



## Saponification pre-treatment and biosensors based control system for slaughterhouse waste anaerobic digestion improvement

ADAW project is co-funded by the European Commission in the Seventh Framework Programme FP7 - for the benefit of SMEs. Eight partners from different European Member States are involved in this 24-month project (1<sup>st</sup> March 2013 to 28<sup>th</sup> February 2015).

European slaughterhouses produce large amounts of different wastes and wastewaters causing ecological problems when direct disposal into the sewerage system without pre-treatment.

The European Regulation led to a drastic limitation of their management options, and as a consequence an increase in total slaughtering industry costs. EU slaughterhouse holders need new solutions with improved cost-efficiency to treat wastes and accomplish with EU regulations (Directive 1069/2009 and 142/2011).

ADAW solution focuses on a technology which allows the adequate management and valorisation of organic wastes with high content of proteins and lipids by anaerobic digestion processes through the development of ultrasonic sonication and saponification pre-treatments, and the implementation of an advanced measuring and control system.

### Anaerobic Digestion for Animal Waste aims at ...

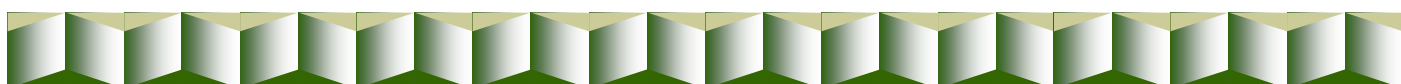
Developing an optimised Anaerobic Digestion process for lipid rich material that will permit a more cost-effective solution to treat slaughterhouses wastes and also allow biogas plants operators to feed a high biomethanisation feedstock to their installations by:

- ✓ Improving biogas yields by introducing a saponification pre-treatment, unifying saponification and sterilization processes already required to treat slaughterhouse waste before Anaerobic Digestion.
- ✓ Improving biogas yields by selecting specific bacteria population.
- ✓ Improving biogas yields by an advanced control system for real time monitoring.

### And brings advantages to various actors in the slaughtering industry and especially for ...

**Slaughterhouse operators** (small and medium size) who will benefit from an alternative solution for waste by integrating a farm scale biogas plant in their facilities without a large investment.

**Commercial biogas holders** who will be able to use also slaughterhouse wastes as a potential energy source.





# ADAW

PROJECT

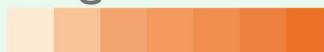
Anaerobic Digestion for Animal Waste



## ADAW Partners:

**BIOGAS FUEL CELL, S.A.**  
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biogas fuel cell



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**ELECTROCHEMICAL SENSOR  
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