

# **Engineered and reusable nanoporous carbons for advanced water treatment.**

## **Final Report FCT. Empower +**

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### **ABSTRACT**

This document reports the activity developed in FCT EMPOWER+ project (2021-2024) in which new high-performing granular activated carbons (GACs), powdered activated carbons (PACs) and reusable magnetic PACs (MPACs) prepared by steam and CO<sub>2</sub> activation of pine nut shells (PNS/Steam and PNS/CO<sub>2</sub> activated carbons) were produced and tested for drinking water treatment towards organic matter, pharmaceutical compounds, microcystin-LR and residual chlorine control.

**Keywords:** Activated carbon adsorption; Novel activated carbons; Drinking water treatment; Point of Use treatment systems; Pharmaceutical compounds control; Residual chlorine removal