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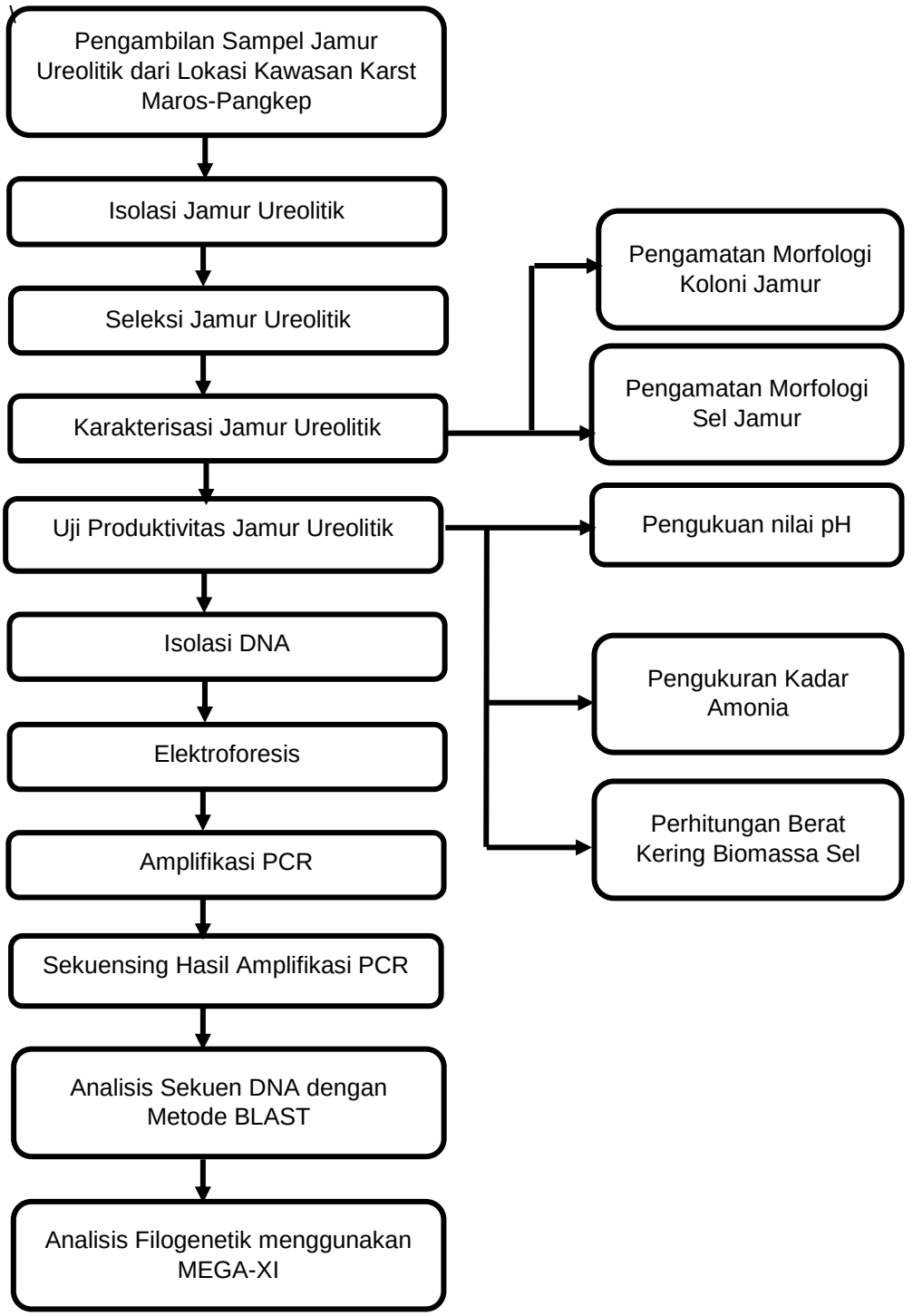
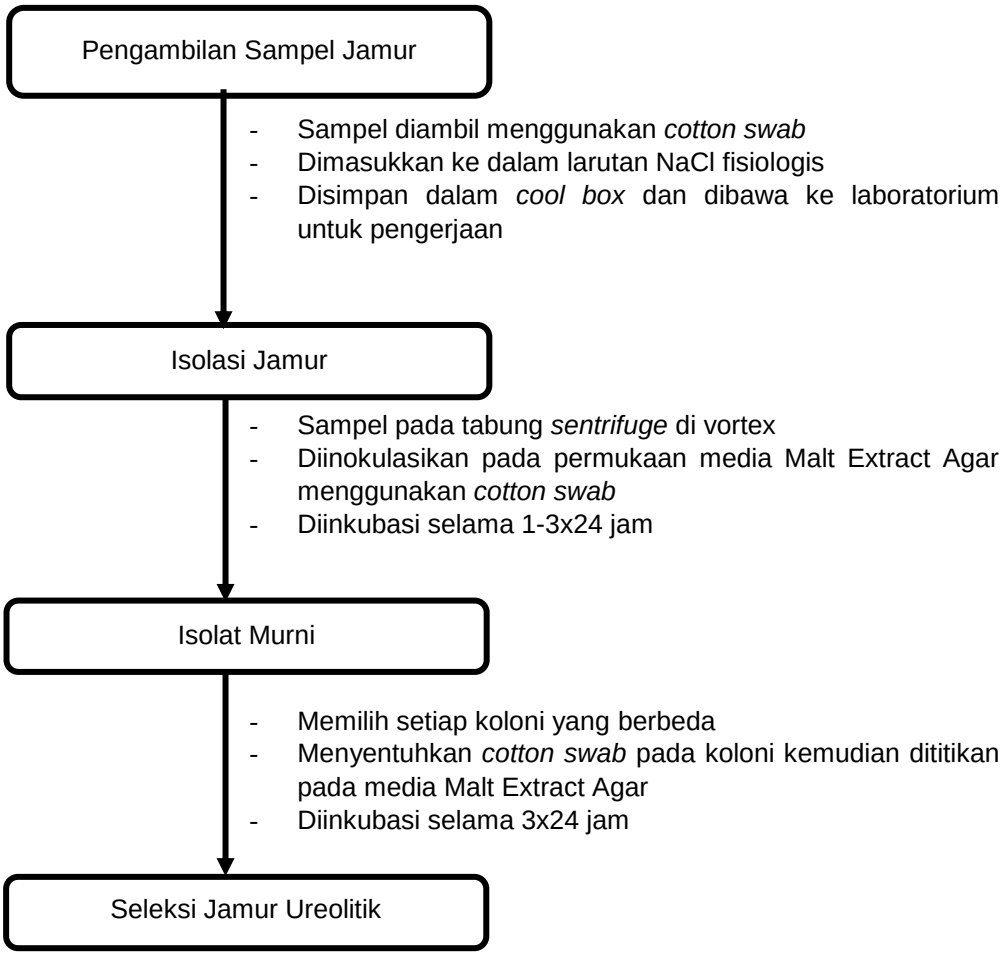
LAMPIRAN

