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Appendix 1 Analysis of Variance table for percentage of barley seed infection by *Alternaria* sp. treated with radio frequency at various temperatures and times evaluated by PDA method

	<u> </u>	XUV	D 9						
Source	DF	SS	MS	F	Р				
Rep	3	1.145	0.3816						
Treatment	12	126.21	10.5175	52.51	0.0000				
Error	36	7.21	0.2003						
Total	51	134.566							
Grand Mea	an = 1.455	5							
CV(%)	- 28.71	- (y)							
C V (70)	- 20.71	Munine Market		7 / -					
	(1								
322		7 2 10		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	24				
Appendix 2 Ana	lysis of Var	ance table for	r percentage o	f barley seed	infection by				
A. <i>flavus</i> treated with radio frequency at various temperatures and times									
					+ /				
evalu	lated by PDF	A method							
Source	DF	SS	MS	F	Р				
rep	3	54.775	18.2582						
trt	12	392.363	32.6969	31.88	0.0000				
Error	36	36.924	1.0257						
Total	51	484.062	Ċ	Y //					
Grand Mea	an = 3.878	51	TER						
CV(%)	- 26.11	IIN	IV D'						
$C \cdot (70)$	= 20.11								

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Appendix 3 Analysis of Variance table for percentage of barley seed infection by *A*. *niger* treated with radio frequency at various temperatures and times evaluated by PDA method

Source	DF	SS	MS	F	Р
rep	3	0.2866	0.09552		
trt	0 12	33.3802	2.78168	88.17	0.0000
Error	36	1.1358	0.03155		
Total	51	34.8025		6/,	
Grand M	lean = 0.40	34		000	
CV (%) Appendix 4 Ar <i>Fu.</i> tim	= 44.29 nalysis of Var sarium sp. tre nes evaluated F	iance table for ated with rad PDA method	or percentage of io frequency at	barley seed various temp	infection by peratures and
Source	DF	SS	MS	F	Р
Rep	3	205.193	68.3975		
Treatment	12	636.319	53.0266	24.84	0.0000
Error	36	76.847	2.1346		
Total	51	918.358			
Grand M CV (%)	lean = 3.91 = 14.16	93 I UN	VERS		

Appendix 5 Analysis of Variance table for percentage of barley seed infection by

Penicillium sp. treated with radio frequency at various temperatures and times evaluated by PDA method

	Source	DF	SS	MS		F	Р	-
_0	Rep	3	75.937	25.3125		Uni	versit	V
	Treatment	12	744.481	62.0401		19.81	0.0000	Ζ.
	Error	36	112.75	3.1319	C	A r	VA	
	Total	51	933.168		3		V C	
	Grand Mean	= 5.144	2					-

$$CV(\%) = 11.63$$

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Appendix 6 Analysis of Variance table for percentage of barley seed infection by *Rhizopus* sp. treated with radio frequency at various temperatures and times evaluated by PDA method

Source	DF	SS	MS	F	Р				
Rep	3	223.2	74.3995						
Treatment	0 12	644.07	53.6728	8.2	0.0000				
Error	36	235.56	6.5432						
Total	51	1102.83		0/					
Grand M	ean = 6.466	59		0 30					
CV (%)	- 10.84								
	- 10.04	一日		6					
		(Ch							
Appendix 7 Analysis of Variance table for percentage of barley seed infection by									
S A	<i>lternaria</i> sp. t	reated with ra	dio frequency a	t various temr	eratures and				
GTS 1	ineritarita sp. e	reated with ra	uio nequency e						
tin	mes evaluated	l by blotter me	ethod		0				
Source	DF	SS	MS	F	Р				
Rep	3	3.861	1.28686						
Treatment	12	114.808	9.56731	45.46	0.0000				
Error	36	7.577	0.21047						
Total	51	126.245		1					
Grand M	ean = 1.259	06	360/						
	05.40	Capes							
CV (%)	= 26.43								
	XYA	7	TTEK						
		LUN							
			-						

Appendix 8 Analysis of Variance table for percentage of barley seed infection by

A. flavus	treated	with	radio	frequency	at	various	temperatures	and	
times eval	uated by	blott	er met	thod					

Source		DF	SS	MS		F	Р
Rep	ΠŬ	3	145.25	48.415	l	Unr	versity
Treatment	•	12	1781.44	148.454		57.19	0.0000
Error	r i	036	93.44	2.596	S	e r	Ved
Total		51	2020.13		9		
Gran	nd Mean	n = 6.548	31				

CV(%) = 24.60

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Appendix 9 Analysis of Variance table for percentage of barley seed infection by A. *niger* treated with radio frequency at various temperatures and times evaluated by blotter method

Source	DF	SS	MS	F	Р				
Rep	3	0.207	0.06891	-					
Treatment	12	109.106	9.09215	67.41	0.0000				
Error	36	4.856	0.13488						
Total	51	114.168		6/,					
Grand Me	an = 0.85	58		00					
CV(%)	- 35 32			5					
CV(70)	- 55.52								
Appendix 10 Analysis of Variance table for percentage of barley seed infection by									
S Fu	<i>sarium</i> sp. t	reated with ra	dio frequency a	t various tem	peratures an				
CTS .	9								
tin	nes evaluate	d by blotter me	ethod						
Source	DF	SS	MS	F	Р				
Rep	3	7.553	2.5176						
Treatment	12	212.683	17.7236	32.7	0.0000				
Error	36	19.51	0.5419						
Total	51	239.745							
Grand Me	an = 1.74	04	360						
$\mathbf{CW}(0/)$	- 27.51	0000							
CV (%)	- 2/)								
	MA	7	TUFR	× //					
	MA	IUN	IVER						

