

Valent Biosciences Corporation

How May We Help You?

Focus is on building the strongest portfolio of
target-specific, biorational solutions
to protect public health

Customer Centric Process helps provide
the Right Product in the Right Habitat
for the Right Mosquito

Naturally occurring soil bacteria

- *Bacillus thuringiensis* subspecies *israelensis* (Bti) strain AM65-52 and strain SA3A
- *Bacillus sphaericus* 2362 (Bs) strain ABTS-1743

The science of specificity

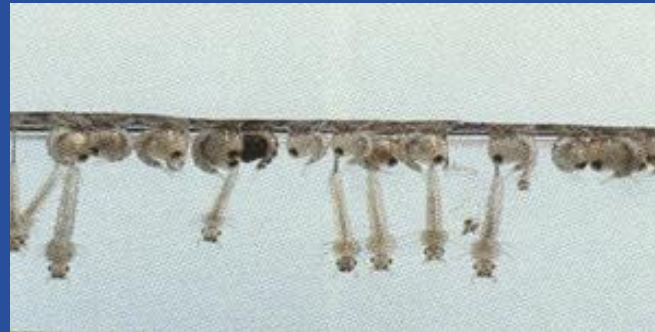


Larviciding Philosophy



The larvae live in water where they feed on microorganisms. The larvae have long breathing tubes at the posterior end.

The majority of the life cycle of a mosquito is spent in the water as larvae and pupae. The adults only live for a short time.



CIA Factors of Larviciding

Control Mosquitoes when they are

- Concentrated
- Immobile
- Accessible

Mosquito Abatement in a Changing World,
William Horsfall, JAMCA, 1985





Larviciding Logic

- 1 Acre = 500,000 Dippers
- 10 Larvae/Dip = 5,000,000 Larvae /Acre
- 1000 Acres of This!!

Larviciding Logic

- 1000 acre site
- 15 mile flight range
- 90 degree downwind spread
- 5 billion mosquitoes dispersed over 72,000 acres

VectoBac[®]
BIOLOGICAL LARVICIDE

Teknar[®]
BIOLOGICAL LARVICIDE

Active Ingredient

Bacillus thuringiensis subsp. *israelensis*
Strain AM65-52 & SA3A

VectoLex[®]
BIOLOGICAL LARVICIDE

Active Ingredient
Bacillus sphaericus 2362
Strain ABTS-1743

VectoBac® & VectoLex®

Strain Specificity

Bacterial products such as *Bti* and *Bs* are like all living organisms

The manufacturer's unique strain number is a critical link to product performance and quality expectations

VectoBac® Formulations

- VectoBac G
- VectoBac GS
- VectoBac WDG
- VectoBac 12AS



VectoLex[®] Formulations

- VectoLex CG



- VectoLex WDG



- VectoLex WSP



VectoMax[®]
BIOLOGICAL LARVICIDE

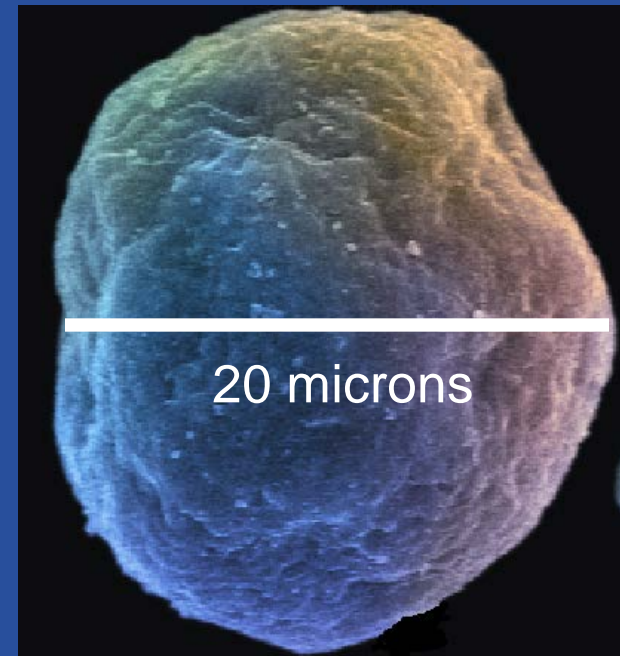
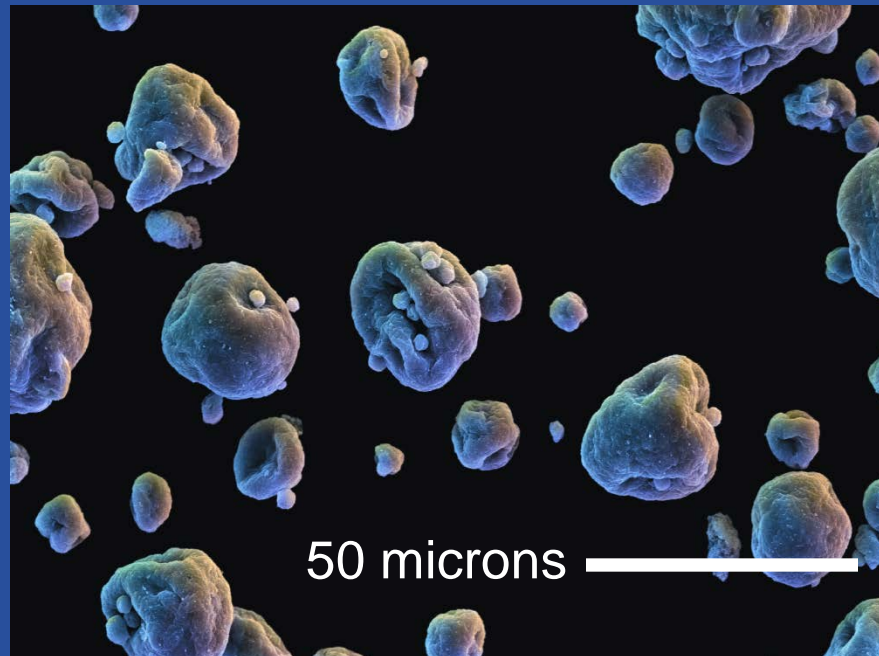
Active Ingredient

