

ANNEX A

***Paecilomyces fumosoroseus* Strain Apopka 97**

A.1 List of the tests and studies evaluated

A.1 Identity

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
IIB 1.4	Abalis I.	Biochemical and pharmacological studies of the insecticidal cyclodepsipetides destruxins and bassianolide produced by entomopathogenic fungi Thesis presented to the Faculty of the Graduate school of Cornell University.	1981	no	yes
IIB 1.4	Anonymous	Presence, absence or production of toxins	No date	no	no
IIB 1.4	Bernardini, M., Carilli, A., Pacioni, G. and Santurbano, B.	Isolation of beauvericin from <i>Paecilomyces fumosoroseus</i> Phytochemistry, 14, 1975, 1865	1975	no	yes
IIB 1.4	Cherton, J.C. , Lange, C. and Mulheim, C.	Direct <i>in vitro</i> and <i>in vivo</i> monitoring of destruxins metabolism in insects using internal surface reversed-phase high-performance liquid chromatography. J. Chromato.,566, 1991, 511-524	1991	no	yes
IIB 1.3	Eyal J.	PFR-MUP Product Chemistry W.R. GRACE & Co. Conn. Company report No: 4775-MUP-CHEM	1994a	yes	no
IIB 1.4	Eyal J.	PFR-MUP Manufacturing and Analysis of Product W.R. Grace & co - Conn. Company report no: 4775-MUP-CHEM	1994b	no	no
IIIB 1	Eyal J.	PFR-97™ 20% WDG Product Chemistry (3 parts) W.R. GRACE & Co. Conn. Company report No: 4775-MUP-97-20-CHEM	1994c	yes	no
IIB 5	Eyal J.	Reduced-Risk Rationale for <i>Paecilomyces fumosoroseus</i> Apopka Strain 97 Company report No: -	-	no	no
IIB 1.3	Fassatiova O., Kalalova S., Samsinakova A. Not useful	Morfologické srovnání některých entomofagických druhů hub rodu Beauveria, Paecilomyces, Tolypocladium, a Culicinomyces Sborník uvtiz -Ochran Rostlin, 19 (LVI) 1983, pp 195-204	1983	no	yes
IIB 1.4	Hull C.J.	HPLC Screening of PFR Broth, Methanol Filtrate Extracts W.R. Grace & Co - Conn. Company report No: -	1992	no	no
IIB 1.3	Humber A. (USDA, Boyce Thompson	Confirmation of strain identity - ARSEF accession numbers	1986a	no	no

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
	Institute)	Letter of 8-10-86 to Dr Osborne			
IIB 1.3	Humber A. (USDA, Boyce Thompson Institute)	Confirmation of strain identity - Possible redistribution of <i>Paecilomyces fumosoroseus</i> , UK-1 [ARSEF 2247] Letter of 18-06-91 to Dr Osborne	1986b	no	no
IIB 1.4	Jegorov, A., Kadlec, Z., Novak, J., Matha, V., Sedmera, P., Triska, J. and Zahradnickova, H.	Are the depsipeptides of <i>Beauveria brongniartii</i> involved in the entomopathogenic process ? In Proc. Int. Conf. Biopesticides, Theory and Practices Eds: A. Jegorov and V. Matha, 1990 pp71-81 CSVTS Ceske Budejovice.	1990	no	yes
IIB 1.4	Jegorov A., Sedmera P., Matha V., Simek P., Zahradnickova H., Landa Z., Eyal J.	Beauverolides L. and La from <i>Beauveria tenella</i> and <i>Paecilomyces fumosoroseus</i> Phytochemistry, Vol. 37, No. 5, 1994, pp-1301-1303	1994	no	yes
IIB 1.4	Matha V.	Letter from Dr. Valdimir Matha February 11, 1996	1996	-	-
IIB 1.4	Matha V., Vilcinskas A., Jegorov A., Landa Z., Eyal J.	Immunostimulating activity of beauverolide L in great wax moth <i>Galleria mellonella</i> larva	-	no	-
IIB 1.3	Osborne L.S., Landa Z.	Biological Control of Whiteflies with Entomopathogenic Fungi Florida Ent. , 75 (4), 1992, pp 457-471	1992	no	yes
IIB 1.3	Samson R.A.	<i>Paecilomyces</i> and some allied hyphomycetes Studies in Mycology, 6, 1974, pp 37-40	1974	no	yes
IIB 1.3	Samson R.A. (Centraalbureau voor Schimmelculturen)	Confirmation of strain identity Letter of 24-02-87 to Dr Osborne	1987	no	no
IIB1.3	Shimizu, S., Yoshioka, H., Matsumoto, T.	Electrophoretic karyotyping of the entomogenous fungus <i>Paecilomyces fumosoroseus</i> . Lett. Appl. Microbiol., 16, 1993, 183-186	1993	no	yes
IIB 1.3	Tigano-Milani M., Carneiro R., de Faria M., Frazao H., McCoy C.	Isozyme Characterization and Pathogenicity of <i>Paecilomyces fumosoroseus</i> and <i>P. lilacinus</i> to <i>Diabrotica speciosa</i> (Coleoptera: Chrysomelidae) and <i>Meloidogyne javanica</i> (Nematoda: Tylenchidae) Biological control, 5, 1995, pp 378-382	1995a	no	yes
IIB 1.3	Tigano-Milani M., Honeycutt R., Lacey L., Assis R., McClelland M., Sobral B.	Genetic Variability of <i>Paecilomyces fumosoroseus</i> Revealed by Molecular Markers Journal of Invertebrate Pathology, 65, pp 274-282, 1995	1995b	no	yes

