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DAFTAR LAMPIRAN

Lampiran1. Persentase penghambatan cendawan endofit terhadap *C. gloeosporioides* secara invitro 2 HST (Hari setelah tanam)

No	Perlakuan Isolat	I	II	III	Total	Rata-Rata
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1	<i>Trichoderma asperellum</i>	33,33	33,33	37,50	104,17	34,72
2	<i>Penecillium citrinum</i>	12,50	11,1	22,22	45,83	15,28
3	<i>Talaromyces thailandensis</i>	16,67	33,33	25,00	75,00	25,00
4	<i>Talaromyces minioluteus</i>	22,22	33,33	33,33	88,89	29,63
5	<i>Aspergillus plavus</i>	22,22	11,11	12,50	45,83	15,28
6	<i>Aspergillus niger</i>	18,18	27,27	25,00	70,45	23,48
		125,13	149,49	155,56	430,18	

Lampiran2. Sidik ragam persentase penghambatan cendawan endofit terhadap *C. gloeosporioides* secara invitro 2 HST (Hari setelah tanam)

SK	DB	JK	KT	F.HIT	F.TABEL	
					0,05	0,01
Perlakuan	5,00	900,05	180,01	5,09297*	4,75	6,10
Galat	12,00	424,14	35,34			
Total	17,00	1324,19	KK	2,76 %		

Lampiran3. Persentase penghambatan cendawan endofit terhadap *C. gloeosporioides* secara invitro 4 HST (Hari setelah tanam)

No	Perlakuan Isolat	I	II	III	Total	Rata-Rata
1	<i>Trichoderma asperellum</i>	68,75	68,75	75,00	212,50	70,83
2	<i>Penecillium citrinum</i>	6,67	17,65	26,32	50,63	16,88

3	<i>Talaromyces thailandensis</i>	6,67	22,22	11,76	40,65	13,55
4	<i>Talaromyces minioluteus</i>	8,33	53,33	22,22	83,89	27,96
5	<i>Aspergillus plavus</i>	41,18	52,94	10,00	104,12	34,71
6	<i>Aspergillus niger</i>	42,86	32,14	27,59	102,59	34,20
		174,45	247,04	172,89	594,38	

Lampiran4. Sidik ragam persentase penghambatan cendawan endofit terhadap *C. gloeosporioides* secara invitro 4 HST (Hari setelah tanam)

SK	DB	JK	KT	F.HIT	F.TABEL	
					0,05	0,01
Perlakuan	5,00	6.297,88	1259,58	6,00899*	4,75	6,10
Galat	12,00	2515,38	209,62			
Total	17,00	8813,26	KK	4,87 %		

Lampiran5. Persentase penghambatan cendawan endofit terhadap *C. gloeosporioides* secara invitro 6 HST (Hari setelah tanam)

No	Perlakuan Isolat	I	II	III	Total	Rata-Rata
1	<i>Trichoderma asperellum</i>	75,00	57,14	70,59	202,73	67,58
2	<i>Penecillium citrinum</i>	33,33	68,42	28,57	130,33	43,44
3	<i>Talaromyces thailandensis</i>	41,67	46,15	25,00	112,82	37,61
4	<i>Talaromyces minioluteus</i>	35,29	40,00	47,37	122,66	40,89
5	<i>Aspergillus plavus</i>	9,09	65,38	50,00	124,48	41,49
6	<i>Aspergillus niger</i>	27,03	21,62	25,64	74,29	24,76
		221,41	298,72	247,17	767,31	

Lampiran6. Sidik ragam persentase penghambatan cendawan endofit terhadap *C. gloeosporioides* secara invitro 6 HST (Hari setelah tanam)

SK	DB	JK	KT	F.HIT	F.TABEL	
					0,05	0,01
Perlakuan	5,00	2.915,40	583,08	2,22006tn	4,75	6,10
Galat	12,00	3151,69	262,64			
Total	17,00	6067,09	KK	4,22 %		

Lampiran7. Intensitas serangan *C.gloeosporioides* pada bibit kakao 2 MSA (Hari setelah tanam)

No	Perlakuan Isolat	IS (I)	IS (II)	IS (III)	Total	Rata-Rata
1	<i>C.gloeosporioides</i>	60,00	56,00	44,44	160,44	53,48
2	<i>Talaromyces minioluteus</i>	53,33	88,89	60,00	202,22	67,41
3	<i>Penecillium citrinum</i>	20,00	25,71	60,00	105,71	35,24
4	<i>Talaromyces thailandensis</i>	60,00	58,18	30,00	148,18	49,39
5	<i>Trichoderma asperellum</i>	100,00	58,18	57,14	215,32	71,77
6	<i>Aspergillus plavus</i>	50,00	56,00	50,00	156,00	52,00
7	<i>Aspergillus niger</i>	50,00	57,14	57,14	164,29	54,76
		333,33	344,11	314,29	1152,17	

