

# A highly-simplified and inexpensive MALDI-TOF mass spectrometry sample preparation with broad applicability to microorganisms, plants, and insects

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**Table S1. Spectral similarity analysis for *Aspergillus* samples.**

**(A) Spectral similarity analysis – simplified protocol**

	FLAVUS_IMI_190443	FLAVUS_IMI_242693	FLAVUS_IMI_357038	FLAVUS_IMI_92875ii	FLAVUS_IMI_93803	ORYZAE_IMI_126842	PARASITICUS_IMI_120920	PARASITICUS_IMI_89717	PARASITICUS_IMI_91019b	TAMARII_IMI_91888	Identification call	Percentage clearance	Confidence	Correct answer?
FLAVUS_IMI_190443_PLATE_1_TEST	<b>429</b>	140	21	151	163	159	11	18	11	5	FLAVUS_IMI_190443	62	High	Yes
FLAVUS_IMI_190443_PLATE_2_TEST	<b>420</b>	152	24	146	146	155	10	15	10	2	FLAVUS_IMI_190443	63	High	Yes
FLAVUS_IMI_242693_PLATE_1_TEST	145	<b>470</b>	36	320	140	146	3	10	7	3	FLAVUS_IMI_242693	32	High	Yes
FLAVUS_IMI_242693_PLATE_2_TEST	168	<b>514</b>	40	337	139	196	3	10	7	2	FLAVUS_IMI_242693	34	High	Yes
FLAVUS_IMI_357038_PLATE_1_TEST	24	47	<b>381</b>	39	15	20	6	1	2	3	FLAVUS_IMI_357038	88	High	Yes
FLAVUS_IMI_357038_PLATE_2_TEST	36	65	<b>474</b>	74	32	43	11	2	8	2	FLAVUS_IMI_357038	84	High	Yes
FLAVUS_IMI_92875ii_PLATE_1_TEST	186	292	35	<b>507</b>	157	115	3	22	8	2	FLAVUS_IMI_92875ii	42	High	Yes
FLAVUS_IMI_92875ii_PLATE_2_TEST	87	283	60	<b>387</b>	89	97	3	7	4	1	FLAVUS_IMI_92875ii	27	High	Yes
FLAVUS_IMI_93803_PLATE_1_TEST	119	131	12	148	<b>518</b>	157	9	10	19	2	FLAVUS_IMI_93803	70	High	Yes
FLAVUS_IMI_93803_PLATE_2_TEST	104	138	10	163	<b>476</b>	137	4	5	8	2	FLAVUS_IMI_93803	66	High	Yes
ORYZAE_IMI_126842_PLATE_1_TEST	113	208	50	143	119	<b>343</b>	8	7	5	6	ORYZAE_IMI_126842	39	High	Yes
ORYZAE_IMI_126842_PLATE_2_TEST	174	204	22	124	138	<b>444</b>	12	11	11	2	ORYZAE_IMI_126842	54	High	Yes
PARASITICUS_IMI_120920_PLATE_1_TEST	10	4	3	5	12	9	<b>207</b>	107	183	2	PARASITICUS_IMI_120920	12	Reasonable	Yes
PARASITICUS_IMI_120920_PLATE_2_TEST	8	7	5	10	14	13	<b>450</b>	110	292	2	PARASITICUS_IMI_120920	35	High	Yes
PARASITICUS_IMI_89717_PLATE_1_TEST	20	12	4	22	9	22	102	<b>570</b>	106	4	PARASITICUS_IMI_89717	81	High	Yes
PARASITICUS_IMI_89717_PLATE_2_TEST	16	6	1	13	12	9	53	<b>160</b>	81	4	PARASITICUS_IMI_89717	49	High	Yes
PARASITICUS_IMI_91019b_PLATE_1_TEST	8	11	9	11	17	9	289	96	<b>531</b>	3	PARASITICUS_IMI_91019b	46	High	Yes
PARASITICUS_IMI_91019b_PLATE_2_TEST	7	6	3	9	7	7	274	123	<b>430</b>	2	PARASITICUS_IMI_91019b	36	High	Yes
TAMARII_IMI_91888_PLATE_1_TEST	3	2	1	4	3	5	3	4	2	<b>232</b>	TAMARII_IMI_91888	98	High	Yes
TAMARII_IMI_91888_PLATE_2_TEST	1	1	2	1	1	2	4	2	2	<b>306</b>	TAMARII_IMI_91888	99	High	Yes