Bti, Strain AM65-52 +
Bs 2362, Strain ABTS-1743

BioFuse™ Technology

- Manufactured using proprietary formulation technology that combines *Bti* and *Bsph* in a specific toxin ratio into every micro particle

100 microns = average diameter of human hair









VectoMax® Formulations

- VectoMax CG



- VectoMax WSP



VectoBac® BIOLOGICAL LARVICIDE	Teknar® BIOLOGICAL LARVICIDE	VectoLex® BIOLOGICAL LARVICIDE	VectoMax® BIOLOGICAL LARVICIDE	Bactimos® BIOLOGICAL LARVICIDE		FORMULATION	KEY FEATURES	HABITATS
●	●					Aqueous Suspension/ Suspension Concentrate (AS/SC)	Economical, ready-to-spray, liquid formulation	Open habitats with minimal vegetation
●		●				Water Dispersible Granule (WG/WDG)	Storage stability of a dry product; easy to mix; excellent suspension; WHOPES; can be applied directly into containers	Open habitats with minimal vegetation; artificial and natural containers
●	●	●	●			Granule (G/GS/GR/CG)	Penetrates vegetation	Vegetated or open habitats
		●	●			Water Soluble Pouch (WSP)	Easy-to-use formulation for direct application	Catch basins, storm drains
●						Direct Tablets	Easy-to-use formulation for direct application	Artificial and natural containers
				●		Pellet (PT)	Sinks directly to feeding zone of midges	Lakes, ponds and other aquatic habitats where non-biting midges are found

The Gap



The Solution

MetaLarvTM s-PT
MOSQUITO GROWTH REGULATOR



MetaLarv™ S-PT

S-PT = Spherical Pellet



Coin added for size comparison

Triple Release Technology

1



The “first release” provides an initial flash of (S)-methoprene for immediate control of mosquitoes; rate of release not dependent on water temperature

2



The “second release” takes place when the floodwaters rise, providing sustained control throughout the duration of the flood

3



MetaLarv S-PT remains effective after the waters recede, ready to release (S)-methoprene during the next flooding cycle (“third release”)

Advantages

- Provides up to 42 days residual control (length of control dependent on local conditions)
- Can be applied up to 28 days prior to flood
- Remains effective after flood/dry-down/re-flood event
- Improved coverage at low rates
- Greater aerial swaths in tests conducted
- Less respirable and particulate dust
- Greater application flexibility
- Low risk to non-target organisms

The industry's most comprehensive portfolio of target-specific biorational solutions





Candace Royals

Valent Biosciences Corporation

www.valentbiosciences.com/ph

candace.royals@valentbiosciences.com

A photograph of a person standing on a rocky shore, with their arms raised in a gesture of triumph or joy. The person is wearing a dark shirt and shorts. The background shows a calm body of water, distant mountains, and a clear sky. The text "Thank you" is overlaid on the right side of the image in a large, white, sans-serif font.

Thank you