90	16 ± 2.8	32 ± 2.0	27 ± 2.4	0.69

Note: * $\pm$ Standard error.

Soil toxicity was assessed using the formula proposed in [95]:

$$ITF = \frac{TF_0}{TF_c}$$

where TF_0 is the value of the measured parameter in the test treatment, and TF_c is the value in the control treatment.

The following scale was used to assess the toxicity of the factor: toxicity class VI (stimulation)— $ITF > 1.10$; V (normal)— $0.91-1.10$; IV (low toxicity)— $0.71-0.90$; Class III (moderate toxicity)— $0.50-0.70$; Class II (high toxicity)— <0.50 ; Class I (extremely high toxicity)—the environment is unsuitable for the test organism's survival.