

EPA Biopesticides Active Ingredient List September 1, 2016

EPA registered the biopesticide ingredients in the following tables in Fiscal Years 2011-2016.

Biochemical pesticides are naturally occurring substances that control pests by non-toxic mechanisms. Conventional pesticides, by contrast, are generally synthetic materials that directly kill or inactivate the pest. Biochemical pesticides include substances that interfere with mating, such as insect sex pheromones, as well as various scented plant extracts that attract insect pests to traps. Because it is sometimes difficult to determine whether a substance meets the criteria for classification as a biochemical pesticide, EPA has established a special committee to make such decisions.

Biochemical Active Ingredients	Completed Date
Oregano oil	03/14/2011
Penta-termanone	07/15/2011
(Z,Z)-3,13-Octadecadien-1-ol acetate	08/23/2011
Citral	08/23/2011
Isopropyl myristate	08/25/2011
2,13-Octadecadien-1-ol, 1-acetate, (2Z,13Z)-	11/22/2011
Lysophosphatidylethanolamines, egg yolk	01/20/2012
Salicylic acid	03/06/2012
Canola oil	03/27/2012
Natamycin	05/14/2012
7,9,11-Dodecatrien-1-ol, formate, (7Z,9E)-	06/14/2012
3-Decen-2-one	02/05/2013
BLAD	02/28/2013
Methyl jasmonate	03/22/2013
Complex Polymeric Polyhydroxy Acid (CPPA)	07/09/2013
2,4-Decadienoic acid, ethyl ester, (2E,4Z)-	08/22/2013
(Z,Z)-7,11-Hexadecadienal	11/25/2013
Cyclopentaneacetic acid, 3-oxo-2-pentyl-, propyl ester	11/25/2013
Humates (as derived from Leonardite)	03/27/2014
(E,E)-1-(1-oxo-2,4-decadienyl) pyrrolidine	08/26/2014
Oils, tea-tree	08/29/2014
CheckMate Technical Pheromone	02/23/2015
Choline chloride	12/01/2015

Microbial pesticides consist of a microorganism (e.g., a bacterium, fungus, virus or protozoan) as the active ingredient. Microbial pesticides can control many different kinds of pests, although each separate active ingredient is relatively specific for its target pest[s]. For example, there are fungi that control certain weeds and other fungi that kill specific insects.

Microbial Active Ingredients	Completed Date
Typhula phacorrhiza (isolate 94671)	11/02/2010
Isaria fumosoroseus strain FE 9901	05/12/2011
Trichoderma asperellum, strain T34	10/20/2011
Bacillus subtilis strain CX-9060	12/15/2011
Bacillus amyloliquefaciens strain D747	12/16/2011
Phoma macrostoma strain 94-44B	01/13/2012
Trichoderma virens strain G-41 (12.1%) (ATCC 20906)	01/23/2012
Aureobasidium pullulans strain DSM 14941	01/31/2012
Pasteuria nishizawae Pn1	02/02/2012
Pseudomonas fluorescens CL 145 A	03/09/2012
Bacillus pumilus, strain GHA 180	03/15/2012
Killed, non-viable Streptomyces acidiscabies strain RL-110 (ATCC 49003) cells and spent fermentation media	04/26/2012
Chromobacterium subtsugae strain PRAA4-1 cells and spent fermentation media	05/01/2012
Pasteuria spp. (Rotylenchulus reniformis nematode) - Pr3	06/13/2012
Bacillus thuringiensis subsp. kurstaki strain VBTS 2546	09/27/2012
QST 713 strain of bacillus subtilis	11/27/2012
Cydia pomonella granulovirus isolate V22	01/08/2013
Pasteuria spp. (Hoplolaimus Galeatus Nematode)-Ph3	04/22/2013
Bacillus thuringiensis subsp. israelensis, Strain SUM-6218	05/13/2013
Bacillus pumilus, strain Bu F-33	05/31/2013
Bacillus thuringiensis subspecies galleriea, strain SDS-502, fermentation solids, spores and insecticidal toxins	07/11/2013
GS-omega/kappa-Htx-Hv1a	02/03/2014
Heat-Killed Burkholderia sp strain A396 cells and spent fermentation media	02/28/2014
Polyhedral occlusion bodies (OBs) of the nuclear polyhedrosis virus of Helicoverpa zea (corn earworm)	03/05/2014
Clonostachys rosea strain 321U	06/20/2014
Pseudomonas fluorescens strain D7	08/29/2014
Beauveria bassiana strain ANT-03	11/12/2014
Bacillus subtilis strain IAB/BS03	02/05/2015
Trichoderma asperelloides strain JM41R	05/06/2015
Helicoverpa armigera nucleopolyhedrovirus, strain BV-0003	11/03/2015
Polyhedral occlusion bodies of the beet armyworm nuclear polyhedrosis virus	12/02/2015