## (B) Spectral similarity analysis – full-extraction controls

	FLAVUS_IMI_190443	FLAVUS_IMI_242693	FLAVUS_IMI_92875ii	FLAVUS_IMI_93803	ORYZAE_IMI_126842	PARASITICUS_IMI_120920	PARASITICUS_IMI_89717	PARASITICUS_IMI_91019b	TAMARII_IMI_91888	Identification call	Percentage clearance	Confidence	Correct answer?
FLAVUS_IMI_190443_PLATE_1_TEST	<b>330</b>	174	123	137	104	19	37	14	5	FLAVUS_IMI_190443	21	High	Yes
FLAVUS_IMI_190443_PLATE_2_TEST	<b>320</b>	153	120	153	172	14	37	13	3	FLAVUS_IMI_190443	11	Reasonable	Yes
FLAVUS_IMI_242693_PLATE_1_TEST	112	<b>511</b>	256	189	157	19	35	13	5	FLAVUS_IMI_242693	50	High	Yes
FLAVUS_IMI_242693_PLATE_2_TEST	187	<b>454</b>	265	204	214	20	39	20	5	FLAVUS_IMI_242693	42	High	Yes
FLAVUS_IMI_92875ii_PLATE_1_TEST	116	302	<b>352</b>	145	163	24	40	27	8	FLAVUS_IMI_92875ii	14	Reasonable	Yes
FLAVUS_IMI_92875ii_PLATE_2_TEST	96	<b>333</b>	322	166	153	23	32	17	5	FLAVUS_IMI_242693	3	Low	No
FLAVUS_IMI_93803_PLATE_1_TEST	129	121	105	<b>570</b>	146	21	34	10	4	FLAVUS_IMI_93803	74	High	Yes
FLAVUS_IMI_93803_PLATE_2_TEST	107	129	100	<b>513</b>	144	14	45	15	6	FLAVUS_IMI_93803	72	High	Yes
ORYZAE_IMI_126842_PLATE_1_TEST	152	176	164	174	<b>485</b>	21	73	24	3	ORYZAE_IMI_126842	64	High	Yes
ORYZAE_IMI_126842_PLATE_2_TEST	160	145	145	217	<b>428</b>	35	56	20	4	ORYZAE_IMI_126842	49	High	Yes
PARASITICUS_IMI_120920_PLATE_1_TEST	32	27	32	31	28	<b>472</b>	93	409	7	PARASITICUS_IMI_120920	13	Reasonable	Yes
PARASITICUS_IMI_120920_PLATE_2_TEST	44	37	33	25	40	<b>482</b>	113	374	6	PARASITICUS_IMI_120920	22	High	Yes
PARASITICUS_IMI_89717_PLATE_1_TEST	37	46	32	55	63	60	<b>499</b>	73	6	PARASITICUS_IMI_89717	85	High	Yes
PARASITICUS_IMI_89717_PLATE_2_TEST	42	40	36	56	71	81	<b>532</b>	97	8	PARASITICUS_IMI_89717	82	High	Yes
PARASITICUS_IMI_91019b_PLATE_1_TEST	42	46	35	28	45	425	129	<b>460</b>	5	PARASITICUS_IMI_91019b	8	Low	Yes
PARASITICUS_IMI_91019b_PLATE_2_TEST	31	39	47	37	49	378	131	<b>549</b>	4	PARASITICUS_IMI_91019b	31	High	Yes
TAMARII_IMI_91888_PLATE_1_TEST	3	6	3	4	5	4	7	4	<b>338</b>	TAMARII_IMI_91888	98	High	Yes
TAMARII_IMI_91888_PLATE_2_TEST	7	7	9	7	7	4	7	4	<b>376</b>	TAMARII_IMI_91888	98	High	Yes