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
IIB 1.3	USDA Agricultural Research Service	Collection of Entomopathogenic Fungal Cultures pp 67-69, database	1992	no	yes

A.2.1 Biological properties of the organism

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
IIB 2.2	anonymous	Canadian Collection of Fungal Cultures, database	1996	no	interne t
IIB 2.2	Centraalbureau voor Schimmelculturen (CBS)	CBS database	-	no	interne t
IIB 2.2	Colmar, Ortiz M., Nunez J., Benoit P.	Survey of indigenous Natural Enemies of Whiteflies in the Dominican Republic, Proyecto 'Mosca Blanca', Departamento de Agronomia, Instituto Superior de Agricultura (ISA)	1995	no	yes
IIB 2.6	Elliot, G.S., Withney, Reed W., Tuite J.	Ante-mortem diagnosis of <i>Paecilomyces</i> in a cat JAVMA, 184, No 1, 1984, pp 93-94	1984	no	yes
IIB 2.2 2.3 ; 2.5	Eyal J.	PFR-MUP Product Chemistry W.R. GRACE & Co. Conn. Company report No: 4775-MUP-CHEM	1994a	no	no
IIIB 2	Eyal J.	PFR-97 TM 20% WDG Product Chemistry (3 parts) W.R. GRACE & Co. Conn. Company report No: 4775-PFR-97-20-CHEM	1994c	no	no
IIB 2.5	Eyal, J.	PFR-MUP Environmental fate and effects data waivers. W.R. GRACE & Co. Conn. Company report No: 4775-MUP-ENVFATE	1994d	no	no
IIB 2.8	Eyal J., Mabud MD A., Fischbein K.L., Walter J.F., Osborne L.S., Landa Z.	Assessment of <i>Beauveria bassiana</i> Nov. EO- 1 Strain, Wich Produces a Red Pigment for Microbial Control Applied Biochemistry and Biotechnology, 44, pp 65-80	1994	no	yes
IIB 2.5	Fargues,J., Rougier, M., Goujet, R., Smits, N., Coustere, Ch., Itier,B.	Inactivation of conidia of <i>Paecilomyces</i> <i>fumosoroseus</i> by near UV and visible radiation. J. Invert. Pathol., 69, 1997, 70-78	1997	no	yes
IIB 2.5	Fargues J., Maniania NK., Delmas JC, Smits N.	Influence de la température sur la croissance in vitro d'hyphomycètes entomopathogènes Agronomie, 12, pp 557-564	1992	no	yes
IIB 2.2	Fransen J.J.	Whiteflies: their bionomics, Pest Status and Management Research Station for floriculture, Aalsmeer pp 187-210	-	no	yes
IIB 2.2	Gillespie A., Claydon N.	The Use of Entomogenous Fungi for Pest Control and the Role of Toxins in Pathogenesis	1989	no	yes

