

Table S1. Description of 37 purple rice landrace accessions and nine check genotypes.

Rice samples	Altitude	Ecotype	Accession no.	Local name
Landrace	Highlands (>500 m)	Upland	002	Pi I Soo
			032	Khao Neaw Dum
			035	Khao Neaw Dum
			037	Pi I Soo
			057	Pi I Soo
			124	Pi I Soo
			151	Deaw Ma O Na
			153	Deaw Ma O Na
			265	Ja Noo Nae Nae
			267	Ja Noo Nae Nae
			270	Ja Noo Nae Nae
			279	Khao Saeng
			290	Khao Saeng
			292	Khao Loog Kery
			295	Ja Nor Na
			297	Khao Luam Pua
			302	Khao Saeng Mag Bok
			311	Khao Neaw Dum
			322	Chi Nor Na
		Wetland	065	MHS065
	Lowlands (<500 m)	Upland	006	Kum E San
			166	Ngoa X
			171	Ple Cha
			190	Khao Kum
			222	Ar Cha
			223	V5 Khao Rai Khao Neaw (1309)
			227	V6 Khao Rai Khao Joa (1318)
			232	Pi I Soo
			233	V9 Khao Rai Khao Neaw 1310
			234	Luam Pua
		Wetland	189	Chi Nor Na
			243	Kum Viet Nam
			244	5153
			260	Bean Koo
			245	87061
			250	Kum Pa Yao
			242	Kum Viang Sa
Purple rice check	Lowlands	Wetland	RB	Riceberry
			HN	Hom nin
			KDK	Kum Dai Saket
			KJ-CMU107	Kum Jao Morchor 107
			KH-CMU	Kum Hom Morchor
Non-pigmented rice check	Lowlands	Wetland	PTT1	Pratumthani1
			KDML105	Khao Dok Mali 105
			RD6	Rice Department 6
			SPT1	Sanpathong1

Table S2. Description of the 16 SSR markers used to evaluate genetic diversity of 37 purple rice landrace and nine check genotypes.

Locus	Chromosome No.	Primer sequence	Repeat motif	Expected size (bp)	Tm (C)	Allele size (bp)	No. of allele	PIC
RM1	1	F 5'-GCGAAAACACAATGCAAAAA-3' R 5'-GCGTTGGTTCAGCTGAC-3'	(GA)26	113	55	77-128	4	0.449
RM486	1	F 5'-CCCCCTCTCTCTCTCTC-3' R 5'-TAGCCACATCAACAGCTTG-3'	(CT)14	104	58	114-126	2	0.356
RM208	2	F 5'-TCTGAAGCCTGTCTGATG-3' R 5'-TAAGTCGATCATGTGTGGACC-3'	(CT)17	173	55	167-197	3	0.298
RM211	2	F 5'-CCGACTCATCAACCAACTG-3' R 5'-CTTCACGAGGATCTCAAAGG-3'	(TC)3A(TC)18	161	55	134-150	2	0.269
RM514	3	F 5'-AGATTGATCTCCATCCCC-3' R 5'-CACGAGCATATTACTAGTGG-3'	(AC)12	259	53	242-279	4	0.407
RM307	4	F 5'-GTACTACCGACTACCGTTAC-3' R 5'-CTGCTATGCATGAAGTGCTC-3'	(AT)14(GT)21	174	55	125-135	3	0.446
RM161	5	F 5'-TGAGATGAGAAGCGGCGCTC-3' R 5'-TGTGTCATCAGACGGCGTCCG-3'	(AG)20	187	61	173-200	2	0.351
RM162	6	F 5'-GCCAGCAAAACCAGGATCCGG-3' R 5'-CAAGGTCTTGTGCGGCTTCCGG-3'	(AC)20	229	55	223-262	3	0.577
RM510	6	F 5'-AACCGGATTAGTTTCTCGCC-3' R 5'-TGAGGACGACGAGCAGATTTC-3'	(GA)15	122	50	102-115	2	0.334
RM11	7	F 5'-TCTCTCTTCCCCGATC-3' R 5'-ATAGCGGCGAGGCTTAG-3'	(GA)17	140	55	131-158	2	0.351
RM223	8	F 5'-GAGTGAGCTTGGGCTGAAAC-3' R 5'-GAAGGCAAGTCTTGGCACTG-3'	(CT)25	165	61	135-145	3	0.376
RM339	8	F 5'-GTAATCGATGCTGTGGGAAG-3' R 5'-GAGTCATGTGATAGCCGATATG-3'	(CTT)8CCT(CTT)5	148	55	145-197	5	0.634
RM316	9	F 5'-CTAGTTGGGCATACGATGCG-3' R 5'-ACGCTTATATGTTACGTCAAC-3'	(GT)8- (TG)9(TTTG)4(TG)4	192	55	205-224	2	0.375
RM171	10	F 5'-AACGCGAGGACACGTACTTAC-3' R 5'-ACGAGATACGTACGCCCTTTG-3'	(GATG)5	328	55	320-259	4	0.560
RM287	11	F 5'-TTCCCTGTAAAGAGAAAATC-3' R 5'-GTGTATTTGGTGAAGCAAC-3'	(GA)21	118	55	108-130	4	0.448
RM19	12	F 5'-CAAAAACAGAGCAGATGAC-3' R 5'-CTCAAGATGGACGCCAAGA-3'	(ATC)10	226	55	224-263	2	0.328
Mean							2.79	0.388

