European Commission

VOLUME 2 – Annex A

- *Beauveria bassiana* PPRI 5339 -

Confidential Information

Rapporteur Member State: The Netherlands

December 2016

Draft Assessment Report and Proposed decision of the Netherlands prepared in the context of the possible approval of *Beauveria bassiana* PPRI 5539 under Regulation (EC) 1107/2009

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A. List of the tests, studies and information submitted

A.1 Identity

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
Annex II Data and Information							
MA 1.3.3/01 MA 4.1/02	Berry, S	2012	Molecular Identify of the South African *Beauveria bassiana* isolate, strain PPRI 5339. Becker Underwood, Mahogany Ridge, KZN, South Africa and Becker Underwood, NSW 2250, Australia. Report Date: 28.11.12 Not GLP Unpublished	N	Y	Strain specific new laboratory study	BASF
MA 1.4.3/01	Cheng, KM	2013	Assay to determine Beauvericin within Beauveria bassiana concentrate with associated validation. Oxford Analytical Ltd, A3, Telford Road, Bicester, Oxfordshire OX26 4LD, UK. Study Number OA02266. GLP Unpublished	N	Y	New strain specific GLP study	BASF
MA 1.3.4/01	Rehner, SA	2005	Phylogenetics of the insect pathogenic genus Beauveria. In: Vega, F.E., Blackwell, M. (Eds.), Insect-Fungal Associations: Ecology and Evolution. Oxford University Press, pp. 3–27. Not GLP Published	N	N	N/A	Public
MA 1.3.1/01	Rehner, SA, Buckley, E	2005	A Beauveria phylogeny inferred from nuclear ITS and EF1-alpha sequences: evidence for cryptic diversification and links to Cordyceps teleomorphs. Mycologica,	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			97(1), 84-98. Not GLP Published				
MA 1.4.2/01	Whittaker, M	2014	Detection and enumeration of *Beauveria bassiana* and microbial contaminants in five production batches of PPRI 5339 technical grade active ingredient. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North Yorkshire HG5 8LF. Study Number APIS-BASF-003 GLP Unpublished	N	Y	New strain specific GLP study	BASF
MA 1.4.3/02	Whittaker, M	2014	Detection and enumeration of yeasts and moulds in five production batches of PPRI 5339 technical grade active ingredient. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North Yorkshire HG5 8LF. Study Number: APIS-BASF-009 Report Date: TBC GLP Unpublished	N	Y	Strain specific new GLP laboratory study	BASF

