



# Process for Upgrade and Recovery Of Polyphenol Extracts

## PUReOPE Outline

PUReOPE (Process for Upgrade and Recovery Of Polyphenol Extracts) provides a unique and innovative methodology for the extraction of high-value polyphenol compounds from process waste in brewing and related sectors. It provides an environmental benefit by reducing effluent volumes and treatment requirements and also a further economic benefit by recovering water and caustic suitable for re-use. It provides valuable compounds from natural resources, which are used in a range of industries, including healthcare and food processing.

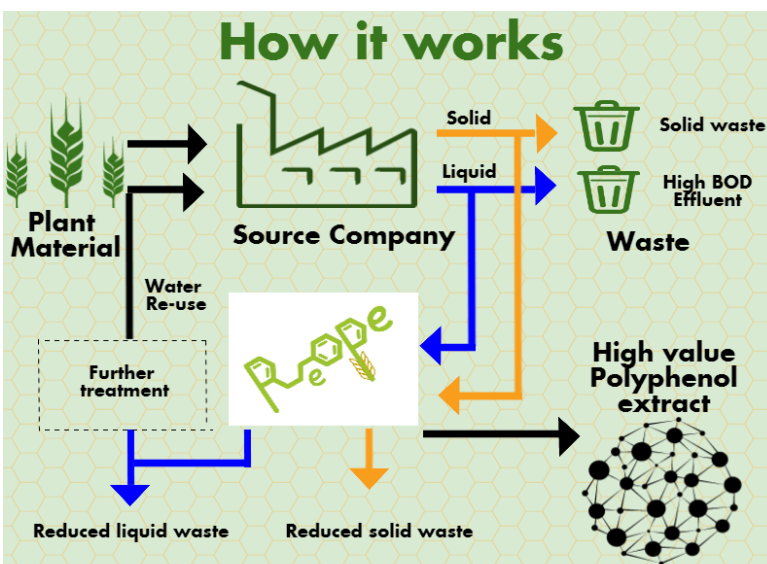
The project objectives are to:

- Develop a business at the centre of which is the recovery of a commercially valuable by-product, polyphenols, while reducing the environmental impact of industrial waste streams from the following sectors: brewing, distilling, malting and cereals production.
- Set up an industrial-scale demonstrator, which will be tested in brewing and distilling and used for volume demonstrations in other sectors. The polyphenols produced will be rigorously assessed for type and purity. A financial and business analysis will be carried out to determine viability. The demonstrator will be used as a reference site for potential clients within the target sectors throughout Europe.
- Address regulatory, technical, financing, source site business case, manufacturing and support barriers limiting the take up of the innovation, in order to exploit markets across Europe and worldwide, with initial focus on the brewing and distilling sectors in Ireland and the UK.

CPL Business Consultants is working with project partners from UK, Denmark and Italy, with expert consultants from Ireland, UK and Germany. The partnership has capabilities to address barriers including regulation, manufacturing, market access, technical development and support, financing and dissemination .



*"PUReOPE aims to develop a commercial process and supply chain able to recover high value polyphenol compounds from process waste streams in the brewing, distilling, malting and associated sectors with the added benefit of reducing the environment impact, energy and water consumption on the source sites"*



## Partners and coordinator

CPL Business Consultants, UK (Partner), FDT Consulting Engineers & Project Managers, Ireland (Coordinator), Exima ApS, Denmark & Italy (Partner).

# PUReOPE Potential

## \$1 Billion

The polyphenol market is projected to reach 1 billion dollars by 2020.



## 5,665 Active Plants



5,665 potential source plants within Europe.

Breweries  
4200

Distilleries  
350

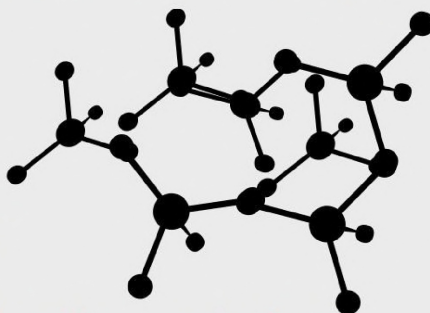
Cereals  
40

Maltsters  
200

## Extraction Scope

Extraction potential from brewing, malting, cereals and distillery plants exceeds,

## 15,000 Tonnes



### Eco Innovation

Where business meets the environment



### Financial Savings



### Reduce

WASTE  
WATER  
ENERGY



Co-funded by the Eco-innovation Initiative of the European Union

### Contact Us

To find out more about PUReOPE contact CPL Business Consultants

#### Tel:

+44 1865 257 057

#### Email:

[info@cplconsult.com](mailto:info@cplconsult.com)

#### Web:

<https://cplconsult.com/PUReOPE>

#### EU Web Archive:

<https://bit.ly/3WSSMQj>

#### Twitter:

[Twitter.com/PUReOPE](https://twitter.com/PUReOPE)

### Our Project Partners



# EXIMA



consulting engineers  
and project managers