Table S3. Standard gamma oryzanol concentration and total gamma oryzanol area obtained from chromatogram for linear regression analysis to determine gamma oryzanol concentration among 37 purple rice landrace accessions and nine check genotypes.

Standard concentration (mg/ml)	Total area (mAU×min)
0.0	0
0.1	402621
0.1	470053
0.1	468606
0.1	471895
0.1	388505
1.0	4171412
1.0	4242381
1.0	4299112
1.0	4347282
1.0	4136879

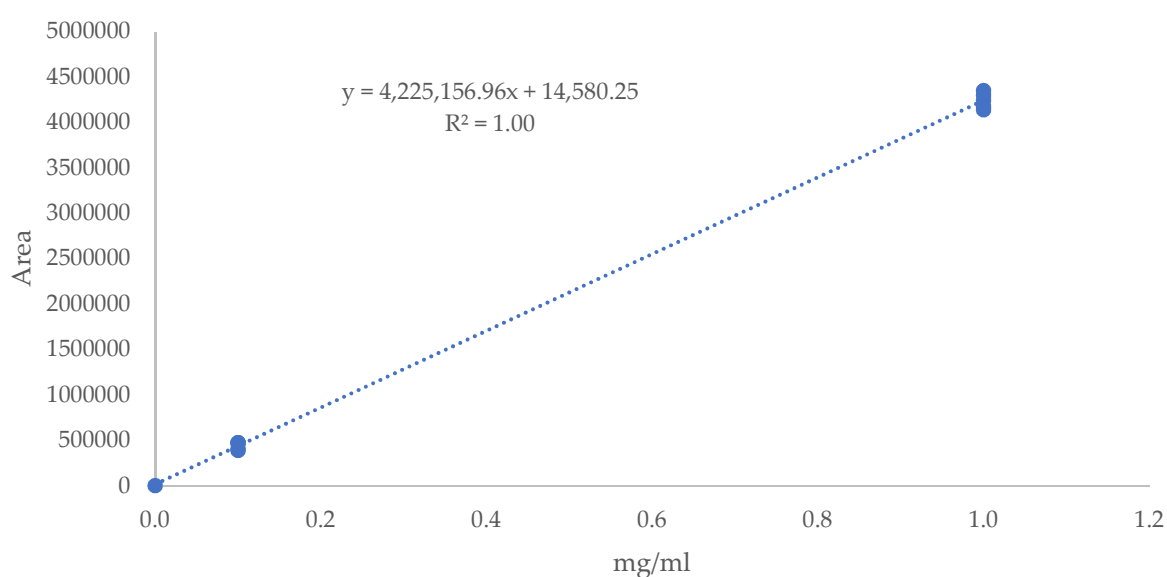


Figure S1. Regression analysis between standard concentration and total area peak of gamma oryzanol to determine concentration among 37 purple rice landrace accessions and nine check genotypes.

