

Monsal* advanced digestion technology (ADT) HPD process*

advanced anaerobic digestion for food waste

overview

Food waste is increasingly becoming a resource instead of a waste going to disposal. Organic material contained within leftover food waste collected from homes, from food manufacturers and restaurants represents a significant sustainable energy source. When treated by anaerobic digestion, it produces a methane rich biogas and a nutrient rich fertilizer. Rather than disposing of organic food waste to landfill with the resultant greenhouse gas emissions, biogas from anaerobic digestion of organics can be used to either generate electricity and heat, bio-methane or even be compressed for vehicle fuel.

benefits

Monsal ADT Hydrolysis Pasteurization Digestion (HPD) Process offers the following benefits:

- High efficiency advanced anaerobic digestion with over 80% conversion of COD to biogas.
- Proven robust and long life system
- Low digester retention times
- Modular and scalable design capable of treating small to large flows
- Fully integrated design with process control to operate 24/7 in full automatic.
- Production of a nutrient rich, high quality digestate, either liquid or dewatered cake capable of being beneficially utilized.



Figure 1: Monsal ADT HPD Plant

- Integrated pasteurization process using Monsal 70 system to comply with all local legislative drivers.
- Widest range of feedstocks including source segregated food waste, commercial and industrial wastes and organic slurries.

applications

The Monsal ADT HPD process treats a wide range of food waste including;

- Commercial waste from restaurants & cafeterias
- Waste from food manufacturing including packaging
- Liquid wastes and slurries
- Slaughterhouse waste and many more

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Figure 2: Monsal ADT for Food Waste

high efficiency digestion

The Monsal Advance Digestion Technology HPD Process (Figures 1 and 2) is a 2-stage biological process which can include a hydrolysis stage if required and achieves high efficiency conversion of food waste to biogas. Greater conversion of organic material results in a number of benefits:

- Higher biogas yields
- Stabilized digestate
- Shorter retention times
- Lower carbon footprint

The process is fully automated and comprises the whole integrated anaerobic digestion process.

improved performance

A two-stage biological treatment stage delivers higher conversion of volatile organic matter (80% to 90%), ensuring maximum biogas production and a well stabilized final product.

Where pasteurization is required, the Monsal 70System will produce an end product free from harmful pathogens, even from slaughterhouse feed wastes.

If required digestate can be dewatered to produce a cake of 25% to 35% dry solids and a treated effluent stream to meet any discharge requirement.

more information

If you would like to learn more about how SUEZ can provide advanced anaerobic digestion for your food waste, contact your local SUEZ representative or visit us at our website www.suezwatertechnologies.com.