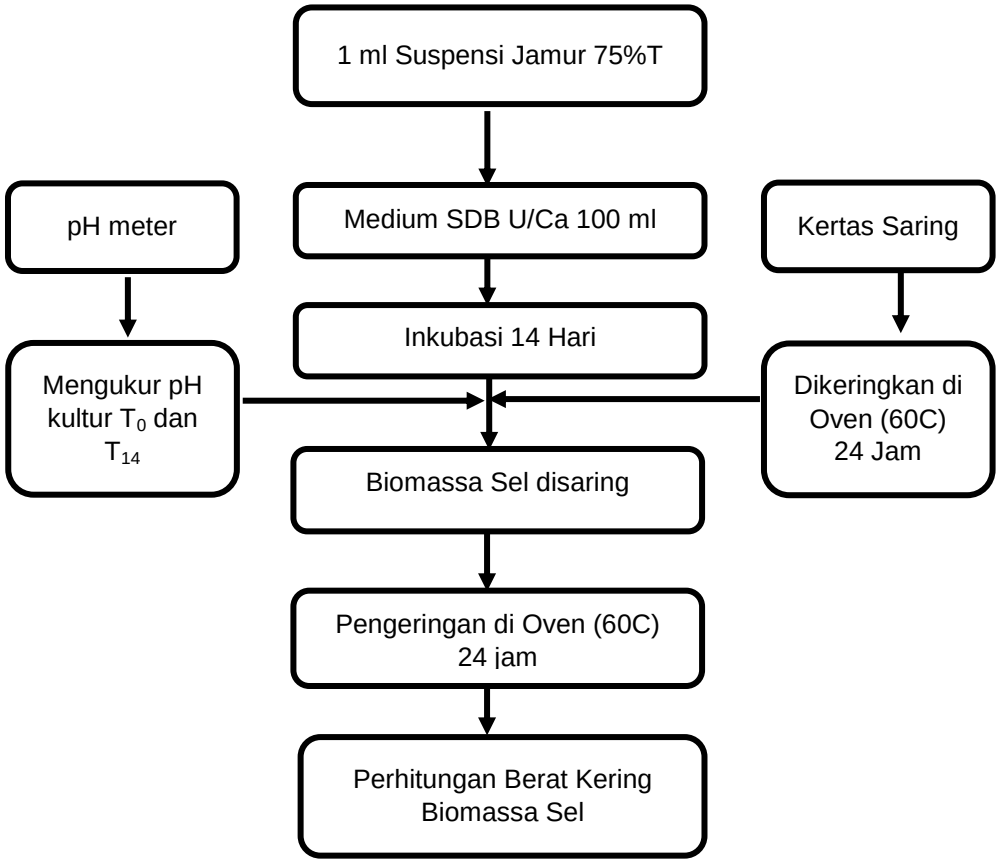
Lampiran 1. Skema Kerja Penelitian



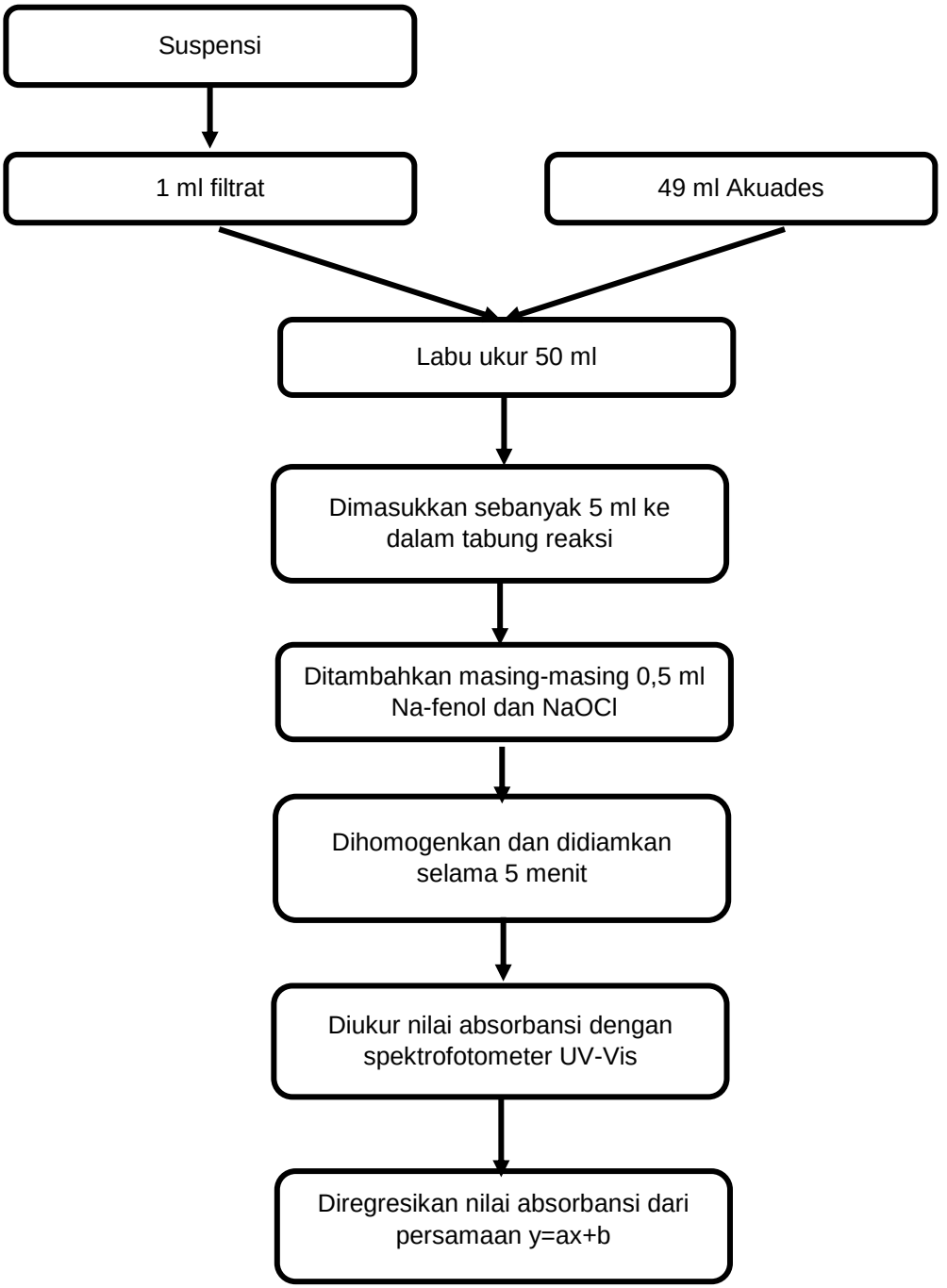
Lampiran 2. Skema Kerja Pengambilan Sampel, Isolasi dan Seleksi Jamur Ureolitik