A.2 Biological, physical, chemical and technical properties

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
Annex II Data and Information							
MA 2.7/09	Abendstein, D, Pernfuss, B, Strasser, H	2000	Evaluation of *Beauveria brongniartii* and its metabolite oosporein regarding phytotoxicity on seed potatoes. Biocontrol Sci Tech 10, 789-796 Non GLP Published	N	N	N/A	Public
MA 2.1.2/09	Airaudi, D. Filipello Marchisio, V.	1996	Fungal biodiversity in the air of Turin. Mycopathologia 136:95-102. Non GLP Published	N	N	N/A	Public
MA 2.1.2/06	Bills, GF, Polishook, JD	1991	Microfungi from *Carpinus caroliniana*. Canadian Journal of Botany 69:1477-1482. Non GLP Published	N	N	N/A	Public
MA 2.7/12	Calo, L, Fornelli, F, Nenna, S, Tursi, A, Caiaffa, M.F, Macchia, L	2004	Beauvericin cytotoxicity to the invertebrate cell line SF-9. J Appl Genet 44, 515-520 Non GLP Published	N	N	N/A	Public
MA 2.7/11	Champlin, FR, Grula, EA	1979	Noninvolvement of Beauvericin in the entomopathogenicity of *Beauveria bassiana*. Appl Environ Microbiol 37, 1122-1125 Non GLP Published	N	N	N/A	Public
MA	Coelho, MA,	2013	Extensive intra-	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
2.6/01	Gonçalves, C, Sampaio, JP, Gonçalves, P		kingdom horizontal gene transfer converging on a fungal fructose transporter gene. PLOS Genetics 9(6): e1003587				
MA 2.2.1	Cuthbertson, A and Brown, A	2011	Efficacy of BUEXP1778 (*Beauveria bassiana* strain PPRI 5339) against two biotypes (Q and B) of *Bemisia tabaci*. FERA, (Food and Environment Research Agency), York, YO41 1LZ, UK, Report R&DFERA0411 Non GLP Unpublished	N	Y	Strain specific new laboratory study	BASF
MA 2.1.2/05	Doberski, JW, Tribe, HT	1980	Isolation of enntomopathogenous fungi from elm bark and soil with reference to ecology of *Beauveria bassiana* and *Metarhizium anisopliae*. Transactions of the British Mycological Society 74:95-100. Non GLP Published	N	N	N/A	Public
MA 2.7/05	Eley, KL, Halo, LM, Song, Z, Powles, H, Cox, RJ, Bailey, A.M, Lazarus, CM, Simpson, TJ	2007	Biosynthesis of the 2-pyridone tenellin in the insect patholgenic fungus *Beauveria bassiana* ChemBioChem 8, 289-297 Non GLP Published	N	N	N/A	Public
MA 2.4/01	Fargues, J, Goettel, MS, Smits, N, Ouedraogo, A,	1997	Effect of temperature on vegetative growth of *Beauveria bassiana* isolates from different	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
	Rougier, M		origins. Mycologia 89:383-392. Non GLP Published				
MA 2.7/07	Favilla, M, Macchia L, Gallo, A, Altomare, C	2006	Toxicity assessment of metabolites of fungal biocontrol agents using two different (artemia salina and daphnia magna) invertebrate bioassays . Food Chem Toxicol 44, 1922-1931 Non GLP Published	N	N	N/A	Public
MA 2.8/01 MA 5.1.4/01	Figueira, L., Pinheiro, D., Moreira, R., Pinto, E., Simões, J., Camisa, E., Torrão, L., Palmares, J., Falcão-Reis, F.	2012	*Beauveria bassiana* keratitis in bullous keratopathy: antifungal sensitivity testing and management. Eur J Ophthalmol 2012; 22 (5): 814-818. Not GLP Published	N	N	N/A	Public
MA 2.7/18	Fuguet R, Vey, A	2004	Comparative Analysis of the production of insecticidal and melanizing macromolecules by strains of Beauveria spp.:in vivo studies. J Invertebr Pathol 85, 152-167 Non GLP Published	N	N	N/A	Public
MA 2.7/19	Fuguet, R, Théraud, M, Vey, A	2004	Production in vitro of toxic macromolecules by strains of *Beauveria bassiana*, and purification of a chitosanase-like	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			protein secreted by a melanizing isolate. Comp Biochem Physiol, Part C 138, 149-161 Non GLP Published				
MA 2.1.2/03 MA 8.4/08	Goettel, MS, Poprawski, TJ, Vandenberg, JD, Li, Z, Roberts, DW	1990	Safety to nontarget invertebrates of fungal biocontrol agents. In: Laird, M, Lacey, L, Davidson, EW, editors. Safety of microbial insecticides. Boca Raton, FL: CRC Press. pp 209-231. Non GLP Published	N	N	N/A	Public
MA 2.4/02	Hallsworth, JE, Magan, N	1999	Water and temperature relations of growth of the entomogenous fungi *Beauveria bassiana, Metarhizium anisopliae* and *Paecilomyces farinosus*. Journal of Invertebrate Pathology 74:261-266. Non GLP Published	N	N	N/A	Public
MA 2.7/04	Jeffs, LB, Khachatourians, GG	1997	Toxic properties of *Beauveria* pigments on erythrocyte membranes. Toxicon 35:1351-1356. Non GLP Published	N	N	N/A	Public
MA 2.7/03	Kirkland, BH, Eisa, A, Keyhani, NO	2005	Oxalic acid as a fungal acaricidal virulence factor. Journal of Medical Entomology 42:346-351.	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Non GLP Published				
MA 2.7/14	Kuzma, M, Jegorov, A, Kacer, P, Havlicek, V	2001	Sequencing of new beauverolides by high- performance liquid chromatography and mass spectrometry J Mass Spectr 36, 1108-1115 Non GLP Published	N	N	N/A	Public
MA 2.1.2/02	Meyling, NV, Eilenberg, J	2006	Isolation and characterisation of Beauveria bassiana isolates from phylloplanes of hedgerow vegetation. Mycological Research 110:188-195. Non GLP Published	N	N	N/A	Public
MA 2.7/08	Nagaoka, T, Nakata, K, Kuono, K, Ando, T	2004	Antifungal activity of oosporein from an antagonistic fungus against Phytophtora infestans Z Naturforsch 59c, 302-304 Non GLP Published	N	N	N/A	Public
MA 2.7/13	Namatame, I, Tomoda, H, Ishibashi, S, Omura, S	2003	Antiatherogenic activity of fungal beauveriolides, inhibitors of lipid droplet accumulation in macrophages. Proc Natl Acad Sci USA 101, 737-742 Non GLP Published	N	N	N/A	Public
MA 2.4/01	Neethling, D, Brown, A	2012	The effect of temperature on	N	Y	Strain specific new	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			growth of *Beauveria bassiana* strain PPRI 5339. Non GLP Not Published			laboratory study	
MA 2.2.1/02	Oliveira, M, Henneberry, T, Anderson, P	2001	History, current status and collaborative research projects for Bemisia tabaci. Crop Protection, 20, 709-723. Non GLP Published	N	N	N/A	Public
MA 2.2.3/06 MA 8.6/10	Ownley, BH, Pereira, RM, Klingeman, WE, Quigley, NB, Leckie, BM	2004	*Beauveria bassiana*, a dual purpose biocontrol organism, with activity against insect pests and plant pathogens. In: Lartey, RT, Caesar, AJ, editors. Emerging concepts in plant health management. India: Research Signpost. pp 255-269. Non GLP Published	N	N	N/A	Public
MA 2.7/06	Pegram, RA, Wyatt, RD	1981	Avian gout caused by oosporein, a mycotoxin produced by chaetomium trilaterale Poultry Science 60, 2429-2440 Non GLP Published	N	N	N/A	Public
MA 2.1.2/08	Posada, F, Vega, FE	2005	Establishment of the fungal entomopathogen *Beauveria bassiana* (Ascomycota: Hypocreales) as an endophyte in cocoa seedlings (*Theobroma cacao*).	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Mycologia 97:1195-1200. Non GLP Published				
MA 2.7/17	Quesada-Moraga, E, Vey, A	2004	Bassiacridin, a protein toxic for locusts secreted by the entomopathogenic fungus *Beauveria bassiana.* Mycol Res 108, 441-452 Non GLP Published	N	N	N/A	Public
MA 2.6/02	Rosewich, UL, Kistler, HC	2000	Role of horizontal gene transfer in the evolution of fungi. Annual Review Phytopathology 38 325–363. Non GLP Published	N	N	N/A	Public
MA 2.8/02 MA 5.1.4/02	Sonoyama, H., raki-Sasaki, K., Kazama, S., Kawasaki,T., Ideta, H., Sunada, A., Asari, S., Inoue, Y., Hayashi, K.	2008	The characteristics of keratomycosis by *Beauveria bassiana* and its successful treatment with antimycotic agents. *Clin Ophthalmol.,* 2(3): 675-678. Not GLP Published	N	N	N/A	Public
MA 2.7/01	Strasser, H, Vey, A, Butt, TM	2000	Are there any Risks in using Entomopathogenic Fungi for pest Control, with Particular Reference to the Bioactive Metabolites of Metarhizium, Tolypocladium and Beauveria species? Biocontrol Science and	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Technology (10) , 717- 735 Non GLP Published				
MA 2.7/16	Vilcinskas, A, Jegorov, A, Landa, Z, Gotz, P, Matha, V	1999	Effects of beauverolide L and cyclosporin A on humoral and cellular immune response of the greater wax moth, Galleria mellonella Comp Biochem Physiol, Part C 122, 83-92 Non GLP Published	N	N	N/A	Public
MA 2.5/01 MA 2.1.2/07	Wagner, BL, Lewis, LC	2000	Colonization of corn, *Zea mays*, by the entomopathogenic fungus *Beauveria bassiana*. Applied Environmental Microbiology 66:3468-3473. Non GLP Published	N	N	N/A	Public
MA 2.2.3/05	Wang, C, Fan, M, Li, Z, Butt, TM	2004	Molecular monitoring and evaluation of the application of the insect-pathogenic fungus *Beauveria bassiana* in southeast China. Journal of Applied Microbiology 96:861-870. Non GLP Published	N	N	N/A	Public
MA 2.1/01	Zimmermann, G	2007	Review on safety of the entomopathogenic fungi *Beauveria bassiana* and *Beauveria brongiartii.* Biocontrol Science and Technology 17(5/6), 553-596	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Non GLP Published				
Annex III Data and Information							
MP 2.1/01	Whittaker, M	2014	Low temperature storage stability test on the Microbial Pest Control Product BAS 480 00 1. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North Yorkshire HG5 8LF. Report No. APIS-BASF-018 GLP Unpublished	N	Y	New GLP study on reference product	BASF
MP 2.6/01	Wiles, J	2014	Viscosity and surface tension determination of Broadband. CEM Analytical Serves Limited (CEMAS). Imperial House, Oaklands Park, Wokingham, Berkshire RG41 2FD Report No. CEMS-6734 GLP: Yes Unpublished	N	Y	New GLP study on reference product	BASF