Appendix 11 Analysis of Variance table for percentage of barley seed infection by

Penicillium sp. treated with radio frequency at various temperatures and times evaluated by blotter method

3	2.822	0.9407	Uni	VARSIT
10				
12	566.202	47.1835	25.74	0.0000
36	65.99	1.8331	o r	VO
51	635.014			VCU
	36 51	36 65.99 51 635.014	36 65.99 1.8331 51 635.014	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

$$CV(\%) = 19.81$$

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Appendix 12 Analysis of Variance table for percentage of barley seed infection by Rhizopus sp. treated with radio frequency at various temperatures and times evaluated by blotter method

Source	DF	SS	MS	F	Р				
Rep	3	25.67	8.556						
Treatment	12	3652.38	304.365	16.99	0.0000				
Error	36	644.89	17.914	\mathbf{a}					
Total	51	4322.94							
Grand Mea	n = 18.87	5							
CV (%)	= 5.11								
		- Th							
Appendix 13 An	alvsis of V	ariance table	for percentage	of barley se	eed moistur				

re Appendix 13 Analysis of Variance table for percentage of barley content treated with radio frequency at various temperatures and times

Source	DF	SS	MS	F	Р
Rep	3	1.87992	0.62664		
Treatment	12	1.96136	0.16345	4.74	0.0001
Error	36	1.24041	0.03446		
Total	51	5.0817			
Grand Mean -	13 851				

CV (%) 1.34

Appendix 14 Analysis of Variance table for percentage of barley seed germination

treated with radio	frequency a	at various	temperatures	and times

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	treated with fadio frequency at various temperatures an							
S 1	Source	DF	SS	MS	F	P		
C C	Rep D	3	52.6	17.534	000	ЛГFU		
	Treatment	12	9310.3	775.856	25.46	0.0000		
Co	Error	36	1097.1	30.475	Ilniv	orcity		
CU	Total 5	51	10460	is mai	UIIIV	CISILY		
Λ	Grand Mean =	= 80.760	4 0		• • •			
AI	CV (%)	6.84	lS	res	er	veu		

treate	ed with radio	frequency at	t various temper	atures and ti	mes
Source	DF	SS	MS	F	Р
rep	3	2.51	0.8381		
Treatment	12	1191.8	99.3165	78.5	0.0000
Error	36	45.55	1.2652		
Total	51	1239.86			
Grand Mean	= 95.837	00			
CV (%)	= 1.17		\geq		
Appendix 16 Analy after temp	ysis of Varia accelerated eratures and	nce table fo aging trea times	r percentage of ated with radio	barley seed frequency	germination at various
Source	DF	SS	MS	F	Р
rep	3	2194.48	731.494		
treat	12	4218.86	351.572	3.85	0.0008
Error	36	3287.71	91.325		
Total	51	9701.05		5	
Grand Mean	= 31.038				
CV (%)	= 30.79	Colored a		$\langle \cdot \rangle$	
	MAI	IINI	VERS		

Appendix 15 Analysis of Variance table for percentage of barley seed viability treated with radio frequency at various temperatures and times

Appendix 17 Analysis of Variance table for percentage of barley seed germination index treated with radio frequency at various temperatures and times

2	Source	DF	SS	MS	F	P
87	rep	3	66.5	22.166	NY1	
	Treatment	12	1778.81	148.234	19.54	0.0000
	Error	36	273.09	7.586		
CO	Total	51	2118.39	ig Mai	Unn	<u>/ersity</u>
	Grand Mean =	25.09	95	0		· · · · · · · · · · · · · · · · · · ·
AI	CV (%) =	10.98	st S	res	e r	ved

Source	DF	22	MS	F	F
Ren	3	0.26502	0.08834	1	1
Treatment	12	0.20302	0.03363	1 17	0 3408
Error	36	1.03576	0.02877	1.1/	0.5100
Total	51	1.70433			
Grand Me	an = 10.58	7 0 0		6)	
CV (%)	= 1.60			231	
Appendix 19 An wi	alysis of Va th radio freq	iance table fo uency at varic	or dehydrogenas	e activity of and times	barley trea
Source	DF	SS	MS	F	je P
rep	3	2344.6	781.517	7	
tret	12	5130.3	427.524	5.63	0.000
Error	36	2731.8	75.884		7
CV (%)	= 9.62	IUN	IVER		
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Appendix 18 Analysis of Variance table for total protein of barley treated with radio frequency at various temperatures and times



Appendix 21 Time-temperature curve for given input power of RF at 60°C for 1 minute Copyright^O by Chiang Mai University All rights reserved



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Appendix 24 Time-temperature curve for given input power of RF at 65°C for 1 minute



Appendix 25 Time-temperature curve for given input power of RF at 65°C for 3 minutes Copyright[©] by Chiang Mai University All rights reserved



Appendix 27 Time-temperature curve for given input power of RF at 70°C for 1 minute Copyright^O by Chiang Mai University All rights reserved



Appendix 29 Time-temperature curve for given input power of RF until 75°C Copyright[©] by Chiang Mai University A I rights reserved



Appendix 30 Time-temperature curve for given input power of RF at 75°C for 1 minute



Appendix 31 Time-temperature curve for given input power of RF at75°C for 3 minutes Copyright[©] by Chiang Mai University All rights reserved

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