**Table S2. Identification results for *Crassula* samples.**

Blind-test sample	Best match	Bruker Score	Second-best match	Bruker score
CRASSULA_BLIND_TEST_01	CRASSULA_AQUATICA_REF_5	2.683	CRASSULA_AQUATICA_REF_2	2.640
CRASSULA_BLIND_TEST_02	CRASSULA_HELMSII_FLINDERS_ISLAND_REF_6	2.584	CRASSULA_HELMSII_FLINDERS_ISLAND_REF_4	2.556
CRASSULA_BLIND_TEST_03	CRASSULA_HELMSII_VICTORIA_REF_4	2.655	CRASSULA_HELMSII_VICTORIA_REF_3	2.551
CRASSULA_BLIND_TEST_04	CRASSULA_AQUATICA_REF_5	2.748	CRASSULA_AQUATICA_REF_3	2.725
CRASSULA_BLIND_TEST_05	CRASSULA_HELMSII_BELGIUM_REF_5	2.747	CRASSULA_HELMSII_BELGIUM_REF_4	2.666
CRASSULA_BLIND_TEST_06	CRASSULA_HELMSII_UK_REF_1	2.700	CRASSULA_HELMSII_UK_REF_6	2.564
CRASSULA_BLIND_TEST_07	CRASSULA_AQUATICA_REF_5	2.764	CRASSULA_AQUATICA_REF_4	2.730
CRASSULA_BLIND_TEST_08	CRASSULA_HELMSII_UK_REF_4	2.717	CRASSULA_HELMSII_UK_REF_1	2.630
CRASSULA_BLIND_TEST_09	CRASSULA_HELMSII_VICTORIA_REF_5	2.719	CRASSULA_HELMSII_VICTORIA_REF_3	2.637
CRASSULA_BLIND_TEST_10	CRASSULA_HELMSII_FLINDERS_ISLAND_REF_1	2.472	CRASSULA_HELMSII_FLINDERS_ISLAND_REF_3	2.237
CRASSULA_BLIND_TEST_11	CRASSULA_HELMSII_FLINDERS_ISLAND_REF_6	2.685	CRASSULA_HELMSII_FLINDERS_ISLAND_REF_2	2.626
CRASSULA_BLIND_TEST_12	CRASSULA_HELMSII_BELGIUM_REF_1	2.705	CRASSULA_HELMSII_BELGIUM_REF_5	2.687
CRASSULA_BLIND_TEST_13	CRASSULA_HELMSII_BELGIUM_REF_5	2.691	CRASSULA_HELMSII_UK_REF_4	2.673
CRASSULA_BLIND_TEST_14	CRASSULA_HELMSII_VICTORIA_REF_4	2.710	CRASSULA_HELMSII_VICTORIA_REF_1	2.577
CRASSULA_BLIND_TEST_15	CRASSULA_HELMSII_BELGIUM_REF_4	2.562	CRASSULA_HELMSII_BELGIUM_REF_6	2.555
CRASSULA_BLIND_TEST_16	CRASSULA_AQUATICA_REF_2	2.522	CRASSULA_AQUATICA_REF_5	2.519
CRASSULA_BLIND_TEST_17	CRASSULA_HELMSII_FLINDERS_ISLAND_REF_2	2.770	CRASSULA_HELMSII_FLINDERS_ISLAND_REF_6	2.676
CRASSULA_BLIND_TEST_18	CRASSULA_HELMSII_UK_REF_2	2.543	CRASSULA_HELMSII_UK_REF_3	2.514
CRASSULA_BLIND_TEST_19	CRASSULA_HELMSII_VICTORIA_REF_2	2.649	CRASSULA_HELMSII_VICTORIA_REF_5	2.551
CRASSULA_BLIND_TEST_20	CRASSULA_HELMSII_BELGIUM_REF_5	2.704	CRASSULA_HELMSII_BELGIUM_REF_3	2.688
CRASSULA_BLIND_TEST_21	CRASSULA_HELMSII_BELGIUM_REF_2	2.614	CRASSULA_HELMSII_BELGIUM_REF_5	2.566
CRASSULA_BLIND_TEST_22	CRASSULA_HELMSII_FLINDERS_ISLAND_REF_1	2.577	CRASSULA_HELMSII_FLINDERS_ISLAND_REF_2	2.428
CRASSULA_BLIND_TEST_23	CRASSULA_HELMSII_UK_REF_4	2.673	CRASSULA_HELMSII_BELGIUM_REF_5	2.626
CRASSULA_BLIND_TEST_24	CRASSULA_HELMSII_VICTORIA_REF_4	2.716	CRASSULA_HELMSII_VICTORIA_REF_3	2.641
CRASSULA_BLIND_TEST_25	CRASSULA_HELMSII_VICTORIA_REF_4	2.706	CRASSULA_HELMSII_VICTORIA_REF_1	2.617
CRASSULA_BLIND_TEST_26	CRASSULA_AQUATICA_REF_5	2.388	CRASSULA_AQUATICA_REF_4	2.364
CRASSULA_BLIND_TEST_27	CRASSULA_HELMSII_FLINDERS_ISLAND_REF_1	2.621	CRASSULA_HELMSII_FLINDERS_ISLAND_REF_2	2.472
CRASSULA_BLIND_TEST_28	CRASSULA_HELMSII_BELGIUM_REF_5	2.696	CRASSULA_HELMSII_BELGIUM_REF_3	2.687
CRASSULA_BLIND_TEST_29	CRASSULA_HELMSII_UK_REF_4	2.630	CRASSULA_HELMSII_UK_REF_1	2.609
CRASSULA_BLIND_TEST_30	CRASSULA_AQUATICA_REF_5	2.614	CRASSULA_AQUATICA_REF_4	2.605