A.3 Data on application and further information

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
Annex II Data and Information							
MA 3.5.1/03	Alon, M, Alon, F, Nauen, R, Morin, S	2008	Organophosphates' resistance in the B-biotype of *Bemisia tabaci* (Hemiptera: Aleyrodidae) is associated with a point mutation in an ace 1-type acetylcholinesterase and overexpression of carboxylesterase. Insect biochemistry and molecular biology 38: 940-949 Non GLP Published	N	N	N/A	Public
MA 3.5.1/04	Arnaud, L , Harbruge, E	2012	Insecticide resistance enhances male reproductive success in a beetle. Evolution 56: 2435-2444 Non GLP Published	N	N	N/A	Public
MA 3.5.1/01	Dudovskiy, IM, Whitten, MMA, Yaroslavtseva, ON, Greig, C, Kryukov, VY, Grzanova, EV, Mukherjee, K, Vilcinskas, A, Glupov, VV, Butt, TM	2013	Can insects develop resistance to insect pathogenic fungi? PLoS ONE 8(4): e60248§ Non GLP Published	N	N	N/A	Public
MA 3.5.1/05	Gillespie, JP, Bailey, AM, Cobb, B, Vilcinskas, A	2000	Fungi as elicitors of insect immune responses. Archives of Insect	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Biochemistry and Physiology 44:49-68 Non GLP Published				
MA 3.5.1/06	Kraaijeeld, AR, Layen, SJ, Futerman, PH, Godfray, HCJ	2012	Lack of phenotypic and evolutionary cross-resistance against parasitoids and pathogens in *drosophila melanogaster*. PLoS ONE 7(12): e53002 Non GLP Published	N	N	N/A	Public
MA 3.5.1/07	Kraaijeveld, AR, Godfray, HCJ	2008	Selection for resistance to a fungal pathogen in *Drosophila melanogaster.* Heredity, 100, 400-406 Non GLP Published	N	N	N/A	Public
MA 3.5.1/02	Silva, AX, Jander, G, Samaniego, H, Ramsey, JS, Figueroa, CC	2012	Insect resistance mechanisms in the green peach aphid *myzus persicae* (Hemiptera: Aphididae) I: a transcriptomic survey. PLoS ONE 7: e36366 Non GLP Published	N	N	N/A	Public
MA 3.5.3/01	Wojda, I, Kowalski, P, Jakbowicz, T	2009	Humoral immune response of *Galleria melonella* larvae after infection by *Beauveria bassiana* under optimal and heat-shock conditions. Journal of Insect	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Physiology, 55, 525-531 Non GLP Published				
Annex III Data and Information							
MP 6.1 and MP 6.2/1	Dr Whaley C.	2013	INITIAL SCREENING OF BUEXP1778 AGAINST WESTERN FLOWER THRIPS ON ORNAMENTALS, UNDER PROTECTED CONDITIONS i2LResearch Ltd 12/118 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Dr Whaley C.	2013	INITIAL SCREENING OF BUEXP1778 AGAINST WESTERN FLOWER THRIPS ON ORNAMENTALS, UNDER PROTECTED CONDITIONS i2LResearch Ltd 12/119 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Dr Whaley C.	2013	EFFICACY EVALUATION OF BUEXP1778 AGAINST WHITEFLY (Trialeurodes vaporariorum), UNDER PROTECTED CONDITIONS i2LResearch Ltd 13/246 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Dylan G.	2012	Western Flower Thrip – Dose Response i2LResearch Ltd	N	Y	Y	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			12/216 GEP, unpublished				
MP 6.1 and MP 6.2/1	Dylan G.	2012	Western Flower Thrip – Dose Response i2LResearch Ltd 12/218 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Limon, E.	2012	FUNGICIDE EFFICACY AND SELECTIVITY OF BUEXP1778, BUEXP1901 and BUEXP1902 APPLIED AT A RANGE OF APPLICATION FREQUENCIES AGAINST THRIPS (Thrips tabaci) ON PROTECTED PEPPER (GREENHOUSE) IN SPAIN IN 2012 PROMO-VERT CROP SCIENCES S.L. 12 I CL BU 05 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Limon, E.	2012	FUNGICIDE EFFICACY AND SELECTIVITY OF BUEXP1778, BUEXP1901 and BUEXP1902 APPLIED AT A RANGE OF APPLICATION FREQUENCIES AGAINST THRIPS (Thrips tabaci) ON PROTECTED PEPPER (GREENHOUSE) IN SPAIN IN 2012 PROMO-VERT CROP SCIENCES S.L.	N	Y	Y	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			12 I CL BU 06 GEP, unpublished				
MP 6.1 and MP 6.2/1	Limon, E.	2012	STUDY ON THE EFFICACY AND SELECTIVITY OF BUEXP1778 APPLIED AT A RANGE OF APPLICATION RATES AGAINST THRIPS (Thrips tabaci) ON PROTECTED PEPPER (GREENHOUSE) IN SPAIN IN 2013 12 I CL BU 07 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Limon, E.	2012	STUDY ON THE EFFICACY AND SELECTIVITY OF BUEXP1778 APPLIED AT A RANGE OF APPLICATION RATES AGAINST THRIPS (Thrips tabaci) ON PROTECTED PEPPER (GREENHOUSE) IN SPAIN IN 2013 12 I CL BU 08 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Limon, E.	2013	STUDY ON THE EFFICACY AND SELECTIVITY OF BUEXP1778 AND BUEXP1901 AGAINST WHITEFLY (Bemisia tabaci) ON PROTECTED PEPPER (GREENHOUSE) IN SPAIN IN 2013 13 I CL BU 01 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and	Pasqualini, E.	2013	Evaluate the efficacy of	N	Y	Y	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
MP 6.2/1			BUEXP1778 against western flower thrips (Frankliniella occidentalis) on eggplant ANADIAG ITALIA SRL, ITA 12156 BA1 GEP, unpublished				
MP 6.1 and MP 6.2/1	Pasqualini, E.	2013	Evaluate the efficacy of BUEXP1778 against western flower thrips (Frankliniella occidentalis) on eggplant ANADIAG ITALIA SRL, ITA 12156 BA2 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Pasqualini, E.	2013	Evaluate the efficacy of BUEXP1778 against western flower thrips (Frankliniella occidentalis) on eggplant ANADIAG ITALIA SRL, ITA 12156 BA3 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Scrimshaw, O.	2012	To determine the efficacy of BUEXP1778 for the control of glasshouse whitefly in protected tomato, 1 trial in the UK, 2012 Eurofins Agroscience Services, S12-02280-01 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and	Scrimshaw, O.	2012	Western Flower Thrip - Dose	N	Y	Y	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
MP 6.2/1			response Eurofins Agroscience Services, S12-04054-01 GEP, unpublished				
MP 6.1 and MP 6.2/1	Scrimshaw, O.	2012	Western Flower Thrip - Dose response Eurofins Agroscience Services, S12-04054-02 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Scrimshaw, O.	2012	Western Flower Thrip - Dose response Eurofins Agroscience Services, S12-04054-03 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Scrimshaw, O.	2012	Western Flower Thrip - Dose response, 1 site in the UK Eurofins Agroscience Services, S12-04055-01 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Scrimshaw, O.	2012	Western Flower Thrip - Dose response, 1 site in Spain Eurofins Agroscience Services, S12-04055-02 GEP, unpublished	N	Y	Y	BASF
MP 6.1 and MP 6.2/1	Scrimshaw, O.	2013	Determine the efficacy of BUEXP1778 applied as a curative foliar spray against glasshouse whitefly, 1 site in the UK Eurofins Agroscience Services, S12-03366-01	N	Y	Y	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			GEP, unpublished				
MP 6.1 and MP 6.2/1	Scrimshaw, O.	2013	Determine the efficacy of BUEXP1778 applied as a curative foliar spray against glasshouse whitefly, 1 site in the UK Eurofins Agroscience Services, S12-03366-02 GEP, unpublished	N	Y	Y	BASF

