

Sampling of Digestate

Site	Much Hadem	SOP Number	003
Date of Last Review	05/03/2025	Work Activity	Tanker Unloading
Task Location	AD plant- waste reception area.	Associated Risk Assessment	Sampling of Digestate

Personal Protective Equipment Requirements

- ✓ High Viz Vest
- ✓ Safety Boots
- ✓ Gloves



Foreseeable Hazards

- ✓ Moving Vehicles
- ✓ Pedestrians
- ✓ Animal by-products
- ✓ Spillages



Sampling of Digestate

Training and Competence

To offload tankers, the operative must have had appropriate training in tanker offloading procedures and waste acceptance procedures.

Legislative Requirements

- Provision and Use of Work Equipment 1998
- Health and Safety at Work Act 1974
- Management of Health and Safety at Work Regulations 1999
- Animal By Products Regulations 2005
- Control of Substances Hazardous to Health 2005
- Environmental Permitting (England and Wales) Regulations 2016

Safe Operating Procedure

Sampling of Digestate

Sampling of whole digestate is carried out annually in accordance using the test suite specified in the PAS 110 Standard. The sampling is carried out on the whole digestate only.

Sampling for measurement of digestate stability all be carried out at the end of the digestion process and prior to dispatch of digestate from the site of production.

Representative sample of the whole digestate can collected form the digestate sampling line located along the digestate production system.

The sampling is carried after full treatment, when the digestate is ready to use. The sampling line is flushed prior to taking a sample.

For each sample, the operator shall record, keep a copy of and inform the laboratory of:

- sampling date;
- sample type (whole digestate, separated liquor or separated fibre, as applicable);
- code for, or reference to, the sampled batch or portion of production;
- digestion facility name; and
- name of the person who carried out the sampling.

Each sample is tested in order to demonstrate compliance equivalent to PAS110 and shall be tested by a laboratory that has no conflict of interest with the producer.

Digestate is sampled annually from the Digestate Lagoon for the full PAS110 suite, including the following determinants (upper limits permitted):

- Potentially Toxic Elements (PTEs): Cadmium (0.48 mg/kg); Chromium (32 mg/kg); Copper (64 mg/kg); Lead (64 mg/kg); Mercury (0.32 mg/kg); Nickel (16 mg/kg); and Zinc (128 mg/kg).
- Stability: Volatile Fatty Acids (VFAs) (0.774 g VS)
- Physical Contaminants (>2mm): Plastics, Glass, Metals & Others (Total: <0.14 kg/tonne); Sharps (Zero) and Stones >5mm (12.8 kg/tonne).
- Other Parameters: Oven Dry Matter, Loss on Ignition, Total Nitrogen, Ammoniacal Nitrogen, Total Phosphorus, Total Potassium, Total Magnesium and Pathogens (salmonella & E. coli).

Sampling of Digestate

	<p>Digestate is sampled from the Pasteuriser on a monthly basis for pathogens only (upper limits permitted by APHA):</p> <ul style="list-style-type: none">• Salmonella (Zero)• E.coli (<10 CFU/g)
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