**Table S3. Identification results for rubbervine samples.**

Blind-test sample	Best match	Bruker Score	Second-best match	Bruker score	Identification call
BLIND_TEST_17	BRAZIL_PLANT_2_LEAF_1_REP_1	2.765	BRAZIL_PLANT_2_LEAF_1_REP_2	2.692	Brazil
BLIND_TEST_18	AUSTRALIA_PLANT_1_LEAF_1_REP_1	2.712	AUSTRALIA_PLANT_1_LEAF_1_REP_2	2.698	Australia
BLIND_TEST_19	BRAZIL_PLANT_1_LEAF_1_REP_2	2.677	BRAZIL_PLANT_1_LEAF_1_REP_1	2.671	Brazil
BLIND_TEST_20	AUSTRALIA_PLANT_1_LEAF_1_REP_1	2.664	AUSTRALIA_PLANT_1_LEAF_1_REP_2	2.614	Australia
BLIND_TEST_21	BRAZIL_PLANT_1_LEAF_2_REP_2	2.669	BRAZIL_PLANT_1_LEAF_2_REP_1	2.615	Brazil
BLIND_TEST_22	AUSTRALIA_PLANT_1_LEAF_2_REP_1	2.668	AUSTRALIA_PLANT_1_LEAF_2_REP_2	2.557	Australia
BLIND_TEST_23	AUSTRALIA_PLANT_1_LEAF_2_REP_1	2.700	AUSTRALIA_PLANT_1_LEAF_2_REP_2	2.658	Australia
BLIND_TEST_24	BRAZIL_PLANT_1_LEAF_2_REP_2	2.596	BRAZIL_PLANT_1_LEAF_2_REP_1	2.580	Brazil
BLIND_TEST_25	BRAZIL_PLANT_2_LEAF_1_REP_1	2.686	BRAZIL_PLANT_2_LEAF_1_REP_2	2.584	Brazil
BLIND_TEST_26	AUSTRALIA_PLANT_2_LEAF_2_REP_2	2.632	AUSTRALIA_PLANT_2_LEAF_1_REP_1	2.606	Australia
BLIND_TEST_27	BRAZIL_PLANT_1_LEAF_1_REP_2	2.574	BRAZIL_PLANT_2_LEAF_2_REP_2	2.570	Brazil
BLIND_TEST_28	AUSTRALIA_PLANT_2_LEAF_1_REP_1	2.684	AUSTRALIA_PLANT_2_LEAF_2_REP_2	2.667	Australia
BLIND_TEST_29	AUSTRALIA_PLANT_2_LEAF_2_REP_2	2.695	AUSTRALIA_PLANT_2_LEAF_1_REP_1	2.645	Australia
BLIND_TEST_30	BRAZIL_PLANT_1_LEAF_1_REP_2	2.560	BRAZIL_PLANT_2_LEAF_1_REP_2	2.546	Brazil
BLIND_TEST_31	AUSTRALIA_PLANT_2_LEAF_2_REP_2	2.643	AUSTRALIA_PLANT_2_LEAF_2_REP_1	2.589	Australia
BLIND_TEST_32	BRAZIL_PLANT_2_LEAF_2_REP_1	2.635	BRAZIL_PLANT_1_LEAF_1_REP_2	2.609	Brazil