A.4 Proposal for classification and labelling

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			No references submitted				

A.5 Analytical methods

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
Annex II Data and Information							
MA 4.1/02 MA 1.3/01	Berry, S	2012	Molecular Identify of the South African *Beauveria bassiana* isolate, strain PPRI 5339. Becker Underwood, Mahogany Ridge, KZN, South Africa and Becker Underwood, NSW 2250, Australia. Report Date: 28.11.12	N	Y	New strain specific GLP study	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Non GLP Unpublished				
MA 4.1.1/01	Cheng, KM	2013	Assay to determine Beauvericin within *Beauveria bassiana* concentrate with associated validation. Oxford Analytical Ltd, A3, Telford Road, Bicester, Oxfordshire OX26 4LD, UK. Study Number OA02266. GLP Unpublished	N	Y	New strain specific GLP study	BASF
MA 4.1/01 MA 1.4.2/01	Whittaker, M	2014	Detection and enumeration of *Beauveria bassiana* and microbial contaminants in five production batches of PPRI 5339 technical grade active ingredient. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North Yorkshire HG5 8LF. Study Number APIS-BASF-003. GLP Unpublished	N	Y	New strain specific GLP study	BASF
Annex III Data and Information							
MP 5.1/01	Whittaker, M	2014	Detection and enumeration or *Beauveria bassiana* and microbial contaminants in five production batches of BROADBAND microbial pest control product. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North Yorkshire HG5 8LF. Study Number APIS-BASF-011. Report date: 17.09.2014 GLP Unpublished	N	Y	Strain specific new laboratory study	BASF