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different) Pestic. Sci., 27, pp 203-215	Year	GLP GEP	Publi- shed or not
IIB 2.8	Götz P., Vilcinskas A., Wedde M. Not useful	Effects of fungal cyclic peptides on the phagocytic activity and cytoskeleton of plasmotocytes., immunocompetent cells of the greater wax moth <i>Galleria mellonella</i> EU-Project - Fungal cyclic peptides as new pesticides	1995	no	yes
IIB 2.9	Hunsberger A.	A selective medium for the detection of <i>Paecilomyces fumosoroseus</i> in greenhouse soil and its potential as a microbial control agent of <i>Diaprepes abbreviatus</i> larvae in containerized citrus Abstract of a thesis presented to the Graduate School of the University of Florida.	1993	no	yes
IIB 2.2	International Mycological Institute Culture Collections	Database	1995	no	internet
IIB 2.2	Krejzova R. Not useful	Ultrastructure of conidia of <i>Paecilomyces fumosoroseus</i> (Wize) et Smith isolated from <i>Zoothermopsis</i> sp. Ceska Mykologie, 30(2), 1976, pp 110-114	1976	no	yes
IIB 2.6	Kunstyr, I., Jelinek, F., Bitznehofer, U. And Pittermann, W.	Fungus <i>Paecilomyces</i> : a new agent in laboratory animals Lab. Anim., 31, 1997, 45-51	1997	no	yes
IIB 2.3	Lacey L.A., Carruthers R., Fransen J.J.	Global Distribution of Naturally Occurring Fungi of <i>Bemisia tabaci</i> s.l. and their Potential as Natural and Biological Control Agents Bemisia Workshop, 3-7 oct. 1994, p 34	1994	no	yes
IIB 2.	Lacey, L., Kirk, A. Not useful	Sweetpotato Whitefly : 1993 Supplement to the Five-year National Research and Action Plan First Annual Rev. Held in Tempe, 1983, pp.102, 137, 138, 149.	1993	no	yes
IIB 2.5	Landa Z., Osborne L., Lopez F., Eyal J.	A Bioassay for Determining Pathogenicity of Entomogenous Fungi on Whiteflies Biological Control 4, pp 341-350, 1994	1994	no	yes
IIB 2.2	Leatherdale D. Not useful	The Arthropod Hosts of Entomogenous Fungi in Britain Entomophaga, 15 (4), 1970, pp 419-435	1970	no	yes
IIB 2.2	Mietkiewski R., Tkaczuk C., Zasada L. Not useful	Occurrence of entomopathogenic fungi in arable soil and meadow soil Acta Mycol, XXVII (2), pp 197-203, 1991-1992	1991 - 1992	no	yes
IIB 2.2	Mietkiewski R.,	Entomogenous Fungi Isolated from	1992	no	yes