**Table S4. Old (1960s) and new (2010s) dried SpHINGIDAE sample details.**

Sample <sup>a</sup>	Details	Identification
MJWC_106	[UK] Somerset, Bruton, MVL, 2.vii.1966 [M.J.W. Cock] MJWC 2015-012	<i>Laothoe populi</i> (Linnaeus)
MJWC_107	[UK] Somerset, Bruton, MVL, 22.v.1966 [M.J.W. Cock] MJWC 2015-008	<i>Smerinthus ocellata</i> (Linnaeus)
MJWC_108	[UK] Somerset, Bruton, MVL, 7.v.1966 [M.J.W. Cock]	<i>Deilephila elpenor</i> (Linnaeus)
MJWC_109	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 30.v.2012, M.J.W. Cock	<i>Laothoe populi</i> (Linnaeus)
MJWC_110	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 19.v.2017, M.J.W. Cock	<i>Smerinthus ocellata</i> (Linnaeus)
MJWC_111	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 6.vii.2013, M.J.W. Cock	<i>Deilephila elpenor</i> (Linnaeus)
MJWC_112	[UK] Somerset, Bruton, MVL, 22.v.1966 [M.J.W. Cock] MJWC 2015-008	<i>Smerinthus ocellata</i> (Linnaeus)
MJWC_113	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 30.v.2012, M.J.W. Cock	<i>Laothoe populi</i> (Linnaeus)
MJWC_114	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 6.vii.2013, M.J.W. Cock	<i>Deilephila elpenor</i> (Linnaeus)
MJWC_115	[UK] Somerset, Bruton, MVL, 2.vii.1966 [M.J.W. Cock] MJWC 2015-012	<i>Laothoe populi</i> (Linnaeus)
MJWC_116	[UK] Somerset, Bruton, MVL, 7.v.1966 [M.J.W. Cock]	<i>Deilephila elpenor</i> (Linnaeus)
MJWC_117	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 19.v.2017, M.J.W. Cock	<i>Smerinthus ocellata</i> (Linnaeus)
MJWC_118	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 6.vii.2013, M.J.W. Cock	<i>Deilephila elpenor</i> (Linnaeus)
MJWC_119	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 19.v.2017, M.J.W. Cock	<i>Smerinthus ocellata</i> (Linnaeus)
MJWC_120	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 30.v.2012, M.J.W. Cock	<i>Laothoe populi</i> (Linnaeus)
MJWC_121	[UK] Somerset, Bruton, MVL, 7.v.1966 [M.J.W. Cock]	<i>Deilephila elpenor</i> (Linnaeus)
MJWC_122	[UK] Somerset, Bruton, MVL, 22.v.1966 [M.J.W. Cock] MJWC 2015-008	<i>Smerinthus ocellata</i> (Linnaeus)
MJWC_123	[UK] Somerset, Bruton, MVL, 2.vii.1966 [M.J.W. Cock] MJWC 2015-012	<i>Laothoe populi</i> (Linnaeus)
MJWC_124	[UK] Somerset, Bruton, MVL, 7.v.1966 [M.J.W. Cock]	<i>Deilephila elpenor</i> (Linnaeus)
MJWC_125	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 19.v.2017, M.J.W. Cock	<i>Smerinthus ocellata</i> (Linnaeus)
MJWC_126	[UK] Somerset, Bruton, MVL, 2.vii.1966 [M.J.W. Cock] MJWC 2015-012	<i>Laothoe populi</i> (Linnaeus)
MJWC_127	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 6.vii.2013, M.J.W. Cock	<i>Deilephila elpenor</i> (Linnaeus)
MJWC_128	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 30.v.2012, M.J.W. Cock	<i>Laothoe populi</i> (Linnaeus)
MJWC_129	[UK] Somerset, Bruton, MVL, 22.v.1966 [M.J.W. Cock] MJWC 2015-008	<i>Smerinthus ocellata</i> (Linnaeus)
MJWC_130	[UK] Somerset, Bruton, MVL, 22.v.1966 [M.J.W. Cock] MJWC 2015-008	<i>Smerinthus ocellata</i> (Linnaeus)
MJWC_131	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 19.v.2017, M.J.W. Cock	<i>Smerinthus ocellata</i> (Linnaeus)
MJWC_132	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 6.vii.2013, M.J.W. Cock	<i>Deilephila elpenor</i> (Linnaeus)
MJWC_133	UK, Ceredigion, Llanon, Brynamlwg, MVL trap, 30.v.2012, M.J.W. Cock	<i>Laothoe populi</i> (Linnaeus)
MJWC_134	[UK] Somerset, Bruton, MVL, 7.v.1966 [M.J.W. Cock]	<i>Deilephila elpenor</i> (Linnaeus)