Table S4. Area of total gamma oryzanol obtained from chromatogram for calculating gamma oryzanol concentration based on regression analysis to determine gamma oryzanol concentration among 37 purple rice landrace accessions and nine check genotypes.

Accession	Replication	Sample weight (g)	Total area	Gamma oryzanol (mg/100g)
2	1	5.0	6257250	59.1
2	2	5.0	5158709	48.7
2	3	5.0	6394567	60.4
6	1	5.0	8781781	83
6	2	5.0	9014165	85.2
6	3	5.0	9880322	93.4
32	1	5.0	8105756	76.6
32	2	5.0	7704366	72.8
32	3	5.0	6996652	66.1
35	1	5.0	6310064	59.6
35	2	5.0	5496721	51.9
35	3	5.0	4704504	44.4
37	1	5.0	6278375	59.3
37	2	5.0	7482545	70.7
37	3	5.0	7503671	70.9
57	1	5.0	6479070	61.2
57	2	5.0	6035429	57
57	3	5.0	6405130	60.5
65	1	5.0	6827646	64.5
65	2	5.0	6753706	63.8
65	3	5.0	6141058	58
124	1	5.0	6574136	62.1
124	2	5.0	6479070	61.2
124	3	5.0	5961489	56.3
151	1	5.0	6003740	56.7
151	2	5.0	6130495	57.9
151	3	5.0	6384004	60.3
153	1	5.0	5739668	54.2
153	2	5.0	5961489	56.3
153	3	5.0	5855860	55.3
166	1	5.0	6310064	59.6
166	2	5.0	7535360	71.2
166	3	5.0	7324102	69.2

Table S4. Continued

Accession	Replication	Sample weight (g)	Total area (mAU×min)	Gamma oryzanol (mg/100g)
171	1	5.0	6193872	58.5
171	2	5.0	6183309	58.4
171	3	5.0	6943838	65.6
189	1	5.0	6753706	63.8
189	2	5.0	6119932	57.8
189	3	5.0	7133970	67.4
190	1	5.0	6553011	61.9
190	2	5.0	5887548	55.6
190	3	5.0	5665728	53.5
222	1	5.0	7598737	71.8
222	2	5.0	6700891	63.3
222	3	5.0	5792482	54.7
223	1	5.0	7788869	73.6
223	2	5.0	7144533	67.5
223	3	5.0	7186784	67.9
227	1	5.0	7218473	68.2
227	2	5.0	7503671	70.9
227	3	5.0	7535360	71.2
232	1	5.0	7556485	71.4
232	2	5.0	7471982	70.6
232	3	5.0	7894498	74.6
233	1	5.0	6310064	59.6
233	2	5.0	6172747	58.3
233	3	5.0	6193872	58.5
234	1	5.0	7271287	68.7
234	2	5.0	7271287	68.7
234	3	5.0	7640989	72.2
242	1	5.0	10176083	96.2
242	2	5.0	9521183	90
242	3	5.0	10049328	95
243	1	5.0	11126743	105.2
243	2	5.0	11306312	106.9
243	3	5.0	10419029	98.5
244	1	5.0	9457806	89.4
244	2	5.0	9394429	88.8
244	3	5.0	9743004	92.1