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
	Tkaczuk C., Badowska T. Not useful	Strawberry Plantation Soil Infested by <i>Otiorrhynchus ovatus</i> L. Roczniki Nauk Rolniczych, Seria E, T. 22, pp39-46			
IIB 2.6	Mikami, Y., Fukushima, K., Arai, T., Abe, H., Shibuya, H., and Ommura, Y.	Leucinostatins, peptide mycotoxins produced by <i>Paecilomyces lilacinus</i> and their possible roles in fungal infection. Zentralbl. Bakteriologie. Mikrobiol. Hyg. Ser. A 257, 275-283	1984	no	yes
IIB 2.6	Mikami, Y., Yazawa, K., Fukushima, K., Arai, S., Udawaga, S. And Samson, R.A.	Paecilotoxin production in clinical and terrestrial isolates of <i>Paecilomyces lilacinus</i> strains. Mycopathologia; 108, 195-199.	1989	no	yes
IIB 2.2	Nanni B., Rotundo G., Marziano F. Not useful	<i>Paecilomyces fumosoroseus</i> (Wize) Brown et Smith e <i>P. farinosus</i> (Holm ex S.F. Gray) Brown et Smith, due funghi entomopatogeni poco noti in Italia, e loro nuovi ospiti Annali, serie quarta, XXII, 1988, pp 37-49	1988	no	yes
IIB 2.3	Osborne L.S., Landa Z.	Biological Control of Whiteflies with Entomopathogenic Fungi Florida Ent. , 75 (4), 1992, pp 457-471	1992	no	yes
IIB 2.8	Peeters H. Zocher R. Madry N. Kleinkauf H. Not useful	Incorporation of Radioactive Precursor into Beauvericin Produced by <i>Paecilomyces</i> <i>fumosoroseus</i> Phytochemistry, Vol. 22, No. 8, 1983, pp. 1719-1720	1983	no	yes
IIB 2.2	Peterkin D., Hall R.A.	Effect of Accelerated Spore Germination on Virulence of <i>Paecilomyces fumosoroseus</i> against the Whitefly, <i>Bemisia tabaci</i> Bemisia Workshop, 3-7 oct 94, pp 36-37	1994	no	yes
IIB 2.7	Riba, G.	Recombinaison après hétérocaryose chez le champignon entomopathogène <i>Paecilomyces</i> <i>fumosoroseus</i> . Entomopathologia, 23, 1978, 417-421	1978	no	yes
IIB 2.4 ; 2.7	Riba, G. And Ravelojoana, M.	The parasexual cycle in the entomopathogenic fungus <i>Paecilomyces fumosoroseus</i> Brown and Smith Can.J.Microbiol. 30, 1984, 922-926	1984	no	yes
IIB 2.4 ; 2.7	Roberts, D.W. and Yendol, W.	Use of fungi for microbial control of insects Chapter 5 ,no date pp 125-147 incomplete reference	no date	no	yes
IIB 2.1.2	Rodriguez-Rueda D., Fargues J. Not useful	Pathogenicity of Entomopathogenic Hyphomycetes, <i>Paecilomyces fumosoroseus</i> and <i>Nomuraea rileyi</i> to Eggs of Noctuids, <i>Mamestra brassicae</i> and <i>Spodoptera littoralis</i> Journal of Invertebrate Pathology, 36, 1980,	1980	no	yes

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
		pp 399-408			
IIB 2.3	Smith P.	Control of <i>Bemisia tabaci</i> and the potential of <i>Paecilomyces fumosoroseus</i> as a biopesticide Biocontrol News and Information, 1993, 14, No. 4, pp 71N-78N	1993	no	yes
IIB 2.2	Sterk, G., Bolkmans, K. And Eyal, J.	A new microbial insecticide, for the control of the greenhouse whitefly, Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97)	1996	no	no
IIB 2.1.2	Tigano-Milani M., de Faria M., Martins I., Lecuona R. Not useful	Natural occurrence of <i>Beauveria bassiana</i> , <i>Metarhizium anisoplia</i> and <i>Paecilomyces</i> sp. In soils of Different Regions in Brazil (Reference not given)	1992	no	-
IIB 2.1.3	USDA Agricultural Research Service	Collection of Entomopathogenic Fungal Cultures pp 67-69, database	1992	no	yes
IIB 2.1.2	Vanninen I., Husberg G., Hokkanen H. Not useful	Occurrence of entomopathogenic fungi and entomoparasitic nematodes in cultivated soils in Finland Acta Entomologica Fennica, 53, 1989, pp 65-71	1989	no	yes
IIB 2.5	Vidal C., Lacey L., Fargues J. Not useful	Intraspecific variability of <i>Paecilomyces fumosoroseus</i> vegetative growth as a function of temperature fourth annual progress review of the 5-year national research and action plan for development of management and control methodology for silverleaf whitefly San Antonio, Texas, February 4-6 1996, p 141	1995	no	yes
IIB 2.8	Vilcinskas A. Not useful	Letter from Dr. Andres Vilcinskas February 12, 1996	-	-	-
IIB 2.6	Westenfeld, F., Alston, W. and Washington, C.	Complicated soft tissue infection with prepatellar bursitis caused by <i>Paecilomyces lilacinus</i> in an immunocompetent host : case report and review J. Clin. Microbiol., 34, 1996, 1559-1562	1996	no	yes
IIB 2.6	Williamson, P.R., Kwon-Chung, K. and Gallin, J.	Successful treatment of <i>Paecilomyces varioti</i> infection in a patient with chronic granulomatous disease and a review of <i>Paecilomyces</i> species infections Clin. Infect. Dis., 14, 1992, 1023-1026	1992	no	yes
IIB 2.1.2	Zimmermann G.	The ' <i>Galleria</i> bait method' for detection of entomopathogenic fungi soil J. Appl. Ent., 102, pp 213-215	1986	no	yes

