

Appendix



Comparative analysis of relative concentration (band %) and molecular weight (bp) of ISSR-PCR; primer ISSR-1

Band number	Average base pair (bp)	e4	e7	v.d3	v.v1	v.e	m2	m4	m9	s.n1	s.n3	s.n5	s.am2	s.mac1	s.mac4	s.s2	s.s4	s.s6	s.s8	s.s14
1	1217																0.98			
2	1159																	0.30	0.88	
3	1135																1.41			
4	1089																	0.41		1.73
5	927	25.73	34.16	43	27.27	38.88	31.08	23.48	21.55	18.84		22.79	25.35	21.87	20.87	18.58	33.28	24.15	21.01	41.18
6	710															1.72			4.92	
7	649																3.46	2.22		
8	586						1.92										5.26			4.70
9	540					1.60											7.73	24.26	25.77	31.44
10	504		3.30	2.35			3.52	0.93	2.07	1.11		1.35	5.93	1.61	5.96	1.97				
11	447																11.37	11.13	2.87	10.36
12	394																12.47			
13	404	17.24	15.40	18.77	22.80	19.13	22.84	13.55	8.12	9.20	12.35	13.21	16.43	16.52	15.84	19.00	17.54	26.27	2.00	
14	374												16.43	16.52	15.84	19.00	17.54	26.27	2.00	
15	331	8.53	2.75	2.14	1.55	2.61	3.16	1.26	1.97	1.35		2.31	3.07	6.53	9.83	7.70				
16	290		3.17	1.79	3.39	3.88	2.90	1.35	4.54	8.10	10.18	4.32	6.70	6.16	6.73	4.30				
17	269		1.51																	
18	255																	7.73	6.52	4.03
19	240																15.79			
20	227		5.30	3.11	6.67	2.08	2.29	2.39	2.60	2.12	11.10									
21	207	11.98										2.00	6.74	11.11	7.14	6.00				
22	191		9.54	11.77	7.50	4.71	6.72	10.84	12.91	12.87	18.59									
23	180											8.79	6.65	7.33	5.99	7.35	3.31	12.28	8.52	1.59
24	160	19.42	8.58	6.21	14.92	9.08	13.93	19.42	11.36	11.68		18.36	11.33	11.97	11.15	13.28	4.94			
25	146		1.51			2.14	1.29													
26	137								7.33	10.74										
27	123		9.16	3.77	4.99	6.95	4.91	13.52	10.17	8.05	24.80									
28	112											14.01	9.11	8.57	8.77	10.72				
29	92	17.1	8.64	4.06	10.91	7.33	5.44	13.26	17.38	15.93	22.98	12.84	8.70	8.33	7.72	9.38			3.25	2.95
No. of Total Amplified Bands (TAB)		6	10	12	9	11	12	10	11	11	6	10	11	11	11	12	11	10	10	10
No. of common (monomorphic) bands		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of polymorphic bands (Pb)		6	10	12	9	11	12	10	11	11	6	10	11	11	11	12	11	10	10	10
Percent of polymorphic bands		20.69	34.48	41.38	31.03	37.93	41.38	34.48	37.93	37.93	20.69	34.48	37.93	37.93	37.93	41.38	34.48	34.48	34.48	34.48
No. of unique bands		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0

Comparative analysis of relative concentration (band %) and molecular weight (bp) of ISSR-PCR; primer ISSR-3