<sup>a</sup>Samples comprised a single leg from each source specimen, divided into five portions (information in square brackets was not included on the original data labels of the source specimens).

**Table S5. Identification results for Sphingidae samples.****(A) Old test samples against old-sample database entries**

Analyte	Best match	Bruker score	Second-best match	Bruker score
MJWC_106 ( <i>Laothoe populi</i> 1966)	MJWC_123 ( <i>Laothoe populi</i> 1966)	2.075	MJWC_126 ( <i>Laothoe populi</i> 1966)	1.988
MJWC_107 ( <i>Smerinthus ocellata</i> 1966)	MJWC_112 ( <i>Smerinthus ocellata</i> 1966)	2.134	MJWC_122 ( <i>Smerinthus ocellata</i> 1966)	1.969
MJWC_108 ( <i>Deilephila elpenor</i> 1966)	MJWC_121 ( <i>Deilephila elpenor</i> 1966)	2.425	MJWC_116 ( <i>Deilephila elpenor</i> 1966)	2.402
MJWC_112 ( <i>Smerinthus ocellata</i> 1966)	MJWC_107 ( <i>Smerinthus ocellata</i> 1966)	2.122	MJWC_122 ( <i>Smerinthus ocellata</i> 1966)	2.053
MJWC_115 ( <i>Laothoe populi</i> 1966)	MJWC_126 ( <i>Laothoe populi</i> 1966)	2.129	MJWC_106 ( <i>Laothoe populi</i> 1966)	1.960
MJWC_116 ( <i>Deilephila elpenor</i> 1966)	MJWC_121 ( <i>Deilephila elpenor</i> 1966)	2.502	MJWC_108 ( <i>Deilephila elpenor</i> 1966)	2.309
MJWC_121 ( <i>Deilephila elpenor</i> 1966)	MJWC_116 ( <i>Deilephila elpenor</i> 1966)	2.388	MJWC_108 ( <i>Deilephila elpenor</i> 1966)	2.363
MJWC_122 ( <i>Smerinthus ocellata</i> 1966)	MJWC_112 ( <i>Smerinthus ocellata</i> 1966)	2.057	MJWC_107 ( <i>Smerinthus ocellata</i> 1966)	1.932
MJWC_123 ( <i>Laothoe populi</i> 1966)	MJWC_126 ( <i>Laothoe populi</i> 1966)	2.292	MJWC_106 ( <i>Laothoe populi</i> 1966)	2.026
MJWC_124 ( <i>Deilephila elpenor</i> 1966)	MJWC_134 ( <i>Deilephila elpenor</i> 1966)	2.301	MJWC_121 ( <i>Deilephila elpenor</i> 1966)	2.063
MJWC_126 ( <i>Laothoe populi</i> 1966)	MJWC_123 ( <i>Laothoe populi</i> 1966)	2.284	MJWC_106 ( <i>Laothoe populi</i> 1966)	2.006
MJWC_129 ( <i>Smerinthus ocellata</i> 1966)	No reliable identification	1.342	No reliable identification	0.998
MJWC_130 ( <i>Smerinthus ocellata</i> 1966)	No reliable identification	1.369	No reliable identification	1.329
MJWC_134 ( <i>Deilephila elpenor</i> 1966)	MJWC_124 ( <i>Deilephila elpenor</i> 1966)	2.207	MJWC_121 ( <i>Deilephila elpenor</i> 1966)	2.175