A.6 Effects on human health

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
Annex II Data and Information							
MA 5.2.2.1/03	Acosta, M.E., Perfetti, D.C., Eduarte, G., Moreno, PM.	2012	Oral pathogenicity of an autochthonous isolate of the entomopathogenic fungus *Beauveria bassiana* in mice (Mus musculus, strain NMRI). Boletin de Malariologia Salud Ambiental, (2012) 52(1): 79-86. Not GLP Published	Y	N	N/A	Public
MA 5.3/01	Acosta-Quintero, M.E., Cazorla-Perfetti, D.J., Eduarte-Pereira, G., Morales-Moreno, P.	2011	Dermal Pathogenicity of an Autochthonous Isolate of Entomopathogenic Fungus *Beauveria bassiana* in Mice. Revisita Centifica-Facultada de Ciencias Veterinarias, (2011) 21(6): 477-483. Not GLP Published	Y	N	N/A	Public
MA 5.2.3.1/01	[redacted]	2014	*Beauveria bassiana* PPRI 5339: Bacterial reverse mutation assay. [redacted] Unpublished Report No. 8295690. GLP Unpublished	Y	Y	Strain-specific new GLP laboratory study	GLP
MA 5.2.2.2/0	[redacted]	2013	*Beauveria bassiana* strain PPRI 5339	Y	Y	Strain-specific new	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
1			Acute Pulmonary Toxicity/Pathogenicity in Rats. [redacted] Unpublished Report No. 16701-12 GLP Unpublished			GLP laboratory study	
MA 5.2.2.2/02	[redacted]	2012a	Acute inhalation toxicity in rats. [redacted]. Unpublished Report No. 15687-11 Not GLP Unpublished	Y	Y	Strain-specific new laboratory study	BASF
MA 5.2.2.2/03	[redacted]	2012b	Acute inhalation toxicity study in rats. [redacted] Unpublished Report No. 15369-11. GLP Unpublished	Y	Y	Strain-specific new GLP laboratory study	BASF
MA 5.2.2.3/01	[redacted]	2012c	*Beauveria bassiana* PPRI 5339 Spore Concentrate. Acute intraperitoneal injection toxicity/pathogenicity study in rats. [redacted]	Y	Y	Strain-specific new GLP laboratory study	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			[redacted] Unpublished Report No. 16448-12 GLP Unpublished				
MA 5.2/05	[redacted]	2007 a	Acute dermal toxicity study of test item Bb spore concentrate in rats. [redacted] Unpublished Report No. 06/338-002P GLP Unpublished	Y	Y	Strain-specific new GLP laboratory study	BASF
MA 5.2.2.1/02	[redacted]	2007 b	Acute oral toxicity study (acute toxic class method) of test item Bb spore concentrate in rats. [redacted] Unpublished Report No. 06/338-001P GLP Unpublished	Y	Y	Strain-specific new GLP laboratory study	BASF
MA 5.1.4/01	Figueira, L., Pinheiro, D., Moreira, R., Pinto, E., Simões, J., Camisa, E., Torrão, L., Palmares, J., Falcão-Reis,	2012	*Beauveria bassiana* keratitis in bullous keratopathy: antifungal sensitivity testing and management. Eur J Ophthalmol 2012; 22 (5): 814-818.	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
	F.		Not GLP Published				
MA 5.2.2.2/04	[redacted]	2011	Pilot inhalation toxicity study in rats. [redacted] Unpublished Report No. CHP 076Y (Stillmeadow 15687-11) Not GLP Unpublished	Y	Y	Strain-specific new laboratory study	BASF
MA 5.2/01	[redacted]	2011a	Acute eye irritation study in rabbits. [redacted] Unpublished Report No. 15370-11 GLP Unpublished	Y	Y	Strain-specific new GLP laboratory study	BASF
MA 5.2/03	[redacted]	2011b	Acute dermal irritation study in rabbits. [redacted] Unpublished Report No. 15371-11 GLP Unpublished	Y	Y	Strain-specific new GLP laboratory study	BASF
MA 5.2/04	[redacted]	2011c	Acute dermal toxicity study in rats. [redacted].	Y	Y	Strain-specific new GLP laboratory study	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Unpublished Report No. 15368-11 GLP Unpublished				
MA 5.2.2.1/01	[redacted]	2011d	Acute oral toxicity study (UDP) in rats. [redacted]. Unpublished Report No. 15367-11 GLP Unpublished	Y	Y	Strain-specific new GLP laboratory study	BASF
MA 5.1/01	Neethling, K.	2013	Memorandum: Exposure to, and adverse health effects from, exposure to *Beauveria bassiana* strain PPRI 5339 during manufacturing. BASF Agricultural Specialities (PTY) Ltd., 91 Clifton Caanyon Drive, Clifton Farm Stockville Quarry, Mahogany Ridge, KwaZulu Natal, South Africa. 11th November 2013. Not GLP Unpublished	N	N	Confidential internal company memorandum	BASF
MA 5.1.4/02	Sonoyama, H., raki-Sasaki, K., Kazama, S., Kawasaki,T., Ideta, H., Sunada, A., Asari, S., Inoue, Y.,	2008	The characteristics of keratomycosis by *Beauveria bassiana* and its successful treatment with antimycotic agents. *Clin Ophthalmol.,* 2(3): 675-678.	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
	Hayashi, K.		Not GLP Published				
MA 5.2/02	[redacted]	2007 a	Acute eye irritation study of test item Bb Spore Concentrate in rabbits. [redacted]. Unpublished Report No. 06/338-005N GLP Unpublished	Y	Y	Strain-specific new GLP laboratory study	BASF
MA 5.2.1/01	[redacted]	2007 b	Skin sensitisation of Bb spore concentrate in Guinea Pigs by Magnusson and Kligman. [redacted] Unpublished Report No. 06/338-104T. GLP Unpublished	Y	Y	Strain-specific new GLP laboratory study	BASF
MA 5.1.4/03	Tu, E.Y., and Park, A.J.	2007	Recalcitrant *Beauveria bassiana* keratitis: confocal microscopy findings and treatment with posaconazole (Noxafil). *Cornea*, 26(8): 1008-1010. Not GLP Published	N	N	N/A	Public
MA 5/01	Zimmermann, G.	2007	Review on safety of the entomopathogenic fungi *Beauveria bassiana* and	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Beauveria brongniartii. *Biocontrol Science and Technology*, 17 (5/6): 553-596 Not GLP Published **Not summarised, review paper**				

A.7 Residue data

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
Annex II Data and Information							
MA 6.2.2/05 MA 7.1.3/02	Edgington, S, Segura, H, De L Rosa, W, Williams, T	2000	Photoprotection of Beauveria bassiana: testing simple formulations for control of the coffee beerry borer. International Journal of Pest Management 43(3) 169-176 Non-GLP Published	N	N	N/A	Public
MA 6.2.2/01 MA 6.1/01	Fargues, J, Goettel, MS, Smits, N, Ouedrago, A, Rougier, M	1997	Effect of temperature on vegetative growth of Beauveria bassiana isolates from different origins. Mycologia, 89(8), 383-392 Non GLP Published	N	N	N/A	Public
MA 6.2.2/04 MA 2.4/02	Hallsworth, JE, Magan, N	1999	Water and temperature relations of growth of the entomogeneous fungi *Beauveria bassiana* and *Metarhizium anisopliae* and *Paecilomyces farinosus*. J Invertebr Pathol. 74, 261-266 Non GLP Published	N	N	N/A	Public
MA 6.2.2/03 MA 6.1/02	Neethling, D, Brown, A	2012	The effect of temperature on growth of *Beauveria bassiana* strain PPRI 5339. Becker Underwood, Mahogany Ridge, South Africa. Project Number: LE 639. Report date: 21.11.12 Non-GLP Unpublished	N	Y	New strain specific GLP study	BASF
MA 6.1/03	Neethling, D, Neethling,	2014	Effect of ultra-violet light on viability of *Beauveria bassiana* strain PPRI	N	Y	New strain specific GLP study	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
MA 7.1.3/01	K, Brown, A		5339. Report No: R&D061401 Non GLP Unpublished				
MA 6.2.1/01 MA 2.7/01	Strasser, H, Vey, A, Butt, TM	2000	Are there any risks in using entomopathogenic fungi for pest control, with particular reference to the bioactive metabolites of Metarhizium, Tlypocladium and Beauveria species? Biocontrol Science and Technology, 10, 717-735 Non GLP Published	N	N	N/A	Public