Band number	Average Base pair (bp)	e4	e7	v.d3	v.v1	v.e	m2	m4	m9	s.n1	s.n3	s.n5	s.am2	s.mac1	s.mac4	s.s2	s.s4	s.s6	s.s8	s.s14
1	1223																	5.60		
2	842											1.76			2.89	16.49	28.23	24.43	25.63	27.64
3	755	13.52	3.14	4.10	11.30	2.40	4.47	2.19		15.50		1.98		16.11						
4	662													1.92		2.21				
5	559		1.29																	
6	493															10.53			0.60	
7	447		12.33														2.39	0.87	1.44	
8	459		20.08									4.40	4.77	2.58	4.07	7.42				4.45
9	372							4.98								1.82	0.61			
10	369																		1.84	3.10
11	319		27.34							4.20										
12	286		14.52						11.36			4.00	5.40	6.34		15.71	15.31	12.58	13.05	9.77
13	252			7.34			16.84	3.98	4.04											
14	231		5.79	43.83					20.25	33.71	17.14	24.72	20.93	30.19	27.85	25.75	5.40	2.90	2.56	4.22
15	205	15.04			58.4	25.56	26.75	24.70												
16	180	14.23	3.39	8.29				9.61	22.02			7.82	7.37			6.51	2.15	3.08	4.14	2.97
17	173									6.76	22.25			12.95	4.88					
18	164					13.82	6.45				7.85	7.67								
19	152	16.40	4.81					4.94									8.22	7.89	7.85	12.42
20	145									5.94					3.62					
21	132	14.38			3.78	12.54	3.75				16.96									
22	108		4.56	27.31					23.45	10.19		25.82		16.38	24.89	9.15				
23	97				18.90	20.92	22.60	8.71			21.44	23.84								
24	90	12.40																		
25	62	14.03	2.75	9.13	11.40	16.68	23.21	37.08	22.93	23.71	22.21	25.38	26.28	13.52	31.80	6.25	11.08	13.63	16.75	17.9
No. of Total Amplified Bands (TAB)		7	11	6	4	7	7	9	5	7	5	8	8	8	7	9	10	11	11	10
No. of common (monomorphic) bands		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. of polymorphic bands (Pb)		6	10	5	3	6	6	8	4	6	4	7	7	7	6	8	9	10	10	9
Percent of polymorphic bands		24	40	20	12	24	24	32	16	24	16	28	28	28	24	32	36	40	40	36
No. of unique bands		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

Comparative analysis of relative concentration (band %) and molecular weight (bp) of ISSR-PCR; primer ISSR-4

Band number	Average base pair (bp)	e4	e7	v.d3	v.v1	v.e.	m2	m4	m9	s.n1	s.n3	s.n5	s.mac1	s.mac4	s.s2	s.s4	s.s6	s.s8	s.s14
1	829														1.14	2.28	3.61		
2	744					13.74			3.27							1.75			
3	699			30.52												1.05	21.88	10.24	9.41
4	643					2.61				17.98	3.08				3.04			3.09	5.29
5	599								2.91										
6	564														2.69				
7	542	19.90				6.83					8.16								
8	500					12.94			14.46										
9	480										8.97								
10	456																		
11	441																		
12	422			36.08		23.59	14.89		19.27	19.45	13.40				7.31	22.66	17.13		16.33
13	373																4.43		
14	391							12.87							5.41	8.94			8.20
15	346					15.87		19.42	11.74										
16	325			33.40		14.85													
17	293	22.24	50.77			4.57		13.59	13.82	8.73	10.87	17.76			14.00	4.68	2.38	5.55	3.20
18	265										7.16					4.47	1.71	5.61	3.66
19	244										9.26					5.44	4.05	7.52	10.86
20	231				35.89		35.43	11.14											
21	220										10.48				23.95	8.42	5.03	10.73	11.56
22	198							9.45											
23	189		49.23			5.01	9.55												
24	172					16.13													
25	131	35.98			30.41		9.45	12.14	7.64	11.79	12.83	22.63			5.24	5.58	3.48	12.29	8.85
26	92										15.78								
27	84	21.88					14.55	21.4	13.34	28.78					19.39	6.60	6.33	11.58	6.36
28	66				33.70														
No. of Total Amplified Bands (TAB)	4	2	3	3	3	9	6	7	9	6	10	4	6	11	6	10	12	11	10
No. of common (monomorphic) bands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of polymorphic bands (Pb)	4	2	3	3	3	9	6	7	9	6	10	4	6	11	6	10	12	11	10
Percent of polymorphic bands	14.30	7.14	10.71	10.71	10.71	32.14	21.43	25.00	32.14	21.43	35.71	14.30	21.43	39.29	21.43	35.71	42.86	39.29	35.71
No. of unique bands	0	0	0	1	1	0	1	1	0	0	3	0	0	0	1	0	1	0	0