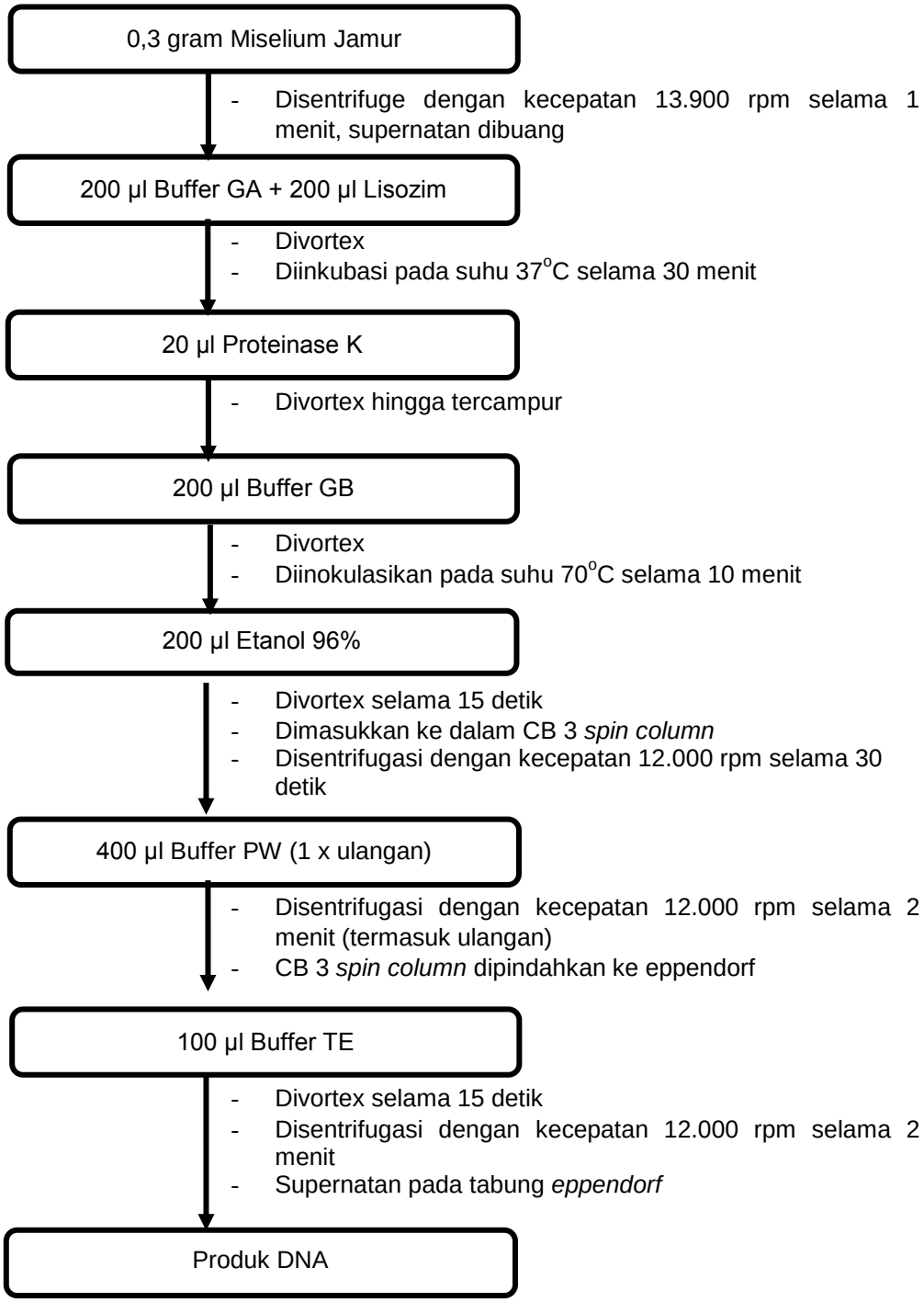
Lampiran 3. Skema Kerja Uji Produktivitas Jamur Ureolitk



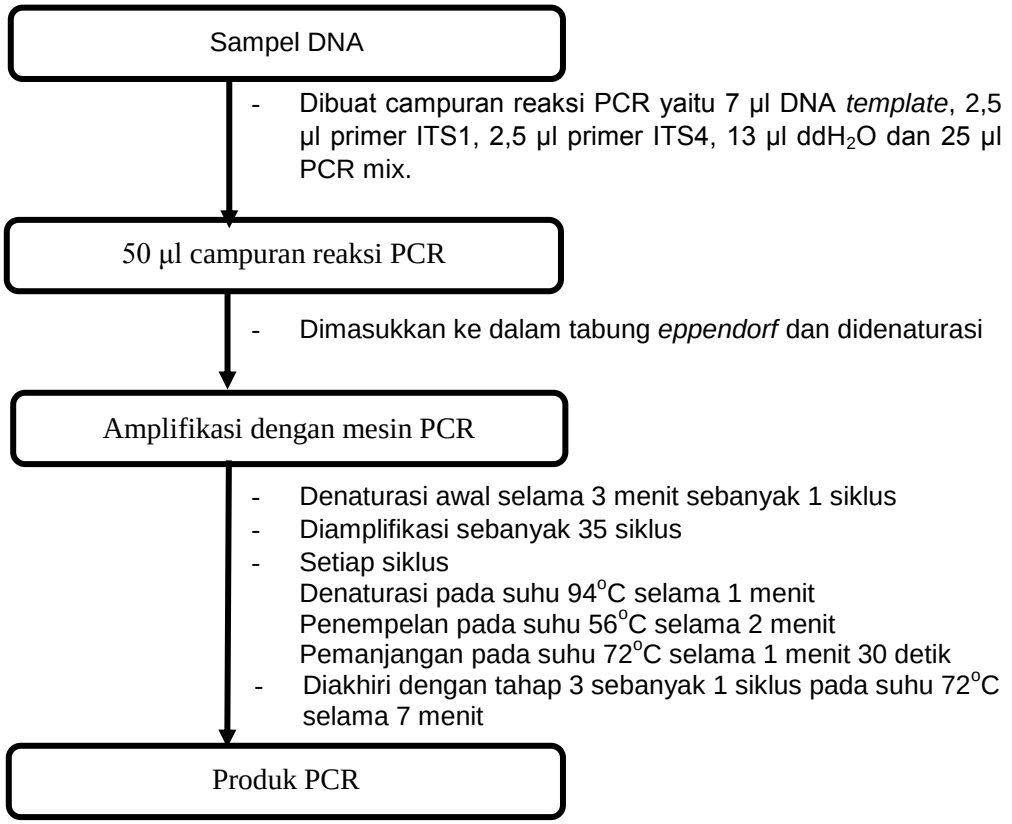
Lampiran 4. Skema Kerja Pengukuran Pengukuran Kadar Amonia yang dihasilkan Jamur Ureolitik