Lampiran8. Sidik ragam Intensitas serangan *C.gloeosporioides* pada bibit kakao 2 MSAE (Minggu Setelah Aplikasi Endofit)

SK	DB	JK	KT	F.HIT	F.TABEL	
					0,05	0,01
Perlakuan	6,00	2.605,61	434,27	1,68866tn	4,75	6,10
Galat	14,00	3600,34	257,17			

Total	20,00	6205,95	KK	3,25 %
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Lampiran9. Intensitas serangan *C.gloeosporioides* pada bibit kakao hari 4 MSA (Minggu Setelah Aplikasi).

No	Perlakuan Isolat	IS (I)	IS (II)	IS (III)	Total	Rata-rata
1	<i>C.gloeosporioides</i>	70,00	62,22	62,22	194,44	64,81
2	<i>Talaromyces minioluteus</i>	48,00	88,89	60,00	196,89	65,63
3	<i>Penecillium citrinum</i>	42,00	33,33	60,00	135,33	45,11
4	<i>Talaromyces thailandensis</i>	58,18	60,00	30,00	148,18	49,39
5	<i>Trichoderma asperellum</i>	71,43	60,00	62,22	193,65	64,55
6	<i>Aspergillus plavus</i>	50,00	62,22	64,00	176,22	58,74
7	<i>Aspergillus niger</i>	50,00	57,14	60,00	167,14	55,71
	Perlakuan Isolat	389,61	423,81	398,44	1211,86	

Lampiran10. Sidik ragam Intensitas serangan *C.gloeosporioides* pada bibit kakao 4 MSA (Minggu Setelah Aplikasi)

SK	DB	JK	KT	F.HIT	F.TABEL	
					0,05	0,01
Perlakuan	6,00	1.178,77	196,46	1,30824tn	4,75	6,10
Galat	14,00	2102,41	150,17			
Total	20,00	3281,18	KK	2,36 %		

Lampiran11. Intensitas serangan *C.gloeosporioides* pada bibit kakao hari 6 MSA (Minggu Setelah Aplikasi).

No	Perlakuan Isolat	IS (I)	IS (II)	IS (III)	Total	Rata-Rata
1	<i>C.gloeosporioides</i>	100,00	100,00	100,00	300,00	100,00
2	<i>Talaromyces minioluteus</i>	71,43	33,33	62,22	166,98	55,66

3	<i>Penecillium citrinum</i>	42,00	33,33	60,00	135,33	45,11
	<i>Talaromyces</i>					
4	<i>thailandensis</i>	58,18	60,00	30,00	148,18	49,39
	<i>Trichoderma</i>					
5	<i>asperellum</i>	40,00	63,64	40,00	143,64	47,88
6	<i>Aspergillus plavus</i>	64,00	62,22	64,00	190,22	63,41
7	<i>Aspergillus niger</i>	50,00	57,14	60,00	167,14	55,71
		325,61	309,67	316,22	1251,50	

Lampiran12. Sidik ragam Intensitas serangan *C.gloeosporioides* pada bibit kakao 4 MSA (Minggu Setelah Aplikasi)

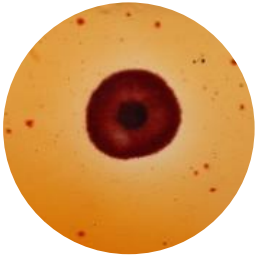
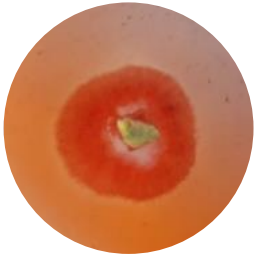
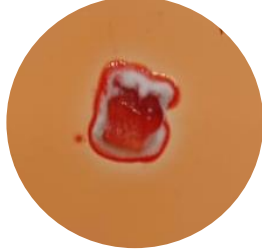
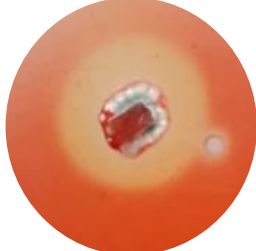
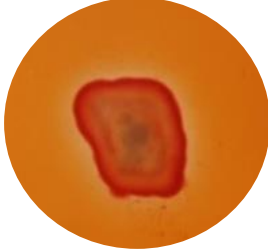