A.2.2 Technical properties of the preparation PREFERAL

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
IIIB 2.7.3	Benoit A.	Rapport d'essai 00253/RES/95 Labo d'Analyse de l'Etat (Liège), Ministère de l'Agriculture	1995a	no	no
IIIB 2.7.1, 2.7.2, 2.7.4, 2.7.5.1	Benoit A.	Rapport d'essai 00554/RES/95 Labo d'Analyse de l'Etat (Liège), Ministère de l'Agriculture	1995b	no	no
IIIB 2.1, 2.2.1, 2.5	Eyal J.	PFR-97 TM 20% WDG Product Chemistry (3 parts) W.R. GRACE & Co. Conn. Company report No: 4775-PFR-97-20-CHEM	1994c	no	no
IIIB 2.8.3	Eyal, J.	PFR-MUP Environmental fate and effects data waivers. W.R. GRACE & Co. Conn. Company report No: 4775-MUP-ENVFATE	1994d	no	no

A.3 Data on application and further data

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
IIB 3.4	Eyal J.	PFR-MUP Manufacturing and Analysis of Product W.R. Grace & co - Conn. Company report no: 4775-MUP-CHEM	1994b	no	no
IIB 3.7	Eyal J.	MSDS for <i>Paecilomyces fumosoroseus</i> Apopka Strain 97	1994e	no	no

A.4 Analytical methods

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
IIB 4.1	Eyal J.	PFR-MUP Manufacturing and Analysis of Product W.R. Grace & co - Conn. Company report no: 4775-MUP-CHEM	1994b	no	no
IIIB 5.1	Eyal J.	PFR-97 TM 20% WDG Product Chemistry (3 parts) W.R. GRACE & Co. Conn. Company report No: 4775-PFR-97-20-CHEM	1994c	no	no
IIB 4.2	Hunsberger A.	A selective medium for the detection of <i>Paecilomyces fumosoroseus</i> in greenhouse soil and its potential as a microbial control agent of <i>Diaprepes abbreviatus</i> larvae in containerized citrus Abstract of a thesis presented to the Graduate School of the University of Florida.	1993	no	yes
IIB 4	Landa Z., Osborne L., Lopez F., Eyal J.	A Bioassay for Determining Pathogenicity of Entomogenous Fungi on Whiteflies Biological Control 4, pp 341-350, 1994	1994	no	yes
IIB 4.1	Zimmermann G.	The 'Galleria bait method' for detection of entomopathogenic fungi soil J. Appl. Ent., 102, pp 213-215	1986	no	yes

A.5 Toxicity, pathogenicity and infectivity

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
IIB 5.4.3	Akhunova, A.M.	The transformation of the saprophytic mycelial form of the fungus <i>Paecilomyces variotii</i> into the tissue parasitic form and its morphological characteristics Med Parazitol, 1992, 3,53-55	1992	no	yes
IIB 5	Eyal J.	Reduced-Risk Rationale for <i>Paecilomyces fumosoroseus</i> Apopka Strain 97 Company report No: -	-	no	no
IIB 5.1.1.2	Jones J.	Acute pulmonary toxicity/pathogenicity study of <i>Paecilomyces fumosoroseus</i> var. Apopka in rats W.R. GRACE & Co. Conn. Company report No: G-7444.228.001	1993a	yes	no
IIB 5.1.1.3	Jones J.	Acute intraperitoneal toxicity/pathogenicity study of <i>Paecilomyces fumosoroseus</i> var. Apopka in rats W.R. GRACE & Co. Conn. Company report No: G-7444.226.001	1993b	yes	no
IIB 5.1.1.1	Jones J.	Acute oral toxicity/pathogenicity study of <i>Paecilomyces fumosoroseus</i> var. Apopka in rats W.R. GRACE & Co. Conn. Company report No: G-7444.222.006	1994	yes	no
IIB 5.1.2.1	Lawlor T.E.	Mutagenicity Test on <i>Paecilomyces fumosoroseus</i> Apopka Strain 97 in the Salmonella/Mammalian-Microcosme Reverse Mutation Assay (Ames Test) with a Confirmatory Assay W.R. GRACE & Co. Conn. Company report No: 16203-0-401R	1994	yes	no
IIB 5.4	Mass C., Sosnowska D., Serk G., Osborne L., Landa Z.	Letters from W.R. Grace, University of Florida, Biobest NV, University of South Bohemia and the Institute of Plant Protection of Poznan, Poland	-	-	-
IIB 5.1.1.4	Wenk M.L.	Primary Dermal Irritation Test of <i>Paecilomyces fumosoroseus</i> var. Apopka in Rabbits W.R. GRACE & Co. Conn. Company report No: G-7444.242	1994a	yes	no
IIB 5.1.1.5	Wenk M.L.	Repeat Primary Eye Irritation Study of <i>Paecilomyces fumosoroseus</i> var. Apopka in rabbits W.R. GRACE & Co. Conn. Company report No: G-7473.230R	1994b	yes	no