Table S4. Continued

Accession	Replication	Sample weight (g)	Total area (mAU×min)	Gamma oryzanol (mg/100g)
245	1	5.0	5750231	54.3
245	2	5.0	6912149	65.3
245	3	5.0	6246687	59
250	1	5.0	11866146	112.2
250	2	5.0	12193595	115.3
250	3	5.0	11285186	106.7
260	1	5.0	7598737	71.8
260	2	5.0	6426256	60.7
260	3	5.0	6933275	65.5
265	1	5.0	7260724	68.6
265	2	5.0	7535360	71.2
265	3	5.0	7894498	74.6
267	1	5.0	7936750	75
267	2	5.0	7588174	71.7
267	3	5.0	7060029	66.7
270	1	5.0	7883935	74.5
270	2	5.0	7102281	67.1
270	3	5.0	7260724	68.6
279	1	5.0	7102281	67.1
279	2	5.0	7693803	72.7
279	3	5.0	7028341	66.4
290	1	5.0	7049467	66.6
290	2	5.0	7281850	68.8
290	3	5.0	8021253	75.8
292	1	5.0	6933275	65.5
292	2	5.0	7831121	74
292	3	5.0	7260724	68.6
295	1	5.0	8454331	79.9
295	2	5.0	7736055	73.1
295	3	5.0	7471982	70.6
297	1	5.0	7493108	70.8
297	2	5.0	7355790	69.5
297	3	5.0	6933275	65.5
302	1	5.0	8686715	82.1
302	2	5.0	8655026	81.8
302	3	5.0	8908536	84.2

Table S4. Continued

Accession	Replication	Sample weight (g)	Total area (mAU×min)	Gamma oryzanol (mg/100g)
311	1	5.0	8412080	79.5
311	2	5.0	8137445	76.9
311	3	5.0	8401517	79.4
322	1	5.0	7841684	74.1
322	2	5.0	7831121	74
322	3	5.0	7313539	69.1
HN	1	5.0	7524797	71.1
HN	2	5.0	7355790	69.5
HN	3	5.0	8084630	76.4
KDK	1	5.0	8897973	84.1
KDK	2	5.0	8211385	77.6
KDK	3	5.0	9014165	85.2
KDML105	1	5.0	5380530	50.8
KDML105	2	5.0	4831259	45.6
KDML105	3	5.0	5919237	55.9
KH-CMU	1	5.0	6373441	60.2
KH-CMU	2	5.0	7577611	71.6
KH-CMU	3	5.0	9035290	85.4
KJ-CMU107	1	5.0	7556485	71.4
KJ-CMU107	2	5.0	7630426	72.1
KJ-CMU107	3	5.0	5021391	47.4
PTT1	1	5.0	3848910	36.3
PTT1	2	5.0	4905199	46.3
PTT1	3	5.0	4049605	38.2
RB	1	5.0	7165658	67.7
RB	2	5.0	7218473	68.2
RB	3	5.0	7662114	72.4
RD6	1	5.0	4303115	40.6
RD6	2	5.0	5127020	48.4
RD6	3	5.0	6172747	58.3
SPT1	1	5.0	6626951	62.6
SPT1	2	5.0	7366353	69.6
SPT1	3	5.0	6225561	58.8

