

Table S1 Summary of OTA degrading microorganisms

Microorganism type	Species/strain	Source	OTA concentration($\mu\text{g/mL}$)	Incubation time	Degradation rate (%)	Degradation products	Degradation enzyme	Reaction conditions	Reference
Actinobacteria	<i>Streptomyces</i> AT10, AT8, SN7, MS1, ML5, G10, PT1	soil	0.095	5d	22.83-52.68	NR	NR	liquid laboratory medium	El Khoury et al. (2017)
Bacteria	<i>Bacillus licheniformis</i> SI-1 ^a	animal faeces	6.2	24h	98	unknown	NR	liquid laboratory medium	Shi et al. (2013)
Bacteria	<i>Bacillus licheniformis</i> SI-1	animal faeces	NR	72h	35	unknown	NR	moldy corn	Shi et al. (2013)
Bacteria	<i>Phenylobacterium immobile</i>	soil	100	3-5h	NR	OT α	dihydrodioldehydrogenase	liquid laboratory medium	Wegst and Lingen (1983)
Bacteria	<i>Acinetobacter calcoaceticus</i> strain 396.1	Vineyard soils	1	6d	82	OT α	NR	liquid laboratory medium	De Bellis et al. (2015)
Bacteria	<i>Acinetobacter</i> sp. neg1	Vineyard soils	1	6d	91	OT α	NR	liquid laboratory medium	De Bellis et al. (2015)
Bacteria	<i>Acinetobacter</i> sp. neg1 ^a	vineyard soil	1	6d	>70	OT α	β -metallo-lactamase (possible)	liquid laboratory medium	Fanelli et al. (2015)
Bacteria	<i>Pediococcus parvulus</i> UTAD 473	Douro wines	1	25h	90	OT α	NR	liquid laboratory medium	Abrunhosa et al. (2014)
Bacteria	<i>Pediococcus parvulus</i> UTAD 473	Douro wines	0.007	6d	80	OT α	NR	grape must	Abrunhosa et al. (2014)
Bacteria	<i>Lactobacillus plantarum</i> , <i>L. sanfrancisco</i> , <i>L. brevis</i>	BioStarPlus Company (Poland)	0.3 ^c	24h	54, 50, 37	NR	NR	liquid laboratory medium	Piotrowska and Zakowska (2000)

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Bacteria	<i>Acinetobacter calcoaceticus</i> NRRL B-551	Northern Regional Agricultural Research Service of United States Drug Administration	10	5d	100	OT α	NR	liquid laboratory medium	Hwang and Draughon (1994)
Bacteria	<i>Bacillus amyloliquefaciens</i> ASAG1 ^a	depot-stored maize	1	24h	98.5	OT α	carboxypeptidase	liquid laboratory medium	Chang et al. (2015)
Bacteria	<i>Brevibacterium casei</i> DSM 20657, DSM 9657, DSM 20658, RM101; <i>B. linens</i> DSM 20425; <i>B. iodinum</i> DSM20626; <i>B. epidermidis</i> DSM 20660	German Collection of Microorganisms and Cell Cultures	0.04	10d	100	OT α	carboxypeptidase A (possible)	liquid laboratory medium	Rodriguez et al. (2011)
Bacteria	<i>Brevibacterium casei</i> RM101	German Collection of Microorganisms and Cell Cultures	40	10d	100	OT α	carboxypeptidase A (possible)	liquid laboratory medium	Rodriguez et al. (2011)
Bacteria	<i>Lactobacillus acidophilus</i> VM 20	University of Veterinary Medicine (Vienna, Austria)	1	4h	96	NR	NR	liquid laboratory medium	Fuchs et al. (2008)
Bacteria	<i>Bacillus licheniformis</i>	rumen fluid of goat	0.1	6h	68	NR	carboxypeptidase A	roughage	Upadhyaya et al. (2011)
Bacteria	<i>Alcaligenes faecalis</i> ASAGF 0D-1	soil	1	48h	92	OT α	carboxypeptidase A (possible)	liquid laboratory medium	Zhang et al. (2017)
Bacteria	<i>Bacillus licheniformis</i> CM 21	Thai fermented soybean product (Thua-nao)	5	2d	92.5	OT α	NR	liquid laboratory medium	Petchkongkaew et al. (2008)
Bacteria	<i>Eubacterium bifforme</i> MM11 ^b	swine intestinal microbiota	0.1	12h	77.1	NR	NR	liquid laboratory medium	Upadhyaya et al. (2012)