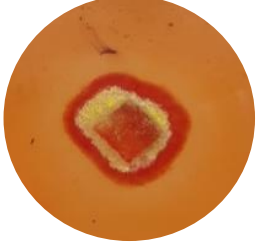
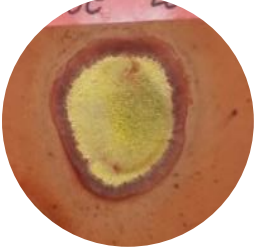


SK	DB	JK	KT	F.HIT	F.TABEL	
					0,05	0,01
Perlakuan	6,00	6.386,24	1064,37	6,91881*	4,75	6,10
Galat	14,00	2153,72	153,84			
Total	20,00	8539,96	KK			
					2,31%	



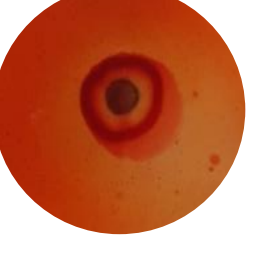
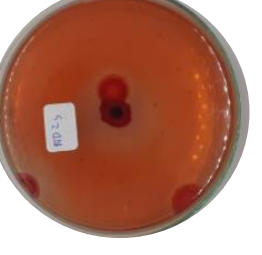
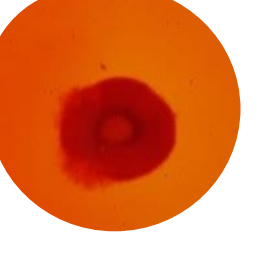

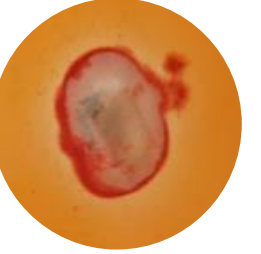
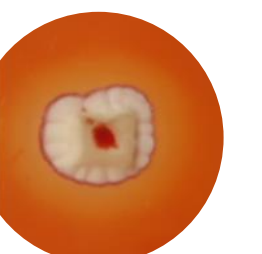
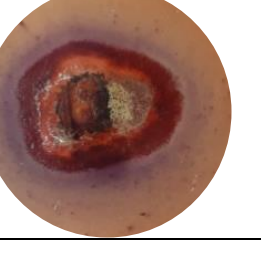
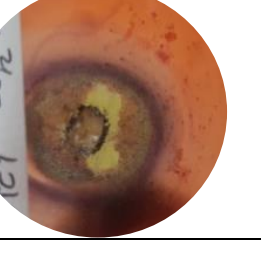
Lampiran 13. Isolasi cendawan endofit dalam jaringan organ tanaman kakao(pot, batang dan daun)


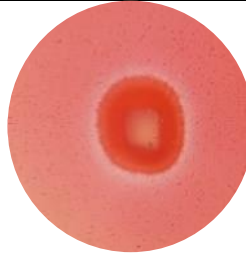
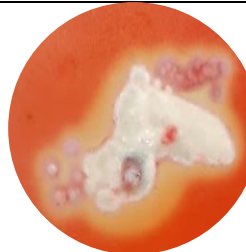


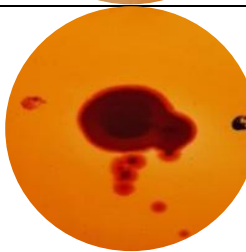
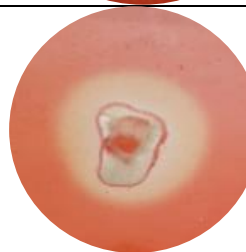

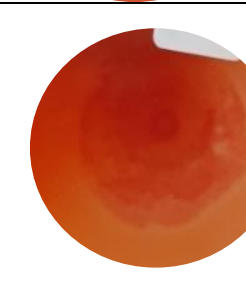
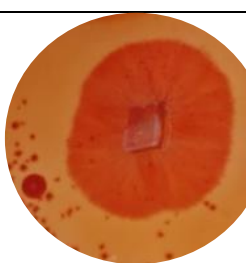



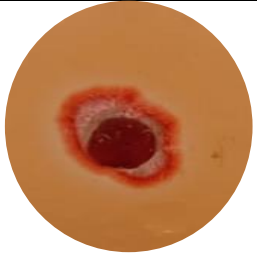
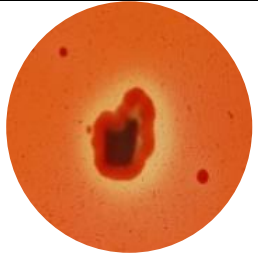
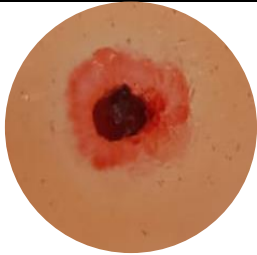

