

Nutrient removal and value added product formation from wastes via struvite precipitation

Fact Sheet

Project Information

STRUVITE

Grant agreement ID: 230788

Status

Closed project

Start date

1 February 2009


End date

31 January 2011

Funded under
FP7-PEOPLE

Overall budget
€ 0

EU contribution
€ 32 400

Coordinated by
**MIDDLE EAST TECHNICAL
UNIVERSITY**
 Turkey

Objective

The major goal of the proposed research is the investigation of the applicability of struvite precipitation technique (SPT) separately or coupled with in an anaerobic digester for recovering nutrients from the anaerobic digestion process (ADP) residues. Optimising SPT will not only improve the performance of ADP which is the most commonly used process for disposing many agro-industrial wastes, in terms of reduced the nutrient (nitrogen and phosphorus) loads discharged to natural aquatic environments, but also lead production of a value-added product in the form of struvite fertilizer. Nutrient recovery from sewage sludge and other organic solid wastes in the form struvite has become the focus of many research studies because of limited phosphorus (P) rock reserves, which are mainly exploited for the production of fertilizers, in the world. There are many additional benefits of recovering nutrients during the anaerobic digestion of the organics by fixing N and P as follows; • controlling struvite formation within the digester may prevent the undesired

controlling struvite formation within the digester may prevent the undesired accumulation of struvite, which causes problems in the hydraulic works, • enrichment of the anaerobic sludge produced in huge amounts in terms of N and P and improvement of its fertilizer quality, • avoiding the nutrient removal requirement of the effluent from anaerobic digesters, which contains usually higher concentrations of N and P than discharge limits, • making the digestion process more self sustainable in terms of avoiding different pretreatment techniques for N and P, • more widespread use of anaerobic biotechnology due to better performance in terms of nitrogen and phosphorus, • reduced oxygen demand in the receiving water bodies, • reduced eutrophication risks in the lakes, etc.

Field of science

/natural sciences/chemical sciences/inorganic chemistry/inorganic compounds

Programme(s)

Topic(s)

Call for proposal

FP7-PEOPLE-IRSES-2008

Funding Scheme

MC-IRSES - International research staff exchange scheme (IRSES)

Coordinator



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Activity type

**Higher or Secondary
Education Establishments**

[Contact the organisation](#) 

EU contribution

€ 32 400

Last update: 16 July 2019

Record number: 90386

Permalink: <https://cordis.europa.eu/project/id/230788/>

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