Comparative analysis of relative concentration (band %) and molecular weight (bp) of ISSR-PCR; primer ISSR-6

Band number	Average base pair (bp)	Band %																		
		e4	e7	v.d3	v.v3	v.e	m2	m4	m9	s.n1	s.n3	s.n5	s.am2	s.mac1	s.mac4	s.s2	s.s4	s.s6	s.s8	s.s14
1	822																			22.91
2	446	56.66	82.9	79.68	38.72	88.26	74.03	48.65	53.53	23.86	34.14	37.27	24.46	61.91	30.85	59.26	35.29	36.33		16.84
3	403			6.84																26.41
4	382													6.13						
5	371											3.61	4.05					36.92	46.04	
6	305			1.27														3.95	21.65	
7	293																	6.00		
8	280																			
9	273								34.97	25.5		5.89					7.09	7.30		2.26
10	251				17.04			15.94												4.80
11	230														6.48			2.47	9.69	
12	221									7.14	3.11			2.97						
13	205			9.38			9.48	17.20	25.63	9.79							12.35			
14	191	6.48	3.04	14.51										3.13	5.66			36.67		
15	178							9.97			5.52	3.39	5.92							
16	168						6.99		10.24								18.02			
17	160		3.72																	
18	154			3.67																
19	147		8.74																	
20	141																10.64			
21	105	12.53	5.99	2.95	7.93	5.56	3.68	13.11	2.10	9.28	10.8	20.03	24.57	13.98	24.56	38.62	27.24	4.00		5.13
22	88				8.55				2.80	8.82	12.69	17.41	27.38		23.84					
23	80			4.32	6.18	5.83								11.88			2.11			
24	75	15.58	4.35				11.08													
25	64				5.14					3.03	4.21	9.28	13.61		8.62					
No. of Total Amplified Bands (TAB)		5	5	5	8	3	5	5	5	7	7	8	6	6	6	3	5	6	5	7
No. of common (monomorphic) bands		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of polymorphic bands (Pb)		5	5	5	8	3	5	5	5	7	7	8	6	6	6	3	5	6	5	7
Percent of polymorphic bands		20	20	20	32	12	20	20	20	28	28	32	24	24	24	12	20	24	20	28
No. of unique bands		1	1	1	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	1

Comparative analysis of relative concentration (band %) and molecular weight (bp) of ISSR-PCR; primer ISSR-9