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Bacteria	<i>Eubacterium biforme</i> MM11 ^b	swine intestinal microbiota	1	24h	100 ^d	NR	NR	solid corn substrate	Upadhyaya et al. (2012)
Bacteria	<i>Eubacterium callanderi</i> Due4_11 ^b	pig intestine	0.2	6h	95	OT α	NR	liquid laboratory medium	Schatzmayr et al. (2006)
Bacteria	<i>Sphingomonas paucimobilis</i> 033-1, <i>S. asaccharolytica</i> 034-1	soil	0.2	5h	>95	OT α	NR	liquid laboratory medium	Schatzmayr et al. (2006)
Bacteria	<i>Stenotrophomonas nitritreducens</i> 041-9	soil	0.2	10h	100	OT α	NR	liquid laboratory medium	Schatzmayr et al. (2006)
Bacteria	<i>Rhodococcus erythropolis</i> GD2A, BRB 1AB	Natural soil	2	72h	27-34	NR	NR	liquid laboratory medium	Cserhádi et al. (2013)
Bacteria	<i>Rhodococcus pyridinivorans</i> K402, K408	Oil contaminated soil	2	72h	15-21	NR	NR	liquid laboratory medium	Cserhádi et al. (2013)
Bacteria	<i>Cupriavidus basilensis</i> ÓR16	soil	20	5d	100	OT α	NR	liquid laboratory medium	Ferenczi et al. (2014)
Bacteria	<i>Bacillus subtilis</i> CW 14 ^a	fresh elk droppings	6	24h	97.6	unknown	NR	PBS buffer	Shi et al. (2014)
Bacteria	<i>Bacillus subtilis</i> CW 14	fresh elk droppings	100 ^c	3d	47.1	unknown	NR	contaminated maize	Shi et al. (2014)
Bacteria	<i>Brevundimonas vermicularis</i> B-1	Vineyard soil	1	2d	87	NR	NR	liquid laboratory medium	Wang et al. (2014)
Bacteria	<i>Bacillus licheniformis</i> MZH-11	animal faeces et al.	5 ^c	36h	73.6	NR	NR	liquid laboratory medium	Guan et al. (2009) ^e
Bacteria	<i>Bacillus licheniformis</i> MZH-11	animal faeces et al.	0.1,0.5,5 ^c	72h	84.4,78.3, 73.5	NR	NR	corn flour	Guan et al. (2009) ^e

