

# MSAD: *Methanosarcina* detection and addition for optimised anaerobic digestion

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## Summary

Anaerobic digestion (AD) is a complex biological process whereby organic waste is broken down to produce biogas. This project will demonstrate the potential of *Methanosarcina* as an inoculant for the AD industry and develop an optimised method for detection.

## Aims

- Trial the use of *Methanosarcina*, a promising methane producing microbe, as an inoculant for AD improvement.
- Determine an assay for simple measurement of *Methanosarcina* as an indicator of AD health.

## Outcomes

- Identified that the presence of *Methanosarcina*, a methane producing archaea, has correlated with higher biogas yield within AD systems.
- Demonstrated that *Methanosarcina* can remain colonised within the system and contribute to methane production from the breakdown of the waste.