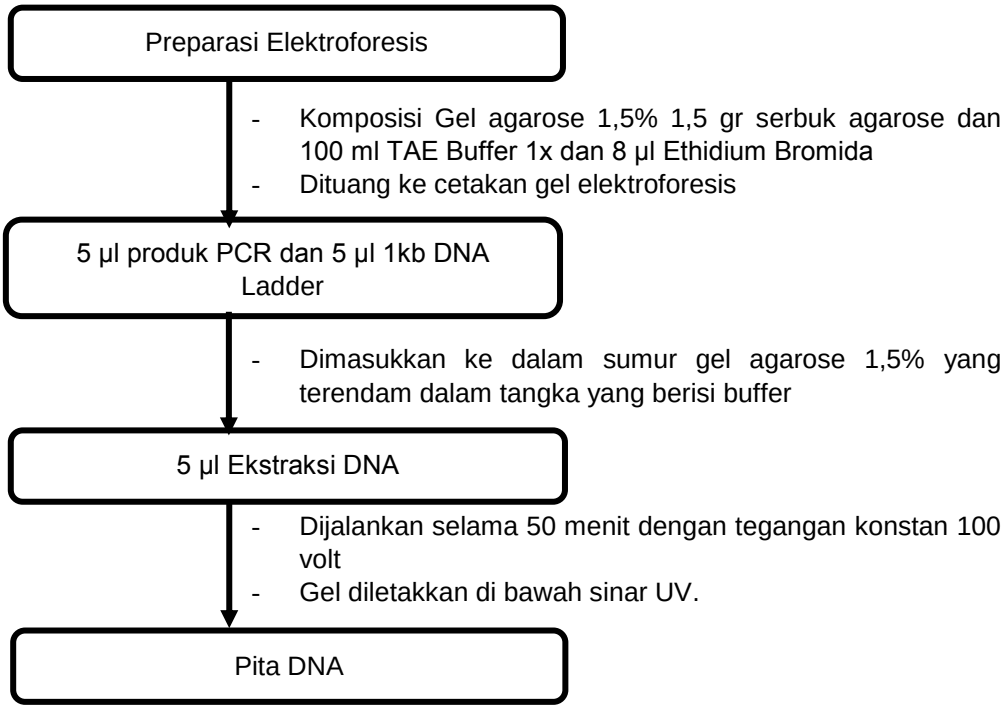
Lampiran 5. Skema Kerja Isolasi DNA Jamur



Lampiran 6. Skema Kerja Amplifikasi ITS dengan PCR



Lampiran 7. Skema Kerja Visualisasi Produk PCR dengan Elektroforesis



Lampiran 8. Tempat Pengambilan Sampel

(a)

(b)

(c)

Tempat dan Titik pengambilan sampel (a) gua Sumpang Bita, (b) gua Leang Timpuseng, dan (c) gua Leang Pettae