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Bacteria	<i>Stenotrophomonas</i> sp. CW117	soil and moldy food	0.02	72h	99.4	NR	NR	liquid laboratory medium	Jiang et al. (2016b)^e
Bacteria	<i>Stenotrophomonas</i> sp. CW117	soil and moldy food	0.02 ^c	72h	71	NR	NR	feed	Jiang et al. (2016b)^e
Bacteria	<i>Luteimonas</i> sp. CW574	soil and moldy food	0.02	48h	90.1	NR	NR	liquid laboratory medium	Jiang et al. (2016d)^e
Bacteria	<i>Luteimonas</i> sp. CW574	soil and moldy food	0.02 ^c	48h	48.3	NR	NR	feed	Jiang et al. (2016d)^e
Bacteria	<i>Silanimonas</i> sp. CW282	soil and moldy food	0.02	48h	95.6	NR	NR	liquid laboratory medium	Jiang et al. (2016c)^e
Bacteria	<i>Silanimonas</i> sp. CW282	soil and moldy food	0.02 ^c	48h	53.2	NR	NR	feed	Jiang et al. (2016c)^e
Bacteria	<i>Lysobacter</i> sp. CW239	soil and moldy food	0.02	48h	99.8	NR	NR	liquid laboratory medium	Jiang et al. (2016a)^e
Bacteria	<i>Lysobacter</i> sp. CW239	soil and moldy food	0.02 ^c	48h	68.7	NR	NR	feed	Jiang et al. (2016a)^e
Bacteria	<i>Pseudomonas aeruginosa</i> N17-1	soil	1	72h	85.4	NR	NR	liquid laboratory medium	Liu et al. (2016)^e
Bacteria	<i>Bifidobacterium bifidum</i> CECT 870T, <i>B. breve</i> CECT 4839T; <i>Lactobacillus casei</i> CECT 475T, <i>Lactobacillus casei</i> CECT 4040, <i>L. casei</i> CECT 4045, <i>L. delbrueckii bulgaricus</i> CECT 4005, <i>L. johnsonii</i> CECT 289, <i>L. paracasei</i> CECT 4022, <i>L. plantarum</i> CECT 220, <i>L. plantarum</i> CECT 221, <i>L. plantarum</i> CECT 222, <i>L. plantarum</i> CECT 223, <i>L. plantarum</i> CECT 748, <i>L. plantarum</i> CECT 749, <i>L. rhamnosus</i> CECT 278T, <i>L. rhamnosus</i> CECT 288, <i>L. salivarius</i> CECT 4062 ^b	Spanish Type Culture Collection	0.6	24h	29.6-97.1	OT α	NR	liquid laboratory medium	Luz et al. (2018)

Microorganism type	Species/strain	Source	OTA concentration($\mu\text{g/mL}$)	Incubation time	Degradation rate (%)	Degradation products	Degradation enzymes	Reaction conditions	Reference
Filamentous fungi	<i>Aspergillus niger</i> GX312, <i>A. Japonicus</i> AX35	French grapes	2	5d	99, 89	OT α	NR	liquid laboratory medium	Bejaoui et al. (2006)
Filamentous fungi	<i>Aspergillus carbonarius</i> SA332 (a weak OTA producer)	French grapes	2	5d	83	OT α	NR	liquid laboratory medium	Bejaoui et al. (2006)
Filamentous fungi	<i>Aspergillus tubingensis</i> M036, M074	Korean meju (a starter of soybeans fermentation)	0.04	14d	>95	OT α	NR	liquid laboratory medium	Cho et al. (2016)
Filamentous fungi	<i>A. niger</i> , <i>A. carbonarius</i> , <i>A. fumigatus</i> , <i>A. clavatus</i> , <i>A. ochraceus</i> , <i>A. versicolor</i> , <i>A. wentii</i> , <i>Cladosporium</i> sp., <i>Penicillium aurantiogriseum</i> , <i>Penicillium spinulosum</i>	Portuguese grapes	1	6d	>80	OT α	carboxypeptidase A (possible)	liquid laboratory medium	Abrunhosa et al. (2002)
Filamentous fungi	<i>Botrytis cinerea</i> UdLTA 3-95, UdLTA 3-102, UdLTA 3-115	grapes	1	7d	24.2-26.7	NR	NR	solid grape synthetic medium	Valero et al. (2008)
Filamentous fungi	<i>Pleurotus ostreatus</i>	purchase	0.2 ^c	4w	77.3	OT α	NR	barley solid state fermentation medium	Engelhardt (2002)
Filamentous fungi	<i>Rhizopus stolonifer</i> , <i>R. microsporus</i> , <i>R. homothallicus</i> , <i>R. oryzae</i> , unidentified <i>Rhizopus</i> sp.	peach, nectarine, tomato, soil, rice, tempeh	7.5	16d	>95	OT α	carboxypeptidase A (possible)	liquid laboratory medium	Varga et al. (2005)
Filamentous fungi	<i>R. stolonifer</i> var. <i>stolonifer</i> TJM 8A8	peach	7.5 ^c	10d	96.5	OT α	carboxypeptidase A (possible)	moistened wheat	Varga et al. (2005)
Filamentous fungi	<i>Aspergillus niger</i> CBS 120.49	Central Bureau of Fungal Cultures (Netherlands)	2.5	7d, 5d	100	OT α	NR	liquid and solid media	Varga et al. (2000)
Filamentous fungi	<i>Aspergillus niger</i> M00120	soil	0.25	2d	99	OT α	NR	liquid laboratory medium	Xiong et al. (2017)