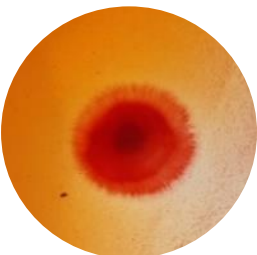
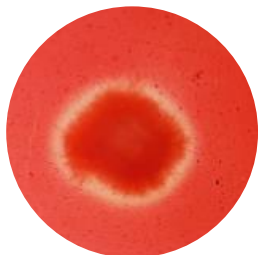



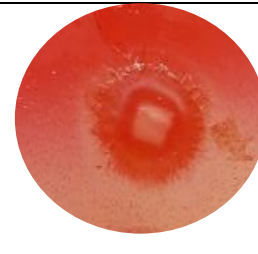
Lampiran 14. Uji aktivitas enzim selulose dan kitinase isolat cendawan endofit




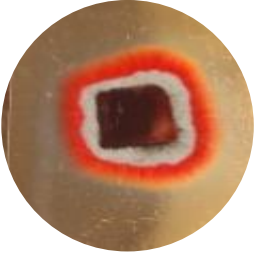
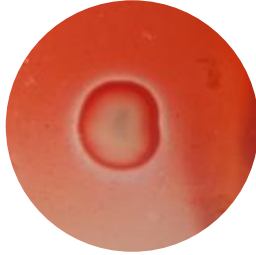

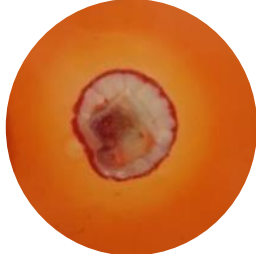

No	Nama Isolat	Uji Kitin	Uji Selulosa
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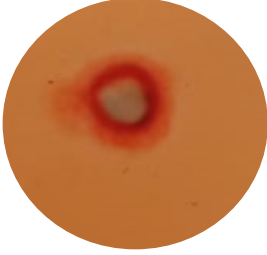

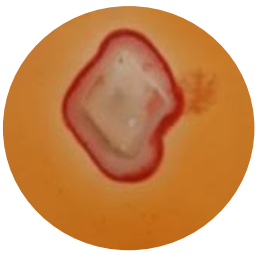
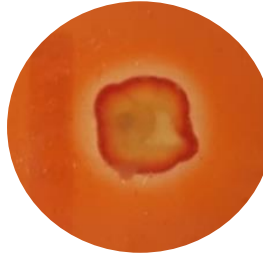
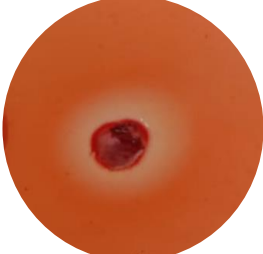
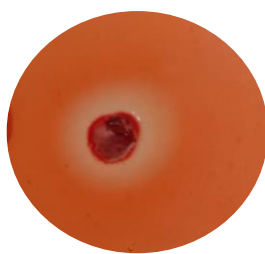




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2	TOD		
3	TOD 5		
4	TOC		
5	BTD		

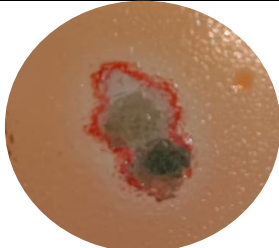
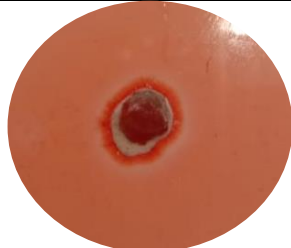
6	BTD 1		
7	BTD 2		
8	BTB 3		
9	BTB 5		
10	BTC 1		

11	BTC 3		
12	BTC 6		
13	BTC 7 K		
14	NHBH		
15	NHDN		
16	NHDN 4		

17	NHBB 9		
18	SRBH		
19	BTDN		
20	BTDN 9		
21	BUBB 4		

22	NHBB		
23	BUBB5		
24	BUBB 6		
25	BUBB 11		
26	SRDN 6		

27	BTBT2		
28	BUBT 3		
29	MSC 2		
30	SRDN 3		
31	SRBT 2 K		

32	SRBT 1		
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Uji Senyawa Metabolit Sekunder Isolat Cendawan Endofit dengan Metode KLT

Lampiran 15. Uji Fitokimia isolat cendawan endofit fase gerak dan fase diam



Proses pembuatan eluen dan penotolan noda senyawa metabolit sekunder isolat endofit

Lampiran 16. Bibit kakao umur 2 bulan sebelum aplikasi endofit dan *Colletotrichum gloeosporioides*



Lampiran 17. Uji efektivitas cendawan endofit asal tanaman kakao terhadap *Colletotrichum gloeosporioides* pada bibit tanaman kakao

