Supplementary Information
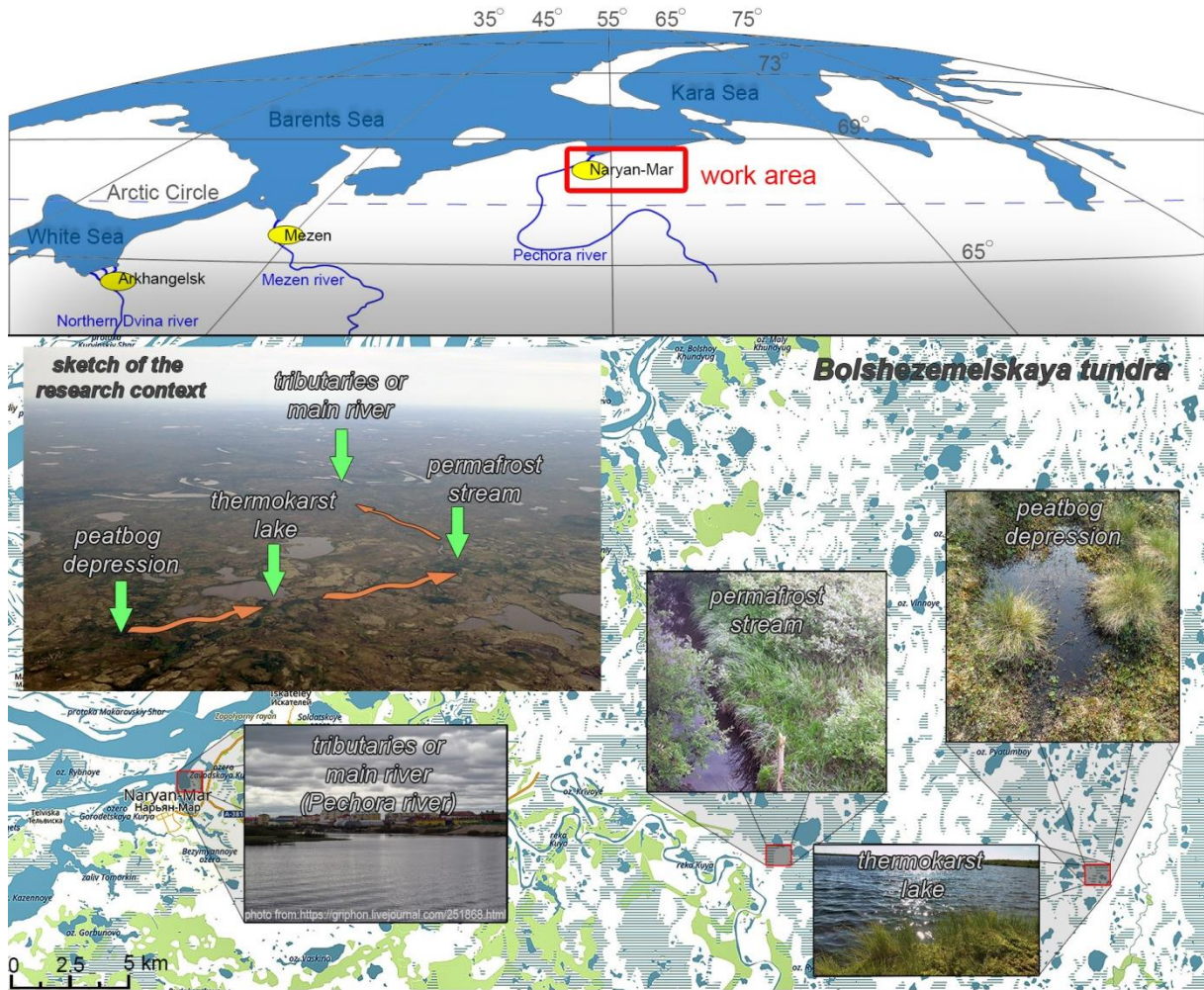
Fig. S1. The map of studied hydrological continuum and ground photos of sampled aquatic systems.

