FAQ: How BKTH's N-Halamine Slurry & Spray Are Used in Food-Waste Digesters

Is BKTH's N-halamine slurry added directly into the digester?

Yes. BKTH's N-halamine slurry is **introduced directly into the digester at controlled, low concentrations** designed to **support odor and ammonia management without disrupting biological digestion**.

The slurry dosage is intentionally kept below thresholds that would interfere with microbial activity, enabling it to function **alongside existing biological controls**, not replace them.

How does the slurry work inside the digester?

When added at controlled levels, the slurry helps:

- **Reduce ammonia volatility** as nitrogen-rich food waste breaks down
- **Interrupt odor-forming chemical pathways**
- **Stabilize emission behavior** during digestion

The goal is **emission moderation**, not sterilization or biological inhibition.

Does adding the slurry harm digester biology?

No. The slurry is applied at **non-disruptive concentrations**, and its use is designed to:

- Preserve active digestion microorganisms
- Maintain gas production and digestion efficiency
- Avoid shock loading or biological upset

This makes it compatible with both anaerobic and hybrid digestion systems.

When are BKTH spray treatments used?

BKTH spray treatments are applied **outside active digestion periods and zones**, including:

- During scheduled digester downtime
- Inside digester rooms and enclosures
- On internal surfaces when the system is offline
- On the **exterior of tanks and processing vessels**

This timing ensures **maximum odor and ammonia control** without affecting active digestion.

Why spray during downtime instead of continuous operation?

Spraying during downtime:

- Avoids interference with digestion biology
- Targets accumulated odor- and ammonia-producing residues
- Resets surface conditions before restart
- Improves air quality for operators and maintenance staff

This approach mirrors best practices already used for sanitation and maintenance cycles.

Why treat both inside the digester and surrounding areas?

Food-waste digesters produce emissions through **multiple pathways**, including:

- Internal digestion chemistry
- Residue on internal surfaces
- Air movement in digester rooms
- Tank exteriors and penetrations

Treating **only one area** often leaves odor and ammonia sources unaddressed. BKTH's approach targets:

- Internal chemical contributors (slurry)
- Surface and ambient contributors (spray)

Why use both slurry and spray instead of one method?

Because ammonia and odor are **not single-source problems**.

- **Slurry** provides ongoing control inside the digestion environment
- **Spray** delivers rapid, surface-level mitigation and room-scale benefit

Together, they form a **layered mitigation strategy** that is more reliable than single-point controls.

How does this compare to traditional odor control systems?

Traditional systems often rely on:

- Ventilation alone
- External scrubbers
- Delayed biofilter responses

BKTH's slurry and spray:

- Act closer to the source
- Reduce load on downstream systems
- Improve overall odor control efficiency
- Deploy without major infrastructure changes

They are designed to **complement**, not replace, existing controls.

Is this approach suitable for pilot projects?

Yes. This approach is particularly well-suited for pilots because it:

- Can be implemented quickly
- Requires minimal system modification
- Allows direct observation of improvements
- Generates meaningful operational data

This makes it ideal for early-stage validation and scale-up planning.

Does this approach transfer to other markets?

Yes. The ammonia chemistry addressed here is the same chemistry found in:

- Manure digestion
- Dairy bedding systems
- Agricultural storage and housing
- Organic waste processing facilities

This allows knowledge transfer across food-waste and agricultural verticals.

CLOSING THOUGHTS

BKTH's integrated slurry and spray strategy is designed to manage ammonia and odor where they originate—inside digestion environments, on surfaces, and in surrounding infrastructure—while preserving biological performance and operational stability.
