

SEPARATE WASTE SYSTEMS HIGH-QUALITY PRODUCTS FROM WASTE

SEPARATE Waste Systems enable the efficient separation of MSW, separately collected bio-waste and mono-streams into a very clean organic fraction and a non-organic rest fraction.

At the heart of the SEPARATE waste system is an innovative hydraulic press that achieves highest separation efficiency (98%). Under the high pressure, the soluble organic matter behaves like a liquid and is separated from the dry fraction. The organic fraction is further cleaned to limit the remaining impurities such as plastics and inert materials to less than 0.5% of the total organic matter.

The result is a homogenous paste that is perfectly suitable for anaerobic digestion and ensures low maintenance costs of the digesters. The cell structures of this organic material are broken up whereby a high gas yield with shorter retention times can be achieved. Short retention times are of economic importance as they reduce the investment costs for the digestors.

KEY ADVANTAGES

- Optimal use of organic matter due to high separation efficiency (98%)
- Lower maintenance costs and improved digester performance (<0.5% plastic and inert material remain in organic fraction)
- More gas yield per input unit due to broken cell structures of organic matter
- Lower investment costs through shorter retention times

HIGH-QUALITY PRODUCTS

- BIOGAS
- COMPOST
- RECYCLABLES
- HIGH QUALITY RDF



A EUROPEAN PROJECT TEAM



db technologies
db technologies BV
The Netherlands



Greenovate! sprl
Belgium



Entsorgung-Gesellschaft
Westmünsterland GmbH
Germany



Opportunity Peterborough
United Kingdom

www.separate-wastesystems.eu

SEPARATE stands for "Enabling market uptake of innovative separation and cleaning solutions for material recycling of all product groups contained in bio-waste and MSW". The SEPARATE project carries out on-the-spot tests of different waste streams and analyses the quality and characteristics of the waste streams that have been separated with the new technology. The results of the analysis are certified by renowned institutes and laboratories in the test countries.

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QUALITY PRODUCTS FROM WASTE THROUGH EFFICIENT WASTE SEPARATION

SEPARATE WASTE SYSTEMS
QUALITY PRODUCTS FROM WASTE

ENABLING HIGH-QUALITY RECYCLING OF BIO-WASTE

Bio-waste can be valorised twice: through capture and use of the biogas emanating from anaerobic digestion and through the preparation of the organic matter into high-quality compost and fertiliser. However, despite the great potential for more bio-waste recycling, the recycling rates of bio-waste fall behind the steadily growing rates of material recycling. Today, the majority of the 88 million tonnes of bio-waste that Europe produces each year is still lost through landfilling (40%) and incineration (20%).

On the policy side, this low performance can be attributed to the absence of an EU-wide obligation to recycle bio-waste and the lack of common quality standards for compost / digestate. On the practical side, the main obstacle for bio-waste recycling appears to be the difficulty of effectively separating bio-waste from other waste fractions and the impurity of the organic matter, even from separate collection, which causes problems for anaerobic digestion.

Efficient separation and purification of bio-waste is thus a key enabler for high-quality recycling of organic material perfectly suitable for anaerobic digestion and fertiliser production.