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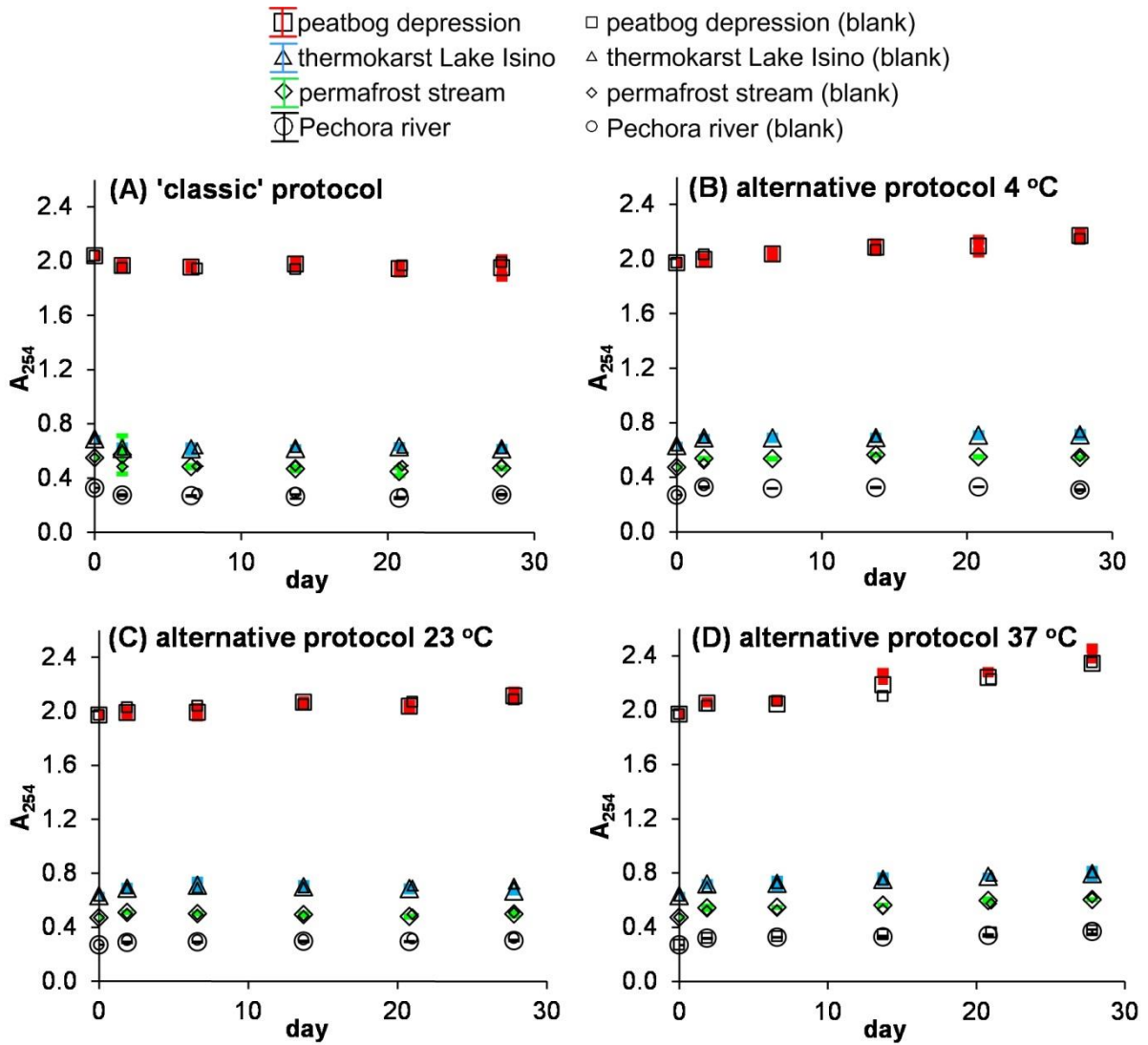
Fig. S2. UV absorbency at 254 nm in biodegradation experiments. The error bars are 1 s.d. of triplicates.