Lampiran 9. Uji Produktivitas Jamur Ureolitik

SPB 6

SPB 7

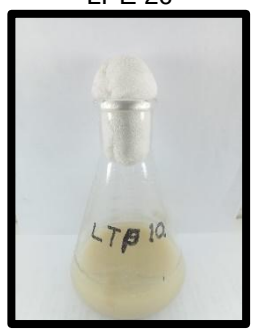
LPE 1

LPE 2a

LPE 2c

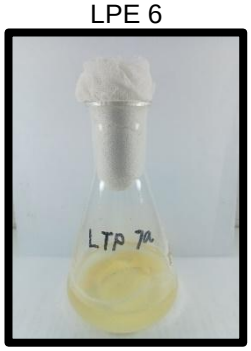
LPE 3

LPE 6



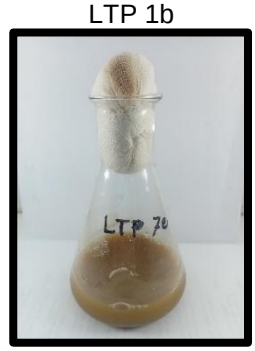
LTP 1a

LTP 1b



LTP 7a

LTP 7d



LTP 7e

Kultur Isolat Jamur Ureolitik pada Media SDB U/Ca

Lampiran 10. Berat Kering Biomassa Sel Jamur Ureolitik

SPB 6

SPB 7

LPE 1

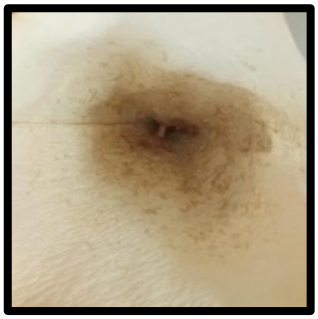
LPE 2a

LPE 2c

LPE 3

LPE 6

LTP 1a



LTP 1b

LTP 7a

LTP 7d

LTP 7e

Berat Kering Biomassa Sel Jamur Ureolitik

Lampiran 11. Hasil Perhitungan Uji Kadar Amonia

Kode Sampel	Pengenceran			Absorbansi (Y)		Konsentrasi		Kadar Amonia (ppm)			Kadar Amonia mmol		
	S	H_2O	FP	T_0	T_{14}	T_0	T_{14}	T_0	T_{14}	Kadar	T_0	T_{14}	Kadar
SPB 6	1	49	50	0,011	0,206	0,585	8,676	29,253	433,817	404,564	2,089	30,986	28,897
SPB 7	1	49	50	0,011	0,170	0,585	7,182	29,253	359,128	329,875	2,089	25,652	23,562
LPE 1	1	49	50	0,000	0,142	0,128	6,020	6,431	301,037	294,605	0,459	21,502	21,043
LPE 2a	1	49	50	0,020	0,297	0,958	12,452	47,925	622,614	574,688	3,423	44,472	41,049
LPE 2c	1	49	50	0,011	0,044	0,585	1,954	29,253	97,717	68,464	2,089	6,979	4,890
LPE 3	1	49	50	0,001	0,139	0,170	5,896	8,506	294,813	286,307	0,607	21,058	20,450
LPE 6	1	49	50	0,001	0,082	0,170	3,531	8,506	176,556	168,049	0,607	12,611	12,003
LTP 1a	1	49	50	0,008	0,023	0,460	1,082	23,029	54,149	31,120	1,644	3,867	2,222
LTP 1b	1	49	50	0,010	0,215	0,543	9,049	27,178	452,489	425,311	1,941	32,320	30,379
LTP 7a	1	49	50	0,009	0,093	0,502	3,987	25,103	199,377	174,273	1,793	14,241	12,448
LTP 7d	1	49	50	0,010	0,100	0,543	4,278	27,178	213,900	186,721	1,941	15,278	13,337
LTP 7e	1	49	50	0,012	0,032	0,626	1,456	31,327	72,821	41,493	2,237	5,201	2,963

Lampiran 12. Hasil Perhitungan Berat Kering Biomassa Sel Jamur Ureolitik

Isolat	Berat Biomassa Sel (mg)		
	Berat Biomassa Sel + Berat Kertas Saring (W_{ab})	**Berat Kertas Saring (W_a)**	**Berat Bersih Biomassa Sel (W_b)**
SPB 6	2.273,60	1.152,60	1.121,00
SPB 7	1.770,20	1.051,70	718,50
LPE 1	1.670,50	1.131,30	539,20
LPE 2a	2.276,20	1.067,90	1.208,30
LPE 2c	1.905,30	1.052,10	853,20
LPE 3	1.877,50	1.083,20	794,30
LPE 6	2.322,40	1.128,00	1.194,40
LTP 1a	1.942,80	1.028,10	914,70
LTP 1b	1.616,00	1.073,40	542,60
LTP 7a	1.263,60	1.019,60	244,00
LTP 7d	3.264,90	1.034,40	2.230,50
LTP 7e	2.069,90	1.048,20	1.021,70

Lampiran 13. Hasil Pengukuran pH

Isolat	pH		
	T_0	**T_{14}**	**Peningkatan pH**
SPB 6	5,20	7,18	1,98
SPB 7	5,21	6,98	1,77
LPE 1	5,15	7,34	2,19
LPE 2a	5,13	8,07	2,94
LPE 2c	5,25	7,53	2,28
LPE 3	5,20	7,13	1,93
LPE 6	5,15	6,93	1,78
LTP 1a	5,20	6,98	1,78
LTP 1b	5,15	7,89	2,74
LTP 7a	5,20	7,37	2,17
LTP 7d	5,13	6,12	0,99
LTP 7e	5,15	7,55	2,40

Lampiran 14. Hasil Identifikasi Jenis Jamur Ureolitik Menggunakan Marka Molekuler