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
IIB 5.1.1.6	Wenk M.L.	Dermal Sensitization Test of <i>Paecilomyces fumosoroseus</i> var. Apopka in Guinea Pigs W.R. GRACE & Co. Conn. Company report No: G-7444.245	1994c	yes	no
IIB 5.2.1	Wenk M.L.	Acute dermal toxicity test of <i>Paecilomyces fumosoroseus</i> var Apopka in rabbits W.R. GRACE & Co. Conn. Company report No: G-7444.232	1994d	yes	no
IIB 5.1.1.5	Wenk M.L. Not useful	Primary Eye Irritation Study of <i>Paecilomyces fumosoroseus</i> var. Apopka in Rabbits W.R. GRACE & Co. Conn. Company report No: G-7473.230	1994e	yes	no

A.6 Residues in or on treated products, food and feed

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
IIB 6	Warkentien K.	PFR-MUP Residue Chemistry Data Waivers W.R. Grace & Co - Conn. Company report No: -	1994	no	no

A.7 Fate and behaviour in the environment

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
IIB 7.1	Eyal J.	PFR-MUP Environmental Fate and Effects Data Waivers W.R. GRACE & Co. Conn. Company report No: 4775-MUP-ENVFATE	1994d	no	no
IIB 7.1.1	Fargues J., Robert P.- H.	Persistance des conidiospores des hyphomycètes entomopathogènes <i>Beauveria bassiana</i> (Bals.) Vuill., <i>Metarhizium anisopliae</i> (Metsch.) Sor., <i>Nomuraea rileyi</i> (F.) Samson et <i>Paecilomyces fumosoroseus</i> Wize dans le sol, en conditions contrôlées. Agronomie, 1985, 5(1), pp 73-80	1985	no	yes
IIB 2.9	Hunsberger A.	A selective medium for the detection of <i>Paecilomyces fumosoroseus</i> in greenhouse soil and its potential as a microbial control agent of <i>Diaprepes abbreviatus</i> larvae in containerized citrus Abstract of a thesis presented to the Graduate School of the University of Florida.	1993	no	yes
IIB 7.1.2 IIB 7.1.3	Shimizu S., Aizawa K.	Nature of Blastopores produced by Entomopathogenic Fungus, <i>Paecilomyces fumosoroseus</i> Japanese J. Ent. Zool., 32, pp 182-186, 1988	1988	no	yes
IIB 7.1.1	Widden P. Not useful	Microfungal community structure from forest soils in southern Quebec, using discriminant function and factor analysis Can. J. Bot., 64, pp 1402-1412	1986	no	yes
IIB 7.1.1	Widden P. Not useful	Seasonality of forest soil microfungi in southern Quebec Can. J. Bot., 64, pp 1413-1423	1986	no	yes
IIB 7.1.1	Widden P. Not useful	Functional relationship between Quebec forest soil microfungi and their environment Can. J. Bot., 64, pp 1424-1432	1986	no	yes