A.8 Fate and behaviour in the environment

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
Annex II Data and Information							
MA 7/04	Clerk, G.C.	1969	Influence of soil extracts on the germination of conidia of the fungi Beauveria bassiana and Paecilomyces farinosus. Journal of Invertebrate Pathology 13:120-124. Non GLP Published	N	N	N/A	Public
MA 7.1.3/02	Edgington, S., Segura, H., De La Rosa, W. and Williams, T	2000	Photoprotection of *Beauveria bassiana*: testing simple formulations for control of the coffee berry borer. International Journal of Pest Management, 46(3) 169-176 Not GLP Published	N	N	N/A	Public
MA 7.1.3/05 MA 6.1/01 MA 6.2.2/01	Fargues, J., Goettel, M.S., Smits, N., Ouedrago, A., Rougier, M.	1997	Effect of temperature on vegetative growth of Beauveria bassiana isolates from different origins. Mycologia, 89(8), 383-392 Non GLP Published	N	N	N/A	Public
MA 7.1.3/04	Ignotffo, C.M., Garcia, C.	1992	Influence of conidial color ininactivation of several entomogenous fungi (Hyphomycetes) by	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			simulated sunlight. Environmental Entomology, 21(4), 913-917 Non-GLP Published				
MA 7.1.3/06	Inglis G.D., Goettel M.S., Johnson D.L.	1995	Influence of ultraviolet light protectants on persistence of the fungus *Beauveria bassiana*, Biological control 5, 581-590 Not GLP Published	N	N	N/A	Public
MA 7.2/02	Kim, J.S. Skinner, M. Gouli, S. Parker, B.L.,	2010	Influence of top-watering on the movement of *Beauveria bassiana*, GHA (Deuteromycota: Hyphomycetes) in potting medium. Crop Protection 29 631–634 Not GLP Published	N	N	N/A	Public
MA 7.1.3/03	Krieg, A., Gröner, A., Huber, J., Zimmermann, G.	1981	Inactivation of certain insect pathogens by ultraviolet radiation Journal of plant diseases and production 88(1) 38-48 Not GLP Publised In German including an English translation	N	N	N/A	Public
MA 7.1.3/07	Morley-Davies, J., Moore, D., Prior, C.	1995	Screening of *Metarizhium* and *Beauveria* spp. Conidia with exposure	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			to simulated sunight and a range of temperatures. Mycological Research 100(1), 31-38 Non GLP Published				
MA 7.1.3/01 MA 6.1/03	Neethling, D., Neethling, K. and Brown, A.	2014	Effect of artificial ultra-violet light on viability of *Beauveria bassiana* strain PPRI 5339. Unpublished Report R&D061401 Not GLP Unpublished.	N	Y		BASF
MA 7/02	Quesada-Moraga E., Navas-Cortes J.A., Maranhao E.A.A., Ortiz-Urquiza A., Santiago-Alvarez C.	2007	Factors affecting the occurrence and distribution of entomopathogenic fungi in natural and cultivated soils. Mycological Research 111: 947-966. Not GLP Published	N	N	N/A	Public
MA 7.1.1/01	Scheepmaker, J.W.A. and Butt, T.M.	2010	Natural and released inoculum levels of entomopathogenic fungal biocontrol agents in soil in relation with risk assessment and in accordance with EU regulations. Biocontrol Science and Technology 20, 503-552 Not GLP Published	N	N	N/A	Public
MA 7.2/01	Storey, G. K. and Gardner W. A.	1988	Movement of an aqueous spray of *Beauveria bassiana*	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			into the profile of four Georgia soils, Entomological society of America 17, 135-139 Not GLP Published				
MA 7/03	Watson A.G., Ford E.J.	1972	Soil fungistasis - A reappraisal. Annual Review of Phytopathology 10:327-348. Non GLP Published	N	N	N/A	Public
MA 7.1.2/01	Whittaker, M.	2014	Hydrophobicity and survival of *Beauveria bassiana* PPRI 5339 in water. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North Yorkshire HG5 8LF. Unpublished report APIS-BASF-010. GLP Unpublished	N	Y	Strain specific New GLP laboratory study	BASF
MA 7/01 MA 2.1/01 MA 5/01	Zimmermann, G.	2007	Review on safety of the entomopathogenic fungi *Beauveria bassiana* and *Beauveria brongniartii*. *Biocontrol Science and Technology*, 17 (5/6): 553-596 Not GLP Published	N	N	N/A	Public