Isolat Jamur LPE 2a

Sequences producing significant alignments Download Select columns Show 100

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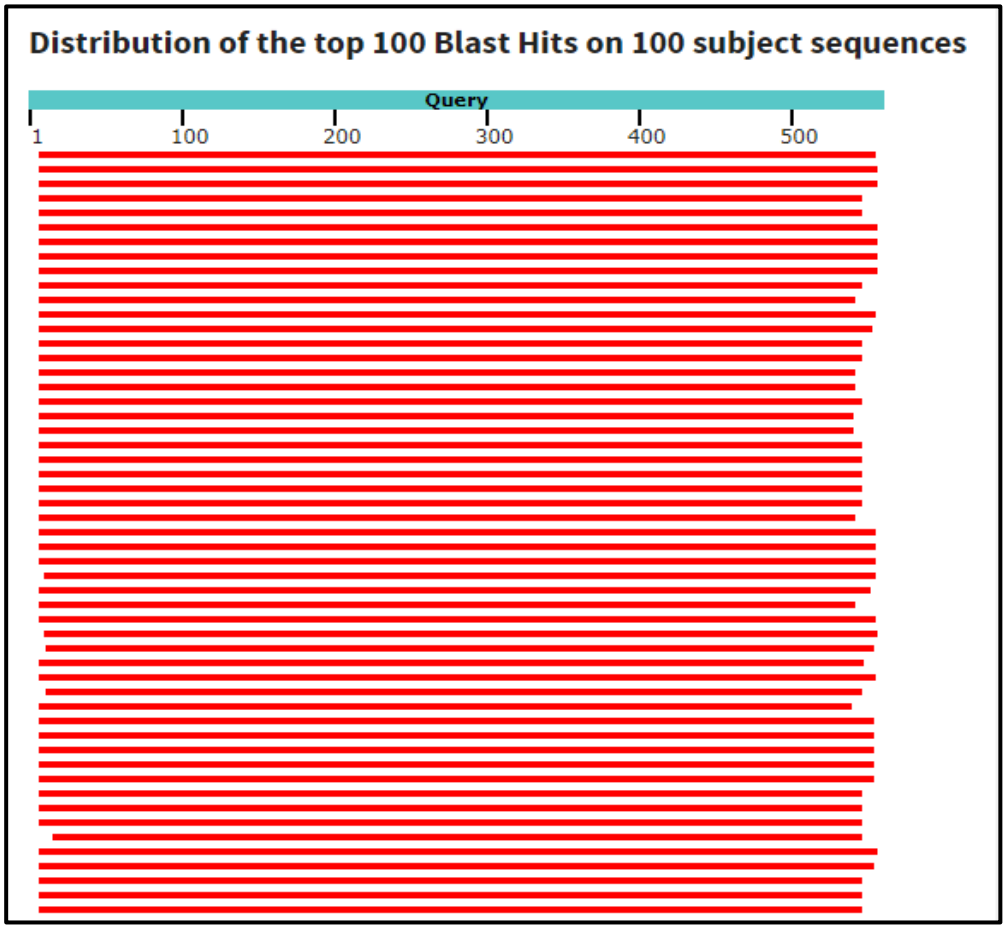
Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. Ident	Acc. Len	Accession
Xylaria feejeensis strain 4-F25 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and intern...	Xylaria feejeensis	992	992	97%	0.0	99.45%	587	MW081339.1
Xylaria feejeensis isolate A2S1-D94 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S...	Xylaria feejeensis	976	976	97%	0.0	98.91%	588	KJ767108.1
Xylaria feejeensis isolate A1S4-D47 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S...	Xylaria feejeensis	972	972	98%	0.0	98.73%	587	KJ767106.1
Xylaria feejeensis isolate 81_01_02 small subunit ribosomal RNA gene, partial sequence; internal transcribed spac...	Xylaria feejeensis	970	970	96%	0.0	99.26%	593	MT252621.1
Xylaria feejeensis strain BZ4 small subunit ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5,...	Xylaria feejeensis	970	970	96%	0.0	99.26%	593	MH712239.1
Xylaria feejeensis isolate A2S4-D46 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S...	Xylaria feejeensis	970	970	97%	0.0	98.72%	588	KJ767110.1
Xylaria feejeensis isolate A2S4-D43 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S...	Xylaria feejeensis	970	970	97%	0.0	98.72%	586	KJ767109.1
Xylaria feejeensis isolate A1S4-D44 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S...	Xylaria feejeensis	970	970	97%	0.0	98.72%	587	KJ767105.1
Xylaria feejeensis isolate A1S3-D88 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S...	Xylaria feejeensis	970	970	97%	0.0	98.72%	587	KJ767104.1
Xylaria feejeensis strain GXIMD 03005 small subunit ribosomal RNA gene, partial sequence; internal transcribed sp...	Xylaria feejeensis	970	970	96%	0.0	99.26%	583	OK021551.1
Xylaria feejeensis strain BZ2 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal...	Xylaria feejeensis	968	968	95%	0.0	99.44%	560	MH712238.1
Xylaria feejeensis isolate A1S4-D50 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S...	Xylaria feejeensis	968	968	97%	0.0	98.72%	585	KJ767107.1
Xylaria feejeensis isolate B3163 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene, complet...	Xylaria feejeensis	966	966	97%	0.0	98.72%	593	MT043785.1
Xylaria feejeensis isolate EF7 small subunit ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5...	Xylaria feejeensis	965	965	96%	0.0	99.07%	600	MG881827.1