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Filamentous fungi	<i>Aureobasidium pullulans</i> AU14-3-1, AU18-3B, AU34-2, LS30	Apple leaves, Plum fruits, Grapevine leaves, Apple fruits	0.8	6d	75-90.5	OT α	NR	liquid laboratory medium	de Felice et al. (2008)
Filamentous fungi	<i>Aureobasidium pullulans</i> AU14-3-1, AU18-3B	Apple leaves, Plum fruits	0.8	6d	25, 31	OT α	NR	grape must	de Felice et al. (2008)
Yeast	<i>Saccharomyces cerevisiae</i>	BioStarPlus Company (Poland)	0.3	24h	41	NR	NR	liquid laboratory medium	Piotrowska and Zakowska (2000)
Yeast	<i>Kazachstania servazzii</i> KFGY7	Kefir grains	1	24h	11	NR	NR	milk	Ben Taheur et al. (2017)
Yeast	<i>Kloeckera apiculata</i> 3187, 3188, 3189, 3197, 3198, 3200	University of Sassari (Italy)	0.006	20d	25-40	OT α	NR	liquid laboratory medium	Angioni et al. (2007)
Yeast	<i>Saccharomyces cerevisiae</i> 1182, 1236	University of Sassari (Italy)	0.006	20d	34-44	OT α	NR	liquid laboratory medium	Angioni et al. (2007)
Yeast	<i>Trichosporon</i> sp DSM 14153, DSM 14156, DSM 14162; <i>Rhodotorula</i> sp DSM 14155	DSMZ (Germany)	0.2	5h	80-100	OT α	NR	liquid laboratory medium	Schatzmayr et al. (2003)
Yeast	<i>Trichosporon mycotoxinivorans</i> (MTV, 115)	DSMZ (Germany)	0.2	2.5h	100	OT α	NR	liquid laboratory medium	Schatzmayr et al. (2006)
Yeast	<i>Trichosporon</i> 178, <i>Rhodotorula</i> 124	DSMZ (Germany)	0.2	24h	100	OT α	NR	liquid laboratory medium	Schatzmayr et al. (2006)
Yeast	<i>Cryptococcus</i> 118	DSMZ (Germany)	0.2	48h	90	OT α	NR	liquid laboratory medium	Schatzmayr et al. (2006)
Yeast	<i>Yarrowia lipolytica</i>	vineyard	1	2d	88	LT, NR	NR	liquid laboratory medium	Yang et al. (2016)

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Yeast	<i>Phaffia rhodozyma</i> CBS 5905	NR	7.5	15d	90	OT α	carboxypeptidase(possible)	liquid laboratory medium	Péteri et al. (2007)
Yeast	<i>Metschnikowia pulcherrima</i> MACH1, M320; <i>Kloeckera lindneri</i> GAL5; <i>Pichia guilliermondii</i> M8, M29; <i>Rhodococcus erythropolis</i> AR14	Agroinno va culture collection centre (Italy)	7.5	15d	25.8-84	unknown	NR	liquid laboratory medium	Patharanjan et al. (2011)
Yeast	<i>Yarrowia lipolytica</i> Y-2	Vineyard soil	1	2d	84	NR	NR	liquid laboratory medium	Wang et al. (2014)
Yeast	<i>Trichosporon mycotoxinivorans</i> sp. nov.	Mastotermittidae	0.4	2.5h	100	OT α	NR	liquid laboratory medium	Molnár et al. (2004)

NR: Not reported; LT: Some degradation products were notably less toxic than OTA; PBS: Phosphate-buffered saline ; *: Cell-free supernatant; ^b: Anaerobic condition ; ^c:

$\mu\text{g}/\text{g}$; ^d: The negative control showed 26% OTA loss; ^e: Patent.