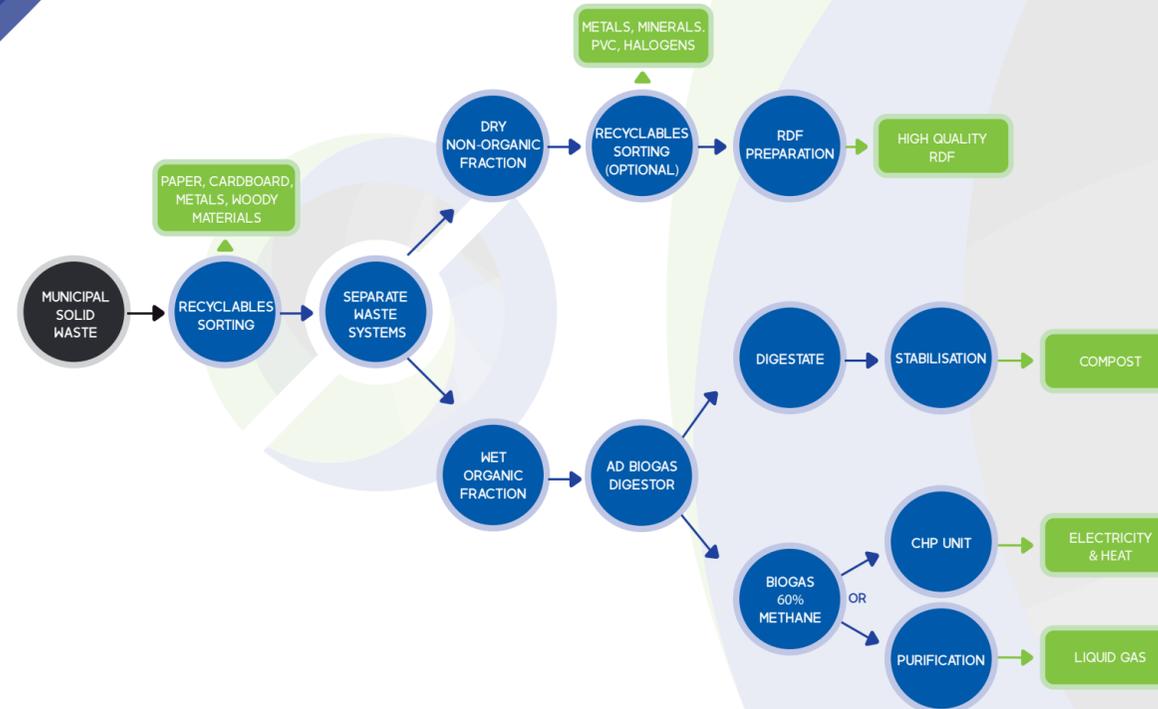
The European eco-innovation project 'SEPARATE' supports the market entry of an innovative separation and cleaning technology that separates organics from non-organic waste with an efficiency of more than 98%. With the help of a mobile testing unit, the SEPARATE project will carry out on-the-spot tests of different waste streams (MSW, separately collected bio-waste and mono-streams) in five European countries. SEPARATE will analyse the quality and characteristics of the waste streams that have been separated with the new technology with regard to quality of the organic feedstock, substances contained and eventual suitability for composting. The results of the analysis will be certified by renowned institutes and laboratories in the test countries.



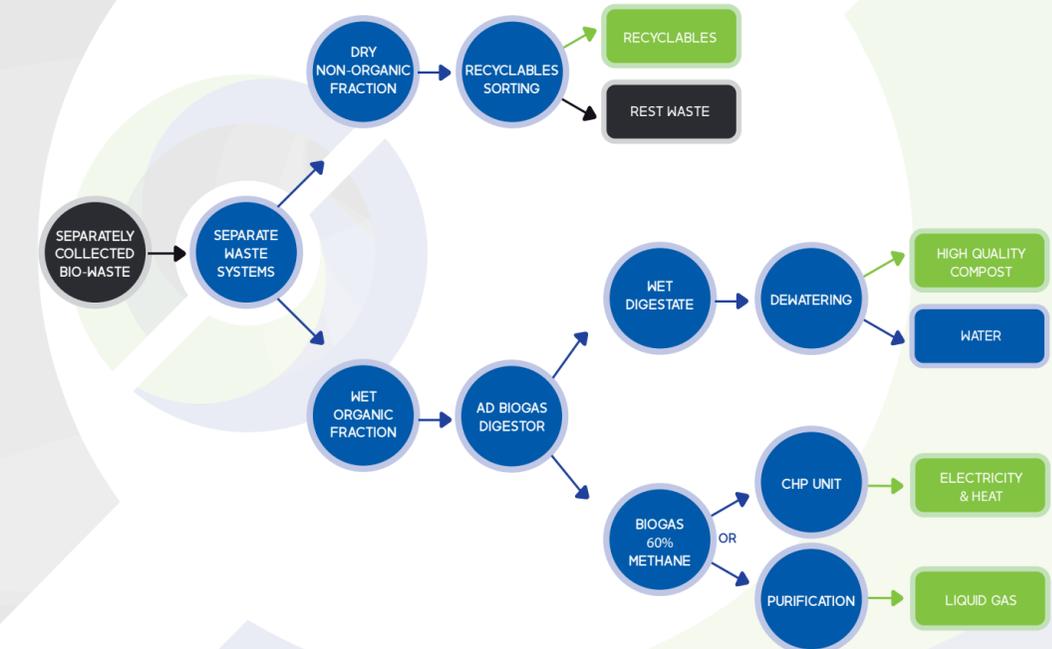
“Bio-waste’ means biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises and comparable waste from food processing plants.”

Directive 2008/98/EC on waste and repealing certain directives (2008)

SEPARATE WASTE SYSTEMS FOR TREATMENT OF MUNICIPAL SOLID WASTE (MSW)



SEPARATE WASTE SYSTEMS FOR TREATMENT OF SEPARATELY COLLECTED BIO-WASTE



● WASTE
● END PRODUCT
MSW = Municipal Solid Waste
AD = anaerobic digestion
CHP = combined heat and power