Band number	Average base pair (bp)	e4	e7	v.d3	v.v1	v.e	m2	m4	m9	s.n1	s.n3	s.n5	s.am2	s.mae1	s.mac4	s.s2	s.s4	s.s6	s.s8	s.s14
1	845		1.42						2.32											
2	806			2.41				3.63				1.74								
3	773												2.82	2.70						
4	713								1.20										4.40	
5	667		6.96							2.01		4.83			2.16			6.46		
6	630					2.53								2.12						
7	580		3.61	1.58		1.78	10.82	7.37												
8	547	6.30								2.72				3.98	2.05	11.60				
9	517		18.34	3.31		2.11	7.77	7.64			9.76		9.51							
10	482										5.18									
11	456	3.18								3.48			6.98		11.08					
12	439			2.28							12.37									
13	423							16.45	15.14			4.13				1.62				
14	403		10.53	4.72		8.97							2.5	7.04	15.68	7.79				
15	357		4.97						6.15											
16	343			3.00		2.66	5.28													
17	331		1.10		6.27					7.00										
18	315					25.71					5.61	9.77	5.62			41.00	11.00	12.61		
19	297							32.04					4.94							
20	280					11.67				3.54	10.64	4.43				19.76	47.36	50.34		
21	271	5.10													10.45	48.00	41.00	35.70	30.00	
22	253														11.88					
23	235	4.76		19.16	4.79						4.37		10.47	48.25		16.44	35.73			
24	233		11.5	16.23	8.51					20.5										
25	217	39.10				18.37						36.71								
26	209		26.11	16.04	14.23	18.53	10.88	14.29		32.68	42.72		30.29							
27	205																			
28	179	1.59	15.18		5.08	22.49	12.08	9.03	3.25	15.03	4.21	2.30		7.11	11.33	23.43				
29	161	8.24		24.67	21.15	23.07			1.55				20.28	15.68	8.96					
30	152					9.96	14.06			9.15	2.69	3.44		2.99	5.13	16.52		8.98	8.04	
31	142					23.08	25.46													
32	135		6.49	7.95																
33	127																			
34	107	5.62	1.09	2.03	10.6	2.94				3.90	2.44	2.51	6.58	6.19	21.28					
35	84		1.75	2.42	2.55															
36	70													3.95						
No. of Total Amplified Bands (TAB)		9	14	10	12	5	12	10	10	10	10	10	10	10	10	5	6	5	4	4
No. of common (monomorphic) bands		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of polymorphic bands (Pb)		9	14	10	12	5	12	10	10	10	10	10	10	10	10	5	6	5	4	4
Percent of polymorphic bands		25.00	38.89	27.78	33.33	13.89	33.33	27.78	27.78	27.78	27.78	27.78	27.78	27.78	27.78	13.89	16.67	13.89	11.11	11.11
No. of unique bands		0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0

Comparative analysis of relative concentration (band %) and molecular weight (bp) of ISSR-PCR; primer ISSR-10

Band number	Average base pair (bp)	e4	e7	v.d3	v.v1	v.e	m2	m4	m9	s.n1	s.n3	s.n5	s.am.2	s.mac1	s.mac4	s.s.2	s.s4	s.s6	s.s8	s.s14
1	651	11.38	8.81																	
2	631																	3.38	2.86	
3	553		6.67			6.93										3.06				
4	505															7.81	5.72	4.58		
5	437		12.64													9.67	4.56			
6	376					8.37										14.60	11.40	11.69		
7	338	26.97	22.23	34.25	31.33	26.07	30.69	36.62	29.2	26.8	30.89	31.23			32.52	25.79				
8	318												32.31	31.27						
9	457																			
10	277															7.67		10.71	11.82	13.75
11	263		11.02						8.76							19.42	13.74	11.69	23.16	
12	241				8.49	7.35				9.85					12.33	12.78		14.76	13.32	
13	220	12.56		10.10	13.95	5.69	17.78	16.69	15.81	13.47	14.24	14.28	19.84	19.11		13.43	13.87	16.07	7.40	
14	206		8.23	12.95																
15	199																			
16	187								27.52	26.14	31.88	23.17	26.52	19.89	32.52	18.62		10.04	10.80	
17	172	26.14	11.49	17.63	32.47	23.19	30.16	25.18							12.56	18.87	5.10	2.72	4.03	
18	153	14.30	10.20	17.07	5.95	11.27	12.8	15.43	11.8	12.28	12.94	20.84	13.69	22.33		16.20	2.01	4.88		
19	144																		1.35	17.32
20	133															6.44				
21	123															10.71			9.74	
22	105																		2.06	
23	92																		5.04	
24	79	8.66	8.70	8.01	7.81	11.13	8.56	6.08	6.91	11.45	10.05	10.49	7.63	7.40	10.07	9.82				
25	65																		17.79	
No. of Total Amplified Bands (TAB)																				
No. of common (monomorphic) bands																				
No. of polymorphic bands (Pb)																				
Percent of polymorphic bands																				
No. of unique bands																				