

## Laboratory Scale



Wastewater filtration,  
Polyphenols capture by using resins,  
Regeneration of the resins using organic  
solvents



Solvent Evaporation



Final polyphenols purification using  
chromatographic techniques

## Preliminary trials



Rotating screen



Wastewater filtering Trials (rotating screen and bagfilter)



Adsorbent resin column



Solvent evaporation

## Final installation of the polyphenols extraction pilot unit in TEI Crete



Storage tanks containing olive oil mill wastewater



Rotating screen (250 µm)



Wastewater pumping to the second filtration stage



Rotating screen (100µm)



Bagfilter (5 µm)



Wastewater pumping and storage before the polyphenols extraction stage





Polyphenols extraction using selective adsorbance resins



Different views of the pilot unit



Solvent evaporation unit at the University of Athens

## Solid waste treatment



Solid Waste



Processing of waste olive leaves in a solid-liquid extraction vessel

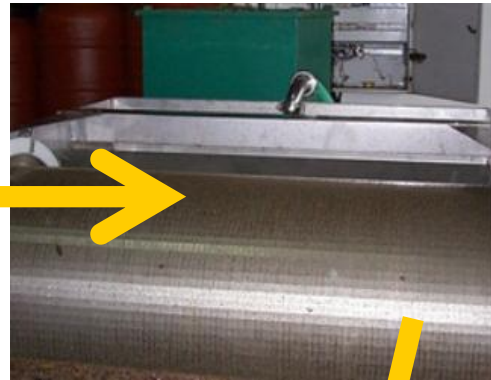


Final formulation of the polyphenols extract in a spray drier

*Schematic presentation of the three major steps of the polyphenols extraction process*



Olive oil mill wastewater from the decanter



filtration



Solvent evaporation - final dry product



Polyphenols extraction



Olive oil mill wastewater evolution through the successive pilot plant process steps (from left to right-final outflow)



## Installation of the composting unit



The evaporation pond filled with wastewater



Shaping the ground



The turner the day it arrived in the plant



The shredder in operation



Introducing wastewater during the compost turning



Compost piles shaping during an open day event



Composting windrows in TEI Crete



Monitoring of the composting operation parameters



**Minutes of the open day event after the Workshop that was held at the Rouva Conference Center at the 30<sup>th</sup> of June 2003**



**Workshop organized at the 30<sup>th</sup> of March 2004 at the Rouva Conference Center**