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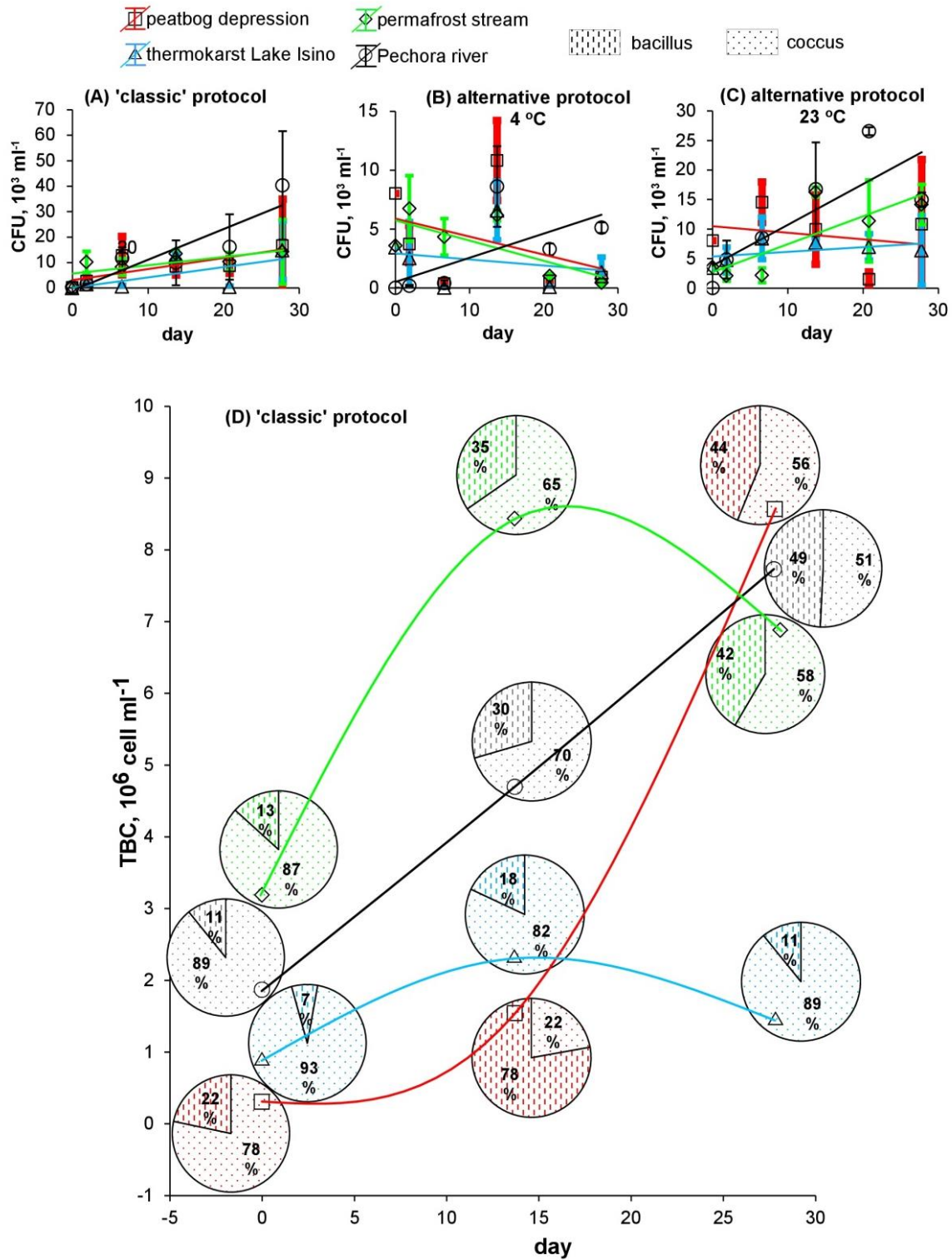
Fig. S3. Number of colony-forming units of oligotrophic bacteria at 23°C in GF/F-filteration
experiment of 'classic' protocol (**A**), at 4°C and 23°C in alternative (3 µm – filtration)
protocol (**B** and **C**, respectively), and total bacterial count (DAPI-based) in GF/F-filtration
experiment (**D**), where bacterial morphological structure (cocci and rods) is shown. The error
bars are 1 s.d. of triplicates.

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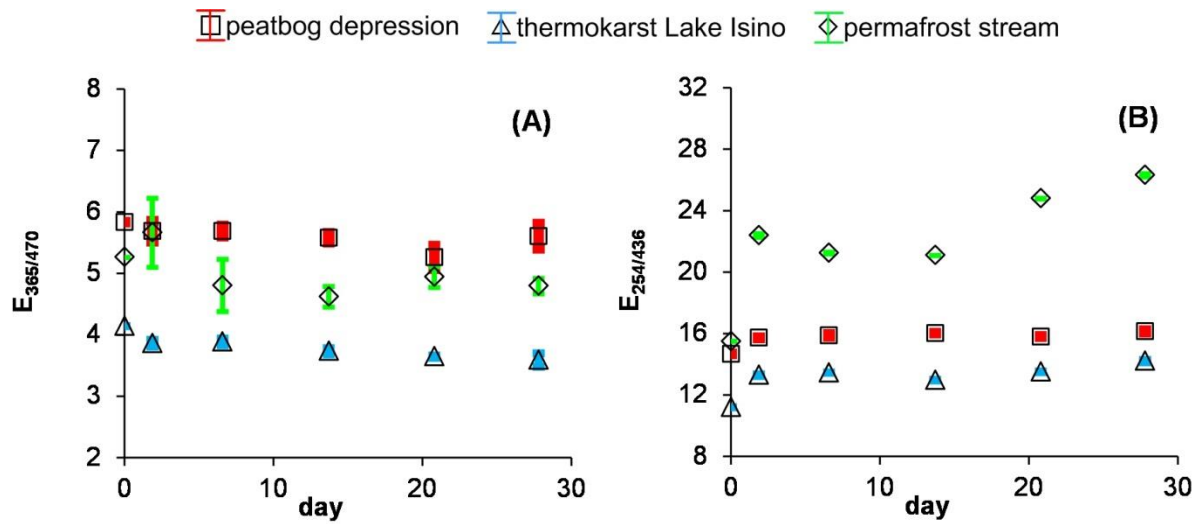
Fig. S4. The optical properties of DOC during photodegrdation experiments: E_{365}/E_{470} ratio

corresponding to UV/vis absorbing functional groups (**A**), and the E_{254}/E_{436} ratio,

corresponding to autochthonous vs. terrestrial DOM (**B**). The error bars are 1 s.d. of

triplicates.

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