

STEPGROW® VIVO 101

All-in-one self-emulsifying solution
for Biological Oil Dispersion (OD)

- NOP Compliant
- Improved Emulsion Stability Performance
- Versatile Compatibility with Microorganisms

Gain Improved Stability and Performance with STEPGROW® VIVO 101

STEPGROW® VIVO 101 is an all-in-one self-emulsifying solution that enhances the production of fully formulated products in the biological technology sector. Combining a sustainable solvent with biologically compatible emulsifiers and dispersants ensures improved stability and performance for your microorganism-based oil dispersion (OD) formulations



STEPGROW® VIVO 101 - Typical Properties

Form at 25°C	Liquid
pH at 5% in 1:1 IPA:H2O	6-7
Moisture Content %	< 1
Viscosity, 25°C, cps	20
Pour Point, °C	< -10

- REACH registered
- All ingredients EPA approved 40CFR 180.920

STEPGROW® VIVO 101

STEPGROW® VIVO 101 is a ready-to-use product in which the Active Ingredient (microorganism) is added directly to form an Oil Dispersion Formulation.

Use STEPGROW® VIVO 101 to accelerate formulation development, reduce processing time and simplify supply chain. This safe to handle solution is compatible with a wide variety of microorganisms.

With STEPGROW® VIVO 101, instead of adding each component individually, you only need to mix our product once with the microorganism. This streamlined process reduces raw material handling and minimizes the need for multiple suppliers, as STEPGROW® VIVO 101 is a comprehensive blend.

Compatibility Approved⁽¹⁾

Compatibility with STEPGROW® VIVO 101	
Beauveria Bassiana	✓
Bacillus Thuringiensis	✓
Bacillus spp ⁽²⁾	✓
Trichoderma Harzianum	✓

Formulation Recipe Proposal

Components	Indicated Usage (%w/w)
Active Ingredient	5 - 40
STEPGROW® VIVO 101	q.s. 100%
Rheology Modifier	0 - 2

Oil Dispersion Formulation Performance using STEPGROW VIVO® 101

The OD formulations developed using STEPGROW® VIVO 101 comply with FAO⁽³⁾'s specification target.

Property	CIPAC ⁽⁴⁾ Method	Room Temperature (initial)	Accelerated Stability (14 days-54°C)
Appearance	Visual	Liquid Homogeneous with a Stable Dispersion	No more than 10% v/v of phase separation, and no sedimentation/caking
Wet Sieve Test, 1% in Water DI ⁽⁵⁾	MT-185	0.15% max of residue on the 200 mesh sieve	
Dispersion Stability	MT-180	Initial Dispersion Complete 30min = 0.5 mL of cream max (no oil) 24h = Redispersion compete 24h + 30min = max. 0.5 mL of cream, no oil maximum 1 mL of sediments	
Persistent Foam	MT-47	Max 10 mL after 1min	
pH, 5% in Water 1:1 IPA	MT-75.3	Product Specific	
Viscosity	MT-192		

(1) Using Resazurin Method

(2) Mixture of Bacillus Subtilis with several other species of Bacillus

(3) Food and Agriculture Organisation

(4) Collaborative International Pesticides Analytical Council

(5) Deionized water

Stepan  **Growing Through Science**
Agricultural Solutions

Contact your local [Stepan sales representative](#) to learn more about STEPGROW® VIVO 101 and our full line of agricultural products. You can also visit stepan.com/agriculture for more information and to [order samples](#).

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