A.9 Ecotoxicology

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
Annex II Data and Information							
MA 8.1/0,	Althouse, CM, Petersen, BE, McEwen, LC	1997	Effects on young American kestrels (Falco sparverius) exposed to Beauveria bassiana bioinsecticide. Bulletin of Environmental Contamination and Toxicology 59:507-512. Non GLP Published	Y	N	N/A	Public
K MA 8.2.1/01 And K MP 10.2.01	[redacted]	2015	Beauveria bassiana (PPRI 5339): Toxicity, infectivity and pathogenicity to rainbow trout (O. mykiss) during a 28 day test, CEMS 6525 GLP: Yes Published: No	Y	Y	N/A	BASF
MA 8.4/02	Devotto, L, Cisternas, E, Carrillo, R, Gerding, M	2008	Non-target effects of *Dalaca pallens* Blanchard control examined through principal response curves: a guild approach in Southern Chile. *Chilean Journal of Agricultural Research, (2008) 68 (3): 228-237.*	N	N	N/A	Public
MA 8.4/01	Devotto, L, Cisternas, E, Gerding, M, Carrillo, R	2007	Response of grassland soil arthropod community to biological and conventional control of a native moth: using *Beauveria bassiana* and lambda-cyhalothrin for *Dalaca pallens* (Lepidoptera : Hepialidae) suppression. *Biocontrol, 52(4): 507-531* GLP: No Published: Yes	N	N	N/A	Public
K MA 8.2.2./01 And K MP 10.2.02	Forbes T	2015	Beauveria bassiana (PPRI 5339): Toxicity, infectivity and pathogenicity to Daphnia magna (Strauss) during a 28 day test, CEMS 6526 GLP: Yes Published: No GLP: Yes	N	Y	N/A	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Published: No				
K MA 8.2.3/01 And K_MP 10.2.03	Forbes T	2015	Beauveria bassiana (PPRI 5339): freshwater green algae (P. subcapitata) growth inhibition assay, CEMS 6527 GLP: Yes Published: No	N	Y	N/A	BASF
MA 8.2.2/04	Genthner, FJ, Cripe, GM, Crosby, DJ	1994a	Effect of Beauveria bassiana and its toxins on Mysidopsis bahia (mysidacea). Archives of Environmental Contamination and Toxicology 26:90-94. Non GLP Published	N	N	N/A	Public
MA 8.2.2/02	Genthner, FJ, Foss, SS, Fisher, WS	1994b	Testing of the insect pest control fungus Beauveria bassiana in grass shrimp Palaemonetes pugio. Diseases of Aquatic Organisms 20:49-57. Non GLP Published	N	N	N/A	Public
MA 8.2.1/02	Genthner, FJ, Middaugh, DP	1992	Effects of *Beauveria bassiana* on embryos of the inland silverside fish (*Menidia beryllina*). Applied and Environmental Microbiology 58:2840-2845. Non GLP Published	N	N	N/A	Public
MA 8.1/03	Haas-Costa, J, Alves, L.F.A & Daros, A.A.	2010	Safety of Beauveria bassiana (Bals.) Vuill. to *Gallus domesticus* L.Not GLP. Brazilian Archives of Biology and Technology, (2010) 53(2): 465-471 Non GLP Published	Y	N	N/A	Public
MA 8.6/01	Hirsch, J, Galidevara, S,	2013	Effects on Diversity of Soil Fungal Community and Fate of an Artificially Applied *Beauveria*	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
	Strohmeier, S, Devi, KU, Reineke, A		*bassiana* Strain Assessed Through 454 Pyrosequencing. *Microbial Ecology, 66(3): 608-620* GLP: No Published: Yes				
M.A 8.3/18	J.P. Kapongo, L. Shipp, P. Kevan, J.C. Stutton	2008	Co-vectoring of *Beauveria bassiana* and *Clonostachys rosea* by bumble bees (*Bombus impatiens*) for control of insect pests and suppression of grey mould in greenhouse tomato and sweet pepper. Biological Control 46 508-514	N	N	-	Public
MA 8.3/17	Jean Pierre Kapongo, Les Shipp, Peter Kevan, Bruce Broadbent	2008	Optimal concentration of *Beauveria bassiana* vectored by bumble bees in relation to pest and bee mortality. BioControl 53:797-812	N	N	-	Public
MA 8.1/02	Johnson, DL, Smits, JE, Jaronski ST, Weaver, DK	2002	Assessment of health and growth of ring-necked pheasants following consumption of infected insects or conidia of entomopathogenic fungi, Metarhizium anisopliae var. acridum and Beauveria bassiana, from Madagascar and North America. Journal of Toxicology and Environmental Health, Part A 65:2145-2162. Non GLP Published	Y	N	N/A	Public
MA 8.1/04	Johnson, DL, Smits, JE, Jaronski ST, Weaver, DK	2002	Assessment of health and growth of ring-necked pheasants following consumption of infected insects or conidia of entomopathogenic fungi, Metarhizium anisopliae var. acridum and Beauveria bassiana, from Madagascar and North America. Journal of Toxicology and Environmental Health, Part A 65:2145-2162.	Y	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Non GLP Published				
MA 8.3/13	M. S. Al Mazra'awi, J. L. Shipp, A. B. Broadbent, And P. G. Kevan	2006	Dissemination of *Beauveria bassiana* by Honey Bees (Hymenoptera: Apidae) for Control of Tarnished Plant Bug (Hemiptera: Miridae) on Canola Environ. Entomol. 35(6): 1569-1577	N	N	-	Public
MA 8.3/15	M.S. Al mazra'awi	2007	Impact of the Entomopathogenic Fungus *Beauveria bassiana* on the Honey bees, *Apis mellifera* (Hymenoptera: Apidae). World Journal of Agricultural Sciences 3 (1): 07-11	N	N	-	Public
MA 8.3/16	M.S. Al mazra'awi, P. Kevan, L. Shipp	2007	Development of *Beauveria bassiana* dry formulation for vectoring by honey bees *Apis mellifera* (Hymenoptera: Apidae) to the flowers of crops for pest control. Biocontrol Science and Technology, 17:7, 733-741	N	N	-	Public
MA 8.3/08 And 8.3/14	Meikle, WG, Mercadier, G, Holst, N, Girod, V	2008	Impact of two treatments of a formulation of *Beauveria bassiana* (Deuteromycota: Hyphomycetes) conidia on Varroa mites (Acari: Varroidae) and on honeybee (Hymenoptera: Apidae) colony health. *Experimental and Applied Acarology, (2008) 46(1-4): 105-117* GLP: No Published: Yes	N	N	N/A	Public
MA 8.3/09	Meikle, WG, Mercadier, G, Holst, N, Girod, V	2008	Impact of a treatment of *Beauveria bassiana* (Deuteromycota: Hyphomycetes) on honeybee (*Apis mellifera*) colony health and on Varroa destructor mites (Acari : Varroidae). *Adipologie, 39(2): 247-259* GLP: No	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Published: Yes				
MA 8.3/10	Mommaerts, V, Put, K, Smagghe, G	2011	*Bombus terrestris* as pollinator-and-vector to suppress *Botrytis cinerea* in greenhouse strawberry. *Pest Management Science, 67(9): 1069-1075.* GLP: No Published: Yes	N	N	N/A	Public
MA 8.3/12	Mommaerts, V, Sterk, G, Hoffman, L & Smagghe, G	2011	A laboratory valuation to determine the compatibility of microbiological control agents with the pollinator *Bombus terrestris. Pest Management Science, 65(9): 949-955* GLP: No Published: Yes	N	N	N/A	Public
MA 8.5/02	Nuutinen V et al	1990	The effects of four entomopathogenic fungi and an entomoparasitic nematode on the hatching of earthworm (Aporrectodea caliginosa) cocoons in laboratory GLP: no Published: yes	N	N	N/A	Public
MA 8.2.2/03	Pascale, M, Visconti, A, Pronczuk, M, Wisniewska, H, Chelkowski, J	2002	Accumulation of fumonisins, beauvericin and fusaproliferin in maize hybrids inoculated under field conditions with Fusarium proliferatum. Mycological Research 106:1026-1030. Non GLP Published	N	N	N/A	Public
MA 8.3/11	Ramanaidu, K & Cutler, GC	2013	Different toxic and hormetic responses of *Bombus impatiens* to *Beauveria bassiana*, *Bacillus subtilis* and spirotetramat. *Pest Management Science, (2013) 69(8): 949-954.* GLP: No MP 10.1 ublished: Yes	N	N	N/A	Public
MA 8.5/01	Shapiro-Ilan, DI,	2013	Earthworms as phoretic hosts for Steinernema carpocapsae	N	N	N/A	Public

