Bio-electrochemically-assisted recovery of valuable resources from urine

From 2012-09-01 to 2016-08-31, closed project | VALUEFROMURINE Website

Project details

<table>
<thead>
<tr>
<th>Total cost:</th>
<th>Topic(s):</th>
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<tbody>
<tr>
<td>EUR 3 795 008,41</td>
<td>ENV.2012.6.3-1 - Innovative resource efficient technologies, processes and services</td>
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<thead>
<tr>
<th>EU contribution:</th>
<th>Call for proposal:</th>
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<tbody>
<tr>
<td>EUR 2 861 021,92</td>
<td>FP7-ENV-2012-two-stage</td>
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<th>Coordinated in:</th>
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<tr>
<td>Netherlands</td>
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<th>Funding scheme:</th>
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<tr>
<td>CP - Collaborative project (generic)</td>
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Objective

The bio-electrochemically-assisted recovery of valuable resources from urine (ValueFromUrine) project will develop, optimize and evaluate an innovative bio-electrochemical system that allows for the recovery of phosphorus (P), ammonia (NH3) and electricity (E) or hydrogen from urine. The innovative principle is that biological oxidation of organics (present in urine) at a bio-anode drives both the transport of ammonium over a membrane (which allows the recovery of NH3) and the production of alkalinity (which can be utilized for the precipitation of P-salts).

Toilets and urinals that collect urine separately from other wastewater streams, are increasingly being installed in newly constructed utility buildings or during renovation of old buildings. Unlike any state-of-the art technology, the ValueFromUrine technology not only has the potential to recover over 95% of the P and NH3 from urine, but also to produce chemicals (NaOH, KOH) and energy. The ValueFromUrine consortium is made up of complementary knowledge institutes, SMEs and industry partner, each of them leading in one or more relevant fields (electrochemistry, membrane technology, microbiology, micro-pollutants and decentralized wastewater treatment). Moreover, all commercial partners have experience in the validation of new technologies. The participating SMEs have a key function in the consortium, which is reflected by the fact that 41% of the requested funding will go to the SMEs for research and technology development.

Related information

<table>
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<tr>
<th>Result In Brief</th>
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<tbody>
<tr>
<td>An end to pouring urine down the drain</td>
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<th>Report Summaries</th>
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<tr>
<td>Final Report Summary - VALUEFROMURINE (Bio-electrochemically-assisted recovery of valuable resources from urine)</td>
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</table>
Coordinator

STICHTING WETSUS, EUROPEAN CENTRE OF EXCELLENCE FOR SUSTAINABLE WATER TECHNOLOGY
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**EU contribution:** EUR 801 954,36

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EU contribution: EUR 280 943

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EU contribution: EUR 474 774,14

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EU contribution: EUR 482 869,80

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EU contribution: EUR 131 943,48

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**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

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**Subjects**

Scientific Research

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