**(B) New test samples against old-sample database entries**

Analyte	Best match	Bruker score	Second-best match	Bruker score
MJWC_109 ( <i>Laothoe populi</i> 2012)	MJWC_126 ( <i>Laothoe populi</i> 1966)	1.829	MJWC_106 ( <i>Laothoe populi</i> 1966)	1.776
MJWC_110 ( <i>Smerinthus ocellata</i> 2017)	No reliable identification	1.177	No reliable identification	1.149
MJWC_111 ( <i>Deilephila elpenor</i> 2013)	No reliable identification	1.632	No reliable identification	1.549
MJWC_113 ( <i>Laothoe populi</i> 2012)	MJWC_106 ( <i>Laothoe populi</i> 1966)	1.892	MJWC_123 ( <i>Laothoe populi</i> 1966)	1.759
MJWC_114 ( <i>Deilephila elpenor</i> 2013)	No reliable identification	1.490	No reliable identification	1.486
MJWC_117 ( <i>Smerinthus ocellata</i> 2017)	No reliable identification	1.576	No reliable identification	1.239
MJWC_118 ( <i>Deilephila elpenor</i> 2013)	No reliable identification	1.499	No reliable identification	1.305
MJWC_119 ( <i>Smerinthus ocellata</i> 2017)	No reliable identification	1.639	No reliable identification	1.343
MJWC_120 ( <i>Laothoe populi</i> 2012)	MJWC_123 ( <i>Laothoe populi</i> 1966)	1.914	MJWC_126 ( <i>Laothoe populi</i> 1966)	1.845
MJWC_125 ( <i>Smerinthus ocellata</i> 2017)	No reliable identification	1.512	No reliable identification	1.305
MJWC_127 ( <i>Deilephila elpenor</i> 2013)	No reliable identification	1.694	No reliable identification	1.633
MJWC_128 ( <i>Laothoe populi</i> 2012)	No reliable identification	1.694	No reliable identification	1.594
MJWC_131 ( <i>Smerinthus ocellata</i> 2017)	No reliable identification	1.690	No reliable identification	1.396
MJWC_132 ( <i>Deilephila elpenor</i> 2013)	No reliable identification	1.624	No reliable identification	1.599
MJWC_133 ( <i>Laothoe populi</i> 2012)	No reliable identification	1.512	No reliable identification	1.491