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
	Brown, I		and Beauveria bassiana: Implications for enhanced biological control. Biological Control, (2013) 66(1): 41 Non GLP Published				
MA 8.4/03	Steinwender, BM, Krenn, HW, Wegensteiner, R	2010	Different effects of the insectpathogenic fungus *Beauveria bassiana* (Deuteromycota) on the bark beetle *Ips sexdentatus* (Coleoptera: Curculionidae) and on its predator Thanasimus formicarius (Coleoptera: Cleridae). *Journal of Plant Diseases and Protection, 117(1): 33-38* Non GLP Published	N	N	N/A	Public
MA 8.3/03	Whittaker M	2014	Effects of *Beauveria bassiana* PPRI 5339 on the honeybee, *Apis mellifera*, in an acute oral and contact toxicity pre-test. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North Yorkshire, HG5 8LF. Study No.: Study No.: APIS-BASF-NGLP-001 GLP: No Published: No	N	Y	N/A	BASF
MA 8.3/04	Whittaker M	2013	Effects of *Beauveria bassiana* PPRI 5339 on the bumblebee, *Bombus terrestris*, in an acute contact toxicity test. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North Yorkshire, HG5 8LF. Study No.: APIS-BASF-004 GLP: Yes Published: No	N	Y	N/A	BASF
MA 8.3/05	Whittaker M	2013	Effects of *Beauveria bassiana* PPRI 5339 on the bumblebee,	N	Y	N/A	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Bombus terrestris, in an acute toxicity test. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North Yorkshire, HG5 8LF. Study No.: APIS-BASF-005 GLP: Yes Published: No				
MA 8.3/06	Whittaker M	2013	Effects of *Beauveria bassiana* PPRI 5339 on the honeybee, *Apis mellifera*, in an acute contact toxicity test. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North Yorkshire, HG5 8LF. Study No.: APIS-BASF-001 GLP: Yes Published: No	N	Y	N/A	BASF
MA 8.3/07	Whittaker M	2013	Effects of *Beauveria bassiana* PPRI 5339 on the honeybee, *Apis mellifera*, in an acute oral toxicity test. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North Yorkshire, HG5 8LF. Study No.: APIS-BASF-002 GLP: Yes Published: No	N	Y	N/A	BASF
MA 8.3/14	William G. Meikle, Guy Mercadier, Niels Holst, Vincent Girod	2008	Impact of two treatments of a formulation of *Beauveria bassiana* (Deuteromycota: Hyphomycetes) conidia on *Varroa* mites (Acari: Varroidae) and on honeybee (Hymenoptera: Apidae) colony health Exp Appl Acarol (2008) 46:105-117	N	N	-	Public
MA 8.3/01	Younger C	2012	*Beauveria bassiana* PPRI 5339 spore concentrate. Honey Bee, *Apis mellifera* non-target microbial testing. Stillmeadow Inc., 12852 Park One Drive,	N	Y	N/A	BASF

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			Sugar Land TX 77478 Study Code: 16339-12 Report Date: GLP: Yes Published: No				
MA 8.3/02	Younger C	2012	*Beauveria bassiana* PPRI 5339 spore concentrate. Honey Bee, *Apis mellifera* non-target microbial testing. Stillmeadow Inc., 12852 Park One Drive, Sugar Land TX 77478 Study Code: 16984-12 Report Date: GLP: Yes Published: No	N	Y	N/A	BASF
Annex III Data and Information							
MA 8.2.1/01 And MP 10.2.01	[redacted]	2015	Beauveria bassiana (PPRI 5339): Toxicity, infectivity and pathogenicity to rainbow trout (O. mykiss) during a 28 day test, CEMS 6525 GLP: Yes Published: No	Y	Y	N/A	BASF
MA 8.2.2./01 And MP 10.2.02	Forbes T	2015	Beauveria bassiana (PPRI 5339): Toxicity, infectivity and pathogenicity to Daphnia magna (Strauss) during a 28 day test, CEMS 6526 GLP: Yes Published: No GLP: Yes Published: No	N	Y	N/A	BASF
MA 8.2.3/01 And MP 10.2.03	Forbes T	2015	Beauveria bassiana (PPRI 5339): freshwater green algae (P. subcapitata) growth inhibition assay, CEMS 6527 GLP: Yes Published: No	N	Y	N/A	BASF
MP 10.4.1/01	Whittaker M	2014	Effects of Broadband (BAS 480 00 I) on the parasitic wasp, *Aphidius rhopalosiphi*, in a glass plate contact toxicity test. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North	N	Y	N/A	BASF

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
			Yorkshire, HG5 8LF, UK. Study No. APIS-BASF-012 GLP: Yes Published: No				
MP 10.4.1/02	Whittaker M	2014	Whittaker, M (2014). Effects of Broadband (BAS 480 00 I) on the predatory bug, *Orius laevigatus*, in a glass plate contact toxicity test. APIS, Knaresborough Technology Park, Manse Lane, Knaresborough, North Yorkshire, HG5 8LF, UK. Study No. APIS-BASF-013. GLP: Yes Published: No	N	Y	N/A	BASF