The Bugman
AQUAFIX Inc.
Innovations in wastewater treatment.
1.888.757.9577 • www.teamaquafix.com • bugman@teamaquafix.com

TECHNICAL UPDATE

AQUABACxt

AQUABACxt is a highly effective, US EPA-registered biological larvicide. It contains a species of bacteria called bacillus thuringiensis, an approved pesticide for controlling red worms and midge flies in wastewater treatment plants.

Midge flies, or chronomids, exist naturally all across the world and find their way into wastewater plants to reproduce, so that their young, red worms, can feed on sludge and bacteria. After 10-14 days the redworm grows into the adult midge fly and the cycle repeats.

Wastewater Impact

Operators often comment that the redworms' feeding is causing their mixed liquor to disappear, even though they've stopped wasting. This can cause ammonia spikes and poor BOD removal. The worms can also cause sludge in the secondary clarifiers to become stringy and clumpy. On top of these serious operational issues, the flies are a nuisance, especially when trapped in an enclosed area, like a secondary clarifier or UV room.

AQUABACxt is quick and efficient; it typically knocks back redworms by 80-90%. To boost the effectiveness of AQUABACxt we focus on getting contact with the maximum number of worms. If there is sludge built up, or the worms are cocooning (wrapping themselves in sludge blankets), we recommend BugJuice to take away the sludge barriers and increase contact with these worms. If the worms have taken a toll on your mixed liquor, VitaStim Rebuild can quickly get your solids inventory back up.

**There is no LC_{50} for aquatic organisms except for mosquito larvae. Organisms other than nuisance flies and midges, Psychoda, Chironomus, and Chironomine are not affected by the product. Minnows, fish, Daphnia, and even other aquatic insects can't be killed by the toxin in the formulation. AQUABACxt is specific to mosquito, blackfly, and midge larvae and again is not toxic to anything in the application sites except the larvae of these targets. The LC_{50} against susceptible mosquito larvae averages 0.15 micrograms per milliliter.*

The Bugman AQUAFIX Inc.
Innovations in wastewater treatment.
1.888.757.9577 • www.teamaquafix.com • bugman@teamaquafix.com

TECHNICAL UPDATE

DOSE RATE

Wastewater Plant Dosing

Flow Rate Gallons per day	**Super Dose** Twice a week for 1-2 weeks	**Initial Dose** Twice a week for 2 weeks	**Maintenance Dose** Once per week for 2 months
10,000 GPD	0.5pt or 8oz	4oz	2oz
50,000 GPD	1qt or 2pt	1pt	8oz
100,000 GPD	0.5gal	1qt.	1pt.
200,000 GPD	1gal	2qt.	2pt.
300,000 GPD	1.5gal	3qt.	3pt.
400,000 GPD	2gal	4qt.	4pt.
500,000 GPD	2.5gal	5qt.	5pt.
600,000 GPD	3gal	6qt.	6pt.
700,000 GPD	3.5gal	7qt.	7pt.
800,000 GPD	4gal	8qt.	8pt.
900,000 GPD	4.5gal	9qt.	9pt.
1,000,000 GPD	5gal	10qt.	10pt.

Add the required dose in one slug, no need to meter in. The dose is added where the worms are the worst, typically the secondary clarifiers. If the worms are bad in other areas, split the dose up and add to the other areas as well.

Extra Tip: If midge worms are sticking around, apply a low dose of 5% bleach in the return lines before applying AQUABACxt. Dose 2 gallon per 100,000 gallons of water in the return lines.

Wastewater Lagoon Dosing

Lagoon Size	**Initial Dose** Once a week for 4 weeks	**Maintenance Dose** Once a week for 2 months
1 Acres	2.5 gal	1 gal
4 Acres	10 gal	4 gal
8 Acres	20 gal	8 gal