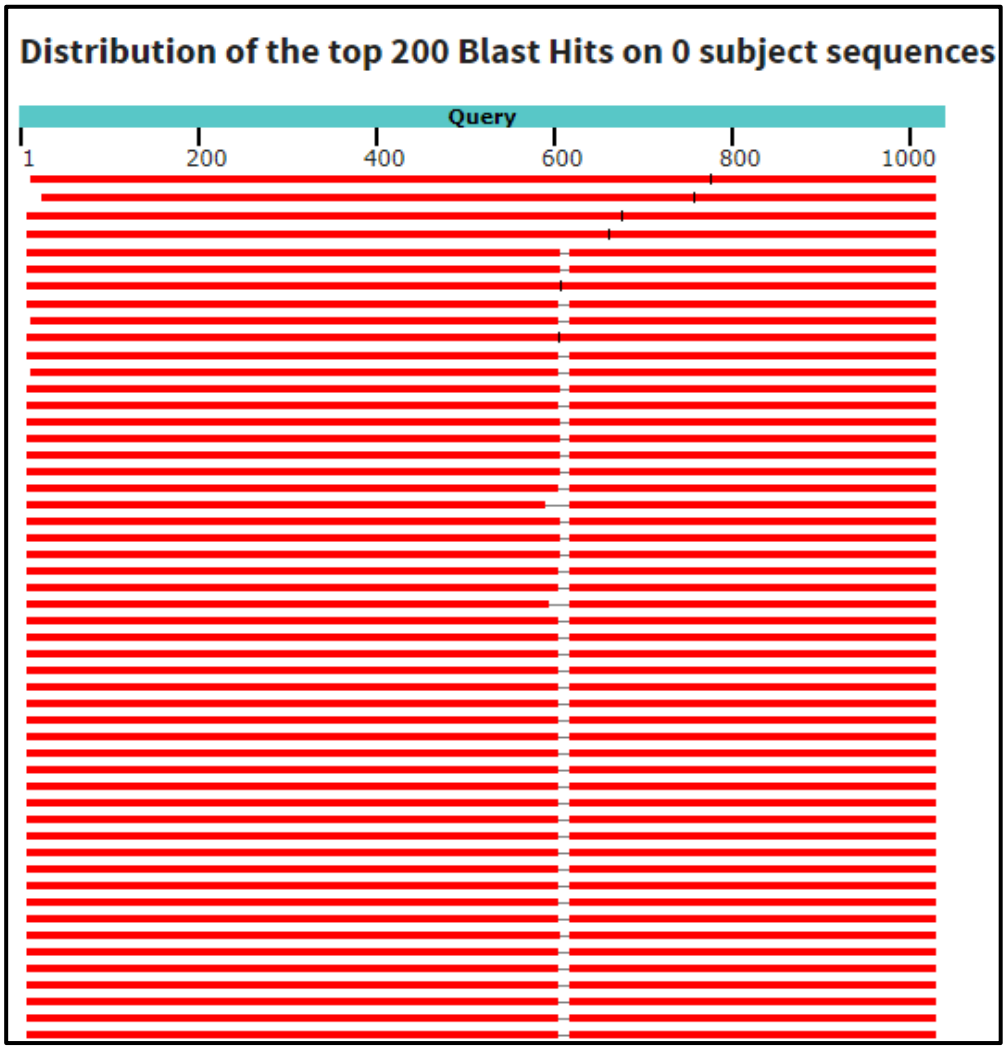


Isolat Jamur LTP 1b

Sequences producing significant alignments Download Select columns Show 100

select all *100 sequences selected* GenBank Graphics Distance tree of results MSA Viewer

Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. Ident	Acc. Len	Accession
Schizophyllum commune voucher GKVK-11 small subunit ribosomal RNA gene, partial sequence; internal transcrib...	Schizophyllum co...	1186	1930	97%	0.0	94.90%	983	MF405162.1
Schizophyllum commune small subunit ribosomal RNA gene, partial sequence; internal transcribed spacer 1 and 5...	Schizophyllum co...	1147	1841	96%	0.0	95.00%	732	KY243923.1
Schizophyllum commune isolate IUM0184 small subunit ribosomal RNA gene, partial sequence; internal transcribe...	Schizophyllum co...	1103	1732	98%	0.0	96.42%	713	MK910772.1
Schizophyllum commune isolate BPSM48 18S ribosomal RNA gene, partial sequence; internal transcribed spacer ...	Schizophyllum co...	1090	1712	98%	0.0	96.81%	688	KM985685.1
Schizophyllum commune strain WDR65 small subunit ribosomal RNA gene, partial sequence; internal transcribed ...	Schizophyllum co...	1079	1616	97%	0.0	99.17%	606	ON500589.1
Schizophyllum commune strain WZ-241 small subunit ribosomal RNA gene, partial sequence; internal transcribed ...	Schizophyllum co...	1077	1614	96%	0.0	99.17%	639	MN856363.1
Schizophyllum commune strain MFFC23 small subunit ribosomal RNA gene, partial sequence; internal transcribed ...	Schizophyllum co...	1074	1616	98%	0.0	99.00%	666	OK184583.1
Schizophyllum commune isolate M6 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8...	Schizophyllum co...	1070	1606	96%	0.0	99.00%	608	FJ426395.1
Schizophyllum sp. voucher HFJAU0085 small subunit ribosomal RNA gene, partial sequence; internal transcribed ...	Schizophyllum sp.	1068	1605	96%	0.0	99.16%	609	MN622803.1
Schizophyllum commune strain MEFC081 small subunit ribosomal RNA gene, partial sequence; internal transcribe...	Schizophyllum co...	1068	1608	98%	0.0	99.00%	631	MK732118.1
Schizophyllum commune isolate WI-X-1.1 small subunit ribosomal RNA gene, partial sequence; internal transcribe...	Schizophyllum co...	1068	1605	96%	0.0	98.99%	647	MF476007.1
Schizophyllum commune isolate WI-VI-1.3 small subunit ribosomal RNA gene, partial sequence; internal transcribe...	Schizophyllum co...	1068	1605	96%	0.0	99.16%	632	MF475993.1
Schizophyllum sp. Sigrf18 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S ribosom...	Schizophyllum sp...	1068	1605	97%	0.0	98.84%	622	KT369828.1
Schizophyllum commune isolate KUC9397 18S ribosomal RNA gene, partial sequence; internal transcribed spacer ...	Schizophyllum co...	1068	1605	96%	0.0	98.99%	620	KJ535691.1



Lampiran 15. Foto Prosedur Penelitian

Tahapan Isolasi Jamur Ureolitik

Tahapan Seleksi Jamur Ureolitik

Tahapan Perhitungan Biomassa Sel

Tahapan Pengukuran Nilai Absorbansi Larutan Kurva Standar dan Kadar Amonia Kultur Jamur Menggunakan Spektrofotometer UV - Vis