A.8 Ecotoxicology

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
IIB 8.3	-	Evaluating the effect of PFR on bumblebees (<i>Bombus terrestris</i>) Company report No: -	-	no	no
IIB 8.4	anonymous	Influence of PFR on beneficial insects, <i>Aphidoletes sp.</i> Company report No: -	1992	no	no
IIB 8.4	anonymous	PFR-SPWF and Parasites (Transvena) In Vivo-Poinsettias Company report No: -	1993	no	no
IIB 8.4	anonymous	<i>Paecilomyces fumosoroseus</i> , Margosan-O and <i>Amblyseius cucumeris</i> in integrated pest management of Western Flower Thrips (<i>Frankliniella occidentalis</i>) Company report No: -	1993	no	no
IIB 8.3	Bolckmans K.	Toxicity of the entomopathogenic fungus <i>Paecilomyces fumosoroseus</i> strain Apopka 97 (PreFeRal WG) for bumblebee brood (<i>Bombus terrestris</i> L.) BIOBEST N.V. Company report No: -	1994	no	no
IIA 8.4	Degheele D., De Cock A., Van De Veire M.	Laboratory assessment of the toxicity of the entomopathogenic fungus PFR to the greenhouse whitefly <i>Trialeurodes</i> <i>vaporariorum</i> , parasite wasp <i>Encarsia</i> <i>formosa</i>	1994	no	no
IIB 8.3	De Wael L. De Greef M.	Toxicity determination with respect to bumblebees of the product PFR (<i>Paecilomyces fumosoroseus</i>) Rijksstation voor Nematologie en Entomologie	1994	no	no
IIB 8.2 (not useful)	Donovan-Peluso M., Wasti S.S., Hartmann G.C.	Safety of Entomogenous Fungi to Vertebrate Hosts Appl. Ent. Zool. , 15 (4) , pp 498-499	1980	no	yes
IIB 8	Eyal J.	Reduced-Risk Rationale for <i>Paecilomyces</i> <i>fumosoroseus</i> Apopka Strain 97 Company report No: -	-	no	no
IIB 8.1	Frey L. Grimes J. Beavers J.	<i>Paecilomyces fumosoroseus</i> Apopka 97: An avian oral pathogenicity and toxicity study in the northern bobwhite W.R. GRACE & Co. Conn. Company report No: 390-101	1994	yes	no
IIB 8.4	James R.R. Lighthart B.	Susceptibility of the Convergent Lady Beetle (Coleoptera Coccinellidae) to Four	1993	no	yes

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
		Entomogenous Fungi J. Environ. Entom. , Vol. 23, no 1, pp 1-3			
IIB 8.4	Sterk G.	Toxicity of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the predatory mite <i>Amblyseius degenerans</i> trial N°3 BIOBEST N.V. Company report No: Ekotox report 5	1994a	no	no
IIB 8.4	Sterk G.	Toxicity of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the predatory mite <i>Phytoseiulus persimilis</i> BIOBEST N.V. Company report No: Ekotox report 2	1994b	no	no
IIB 8.4	Sterk G.	Toxicity of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the predatory mite <i>Amblyseius degenerans</i> trial N°1 BIOBEST N.V. Company report No: Ekotox report 3	1994c	no	no
IIB 8.4	Sterk. G.	Toxicity of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the predatory mite <i>Amblyseius degenerans</i> trial N°2 BIOBEST N.V. Company report No: Ekotox report 4	1994d	no	no
IIB 8.4	Sterk G.	Toxicity of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the flower bug <i>Orius insidiosus</i> BIOBEST N.V. Ekotox report 6	1994e	no	no
IIB 8.4	Sterk G.	Toxicity of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the flower bug <i>Orius insidiosus</i> BIOBEST N.V. Company report No: Ekotox report 7	1994f	no	no
IIB 8.4	Sterk G.	Toxicity of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the flower bug <i>Orius insidiosus</i> BIOBEST N.V. Company report No: Ekotox report 8	1994g	no	no
IIB 8.4	Sterk G.	Toxicity of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the flower bug <i>Orius laevigatus</i> BIOBEST N.V. Company report No: Ekotox report 9	1994h	no	no
IIB 8.4	Sterk G.	Toxicity of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the	1994i	no	no

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
		predatory bug <i>Macrolophus caliginosus</i> BIOBEST N.V. Company report No: Ekotox report 10			
IIB 8.4	Sterk G.	Toxicity of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the predatory bug <i>Macrolophus caliginosus</i> BIOBEST N.V. Company report No: Ekotox report 11	1994j	no	no
IIB 8.3	Sterk G., Bolckmans K., De Jonghe R., De Wael	Side-effects of the microbial insecticide PREFERAL (<i>Paecilomyces fumosoroseus</i> , Strain Apopka 97) on <i>Bombus terrestris</i> Med. Fac. Landbouww. Univ. Gent, 60/3a, pp 713-717, 1995	1995	yes	yes
IIB 8.4	Sterk G., Bolckmans K., Van de Veire M., Sels N., Stepman W.	Side-effects of the microbial insecticide PREFERAL (<i>Paecilomyces fumosoroseus</i> , Strain Apopka 97) on different species of beneficial arthropods Med. Fac. Landbouww. Univ. Gent, 60/3a, pp 719-724, 1995	1995	yes	yes
IIB 8	Warkentien K.	PFR-MUP Ecological Data Waivers W.R. GRACE & Co. Conn. Company report No: -	1994	no	no

