

**The LIFE BIOAs project has received funding from the LIFE Programme of the European Union**

### **Newsletter N° 3 - Bio-adsorbents production**

At the Eco Recycling industrial site, located in Civita Castellana (VT), a demonstration campaign is underway aimed at the production of bio-adsorbents using olive pomace as raw material for the process. This campaign is aimed at optimizing and validating the innovative bio-adsorbent production process developed in the project and is also carried out using the prototype designed and built within the project.

**The different steps of the experimental campaign are detailed below:**

#### **HYDROTHERMAL CARBONIZATION TREATMENT**

Olive oil  
pomace and  
iron salt  
collection and  
weighing



Manual  
charging of  
olive oil  
pomace and  
iron salt in the  
reactor



#### **FILTRATION, GRANULATION AND MILLING TREATMENTS**

Filtration and  
manual  
hydro-char  
recovery



Feeding of  
the binder  
and  
granulation



Shredding  
with cone  
mill





**The LIFE BIOAs project has received funding from the LIFE Programme of the European Union**

**Newsletter N° 3 - Bio-adsorbents preparation**



**THERMAL ACTIVATION TREATMENT**

Thermal  
activation of  
granules after  
treatment with  
cone milling



**BIO-ADSORBENTS PRODUCED**



The demonstration campaign started in November 2022, and using the operating conditions optimized up to now, starting from a batch of 16 kg of olive pomace, an average of 5,8 kg of bio-adsorbents are produced.

From the analysis realized at lab scale, the produced bio-adsorbents have an adsorbent capacity of 3,4 g/kg.