### (C) New test samples against new-sample database entries

Analyte	Best match	Bruker score	Second-best match	Bruker score
MJWC_109 ( <i>Laothoe populi</i> 2012)	MJWC_120 ( <i>Laothoe populi</i> 2012)	2.385	MJWC_128 ( <i>Laothoe populi</i> 2012)	2.378
MJWC_110 ( <i>Smerinthus ocellata</i> 2017)	MJWC_117 ( <i>Smerinthus ocellata</i> 2017)	2.293	MJWC_119 ( <i>Smerinthus ocellata</i> 2017)	2.028
MJWC_111 ( <i>Deilephila elpenor</i> 2013)	MJWC_132 ( <i>Deilephila elpenor</i> 2013)	2.326	MJWC_118 ( <i>Deilephila elpenor</i> 2013)	2.308
MJWC_113 ( <i>Laothoe populi</i> 2012)	MJWC_128 ( <i>Laothoe populi</i> 2012)	2.528	MJWC_133 ( <i>Laothoe populi</i> 2012)	2.453
MJWC_114 ( <i>Deilephila elpenor</i> 2013)	MJWC_127 ( <i>Deilephila elpenor</i> 2013)	2.248	MJWC_111 ( <i>Deilephila elpenor</i> 2013)	2.180
MJWC_117 ( <i>Smerinthus ocellata</i> 2017)	MJWC_131 ( <i>Smerinthus ocellata</i> 2017)	2.465	MJWC_110 ( <i>Smerinthus ocellata</i> 2017)	2.371
MJWC_118 ( <i>Deilephila elpenor</i> 2013)	MJWC_111 ( <i>Deilephila elpenor</i> 2013)	2.382	MJWC_127 ( <i>Deilephila elpenor</i> 2013)	2.256
MJWC_119 ( <i>Smerinthus ocellata</i> 2017)	MJWC_125 ( <i>Smerinthus ocellata</i> 2017)	2.507	MJWC_131 ( <i>Smerinthus ocellata</i> 2017)	2.352
MJWC_120 ( <i>Laothoe populi</i> 2012)	MJWC_109 ( <i>Laothoe populi</i> 2012)	2.287	MJWC_113 ( <i>Laothoe populi</i> 2012)	2.088
MJWC_125 ( <i>Smerinthus ocellata</i> 2017)	MJWC_119 ( <i>Smerinthus ocellata</i> 2017)	2.591	MJWC_131 ( <i>Smerinthus ocellata</i> 2017)	2.141
MJWC_127 ( <i>Deilephila elpenor</i> 2013)	MJWC_132 ( <i>Deilephila elpenor</i> 2013)	2.461	MJWC_111 ( <i>Deilephila elpenor</i> 2013)	2.338
MJWC_128 ( <i>Laothoe populi</i> 2012)	MJWC_133 ( <i>Laothoe populi</i> 2012)	2.475	MJWC_109 ( <i>Laothoe populi</i> 2012)	2.420
MJWC_131 ( <i>Smerinthus ocellata</i> 2017)	MJWC_117 ( <i>Smerinthus ocellata</i> 2017)	2.517	MJWC_119 ( <i>Smerinthus ocellata</i> 2017)	2.315
MJWC_132 ( <i>Deilephila elpenor</i> 2013)	MJWC_127 ( <i>Deilephila elpenor</i> 2013)	2.577	MJWC_111 ( <i>Deilephila elpenor</i> 2013)	2.393
MJWC_133 ( <i>Laothoe populi</i> 2012)	MJWC_128 ( <i>Laothoe populi</i> 2012)	2.437	MJWC_113 ( <i>Laothoe populi</i> 2012)	2.422

### (D) Old test samples against new-sample database entries

Analyte	Best match	Bruker score	Second-best match	Bruker score
MJWC_106 ( <i>Laothoe populi</i> 1966)	MJWC_113 ( <i>Laothoe populi</i> 2012)	1.882	MJWC_109 ( <i>Laothoe populi</i> 2012)	1.797
MJWC_107 ( <i>Smerinthus ocellata</i> 1966)	No reliable identification	1.527	No reliable identification	1.372
MJWC_108 ( <i>Deilephila elpenor</i> 1966)	No reliable identification	1.476	No reliable identification	1.430
MJWC_112 ( <i>Smerinthus ocellata</i> 1966)	MJWC_131 ( <i>Smerinthus ocellata</i> 2017)	1.734	No reliable identification	1.553
MJWC_115 ( <i>Laothoe populi</i> 1966)	MJWC_109 ( <i>Laothoe populi</i> 2012)	1.715	No reliable identification	1.679
MJWC_116 ( <i>Deilephila elpenor</i> 1966)	No reliable identification	1.544	No reliable identification	1.438
MJWC_121 ( <i>Deilephila elpenor</i> 1966)	MJWC_132 ( <i>Deilephila elpenor</i> 2013)	1.715	No reliable identification	1.623
MJWC_122 ( <i>Smerinthus ocellata</i> 1966)	No reliable identification	1.488	No reliable identification	1.361
MJWC_123 ( <i>Laothoe populi</i> 1966)	MJWC_120 ( <i>Laothoe populi</i> 2012)	1.884	MJWC_109 ( <i>Laothoe populi</i> 2012)	1.848
MJWC_124 ( <i>Deilephila elpenor</i> 1966)	No reliable identification	1.603	No reliable identification	1.547
MJWC_126 ( <i>Laothoe populi</i> 1966)	MJWC_120 ( <i>Laothoe populi</i> 2012)	1.959	MJWC_109 ( <i>Laothoe populi</i> 2012)	1.909
MJWC_129 ( <i>Smerinthus ocellata</i> 1966)	No reliable identification	0.936	No reliable identification	0.709
MJWC_130 ( <i>Smerinthus ocellata</i> 1966)	No reliable identification	1.467	No reliable identification	1.245
MJWC_134 ( <i>Deilephila elpenor</i> 1966)	No reliable identification	1.678	No reliable identification	1.569