A.9 Classification and labelling

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A.10 Efficacy

Annex point(s) 91/414/EEC	Author(s)	Title Company (insert name) Report No Source (where different)	Year	GLP GEP	Publi- shed or not
IIIB 6	Bolckmans K., Sterk G., Eyal J., Sels B., Stepman W.	PreFeRal (<i>Paecilomyces fumosoroseus</i> strain Apopka 97), a new microbial insecticide for the biological control of whiteflies in greenhouses Med. Fac. Landbouww. Univ. Gent., pp 707-711	1995	no	yes
IIIB 6	Sterk G.	Efficacy of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the sweet potato whitefly <i>Trialeurodes vaporariorum</i> BIOBEST N.V. Company report No: Triavia 94/01A	1994	no	no
IIIB 6	Sterk G.	Efficacy of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the sweet potato whitefly <i>Trialeurodes vaporariorum</i> BIOBEST N.V. Company report No: Triavia 94/02A	1994	no	no
IIIB 6	Sterk G.	Efficacy of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the sweet potato whitefly <i>Trialeurodes vaporariorum</i> BIOBEST N.V. Company report No: Triavia 94/03C	1994	no	no
IIIB 6	Sterk G.	Efficacy of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the sweet potato whitefly <i>Trialeurodes vaporariorum</i> BIOBEST N.V. Company report No: Triavia 94/03A	1994	no	no
IIIB 6	Sterk G.	Efficacy of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the sweet potato whitefly <i>Trialeurodes vaporariorum</i> BIOBEST N.V. Triavia 94/04A	1994	no	no
IIIB 6	Sterk G.	Efficacy of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the sweet potato white fly <i>Trialeurodes vaporariorum</i> BIOBEST N.V. Company report No: Triavia 95/01A	1995	no	no
IIIB 6	Sterk G.	Efficacy of Preferal, (<i>Paecilomyces fumosoroseus</i> strain Apopka 97) to the sweet potato whitefly <i>Trialeurodes vaporariorum</i> BIOBEST N.V. Company report No: Triavia 95/03A	1995	no	no
Annex point(s)	Author(s)	Title Company (insert name) Report No	Year	GLP GEP	Publi- shed

91/414/EEC		Source (where different)			or not
(not useful)	Domsch K.H., Gams W.	Fungi in agricultural soils Halsted Press Division pp 126-129	-	no	yes
(not useful)	Maniania N.K., Fargues J.	Susceptibility of the Fall Armyworm, <i>Spodoptera frugiperda</i> to the Fungal Pathogens <i>Paecilomyces fumosoroseus</i> and <i>Nomuraea rileyi</i> Florida Entomologist 68 (1), 1985, pp 178-183	1985	no	yes
(not useful)	Seryczynska H., Bajan C.	Defensive reactions of L ₃ , L ₄ Larvae of the Colorado Beetle to the Insecticidal Fungi <i>Paecilomyces fumosoroseus</i> (Dicks) Brown et Smith, <i>Paecilomyces fumosoroseus</i> (Wize), <i>Beauveria bassiana</i> (Bols/Vuill.) Bulletin de l'académie polonaise des sciences, Série des sciences biologiques, Cl. II, Vol. XXIII, No 4, 1975, pp 267-271	1975	no	yes
(not useful)	Carruthers R.I., Wraight S.P., Jones V.A.	An overview of biological control of the sweetpotato whitefly, <i>Bemisia tabaci</i> Cotton Insect and Research and Control Conference, pp 680-685	1993	no	yes
(not useful)	Gillespie A.T.	The potential of entomogenous fungi to control glasshouse pests and brown planthopper of rice University of Southampton (no reference)	-	no	-
(not useful)	Ward O.P.	Fermentation Biotechnology Prentice Hall, Englewood Cliffs, NJ 07632 pp 59-71	-	no	yes