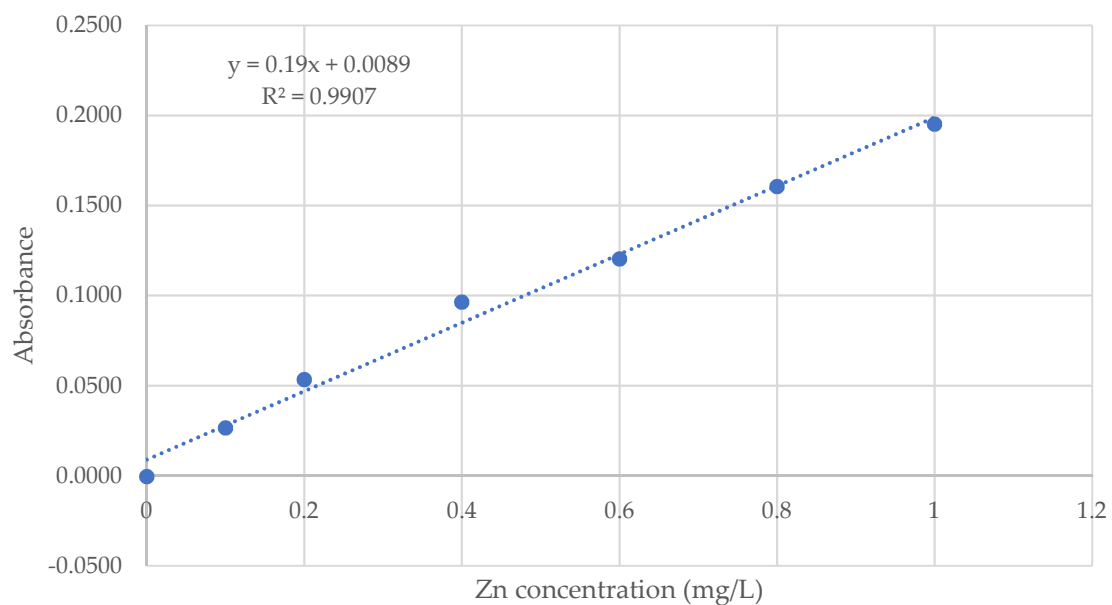


Figure S2. Regression analysis between Zn standard concentration and absorbance value from atomic absorption spectrophotometer (AAS) for regression analysis (AAS) to determine Zn concentration among 37 purple rice landrace accessions and nine check genotypes.

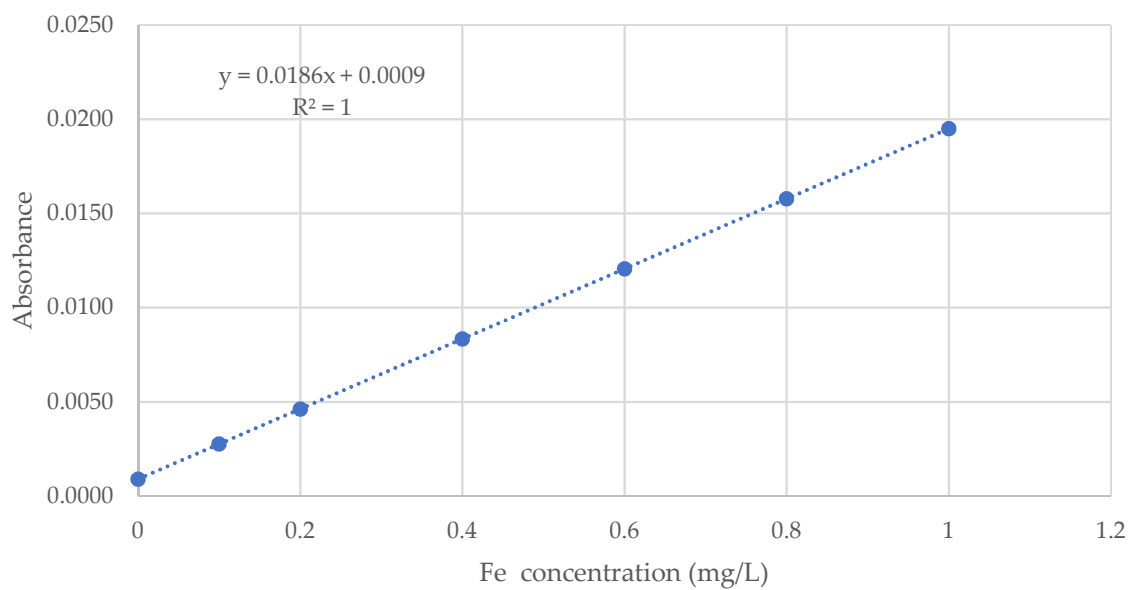


Figure S3. Regression analysis between Fe standard concentration and absorbance value from atomic absorption spectrophotometer (AAS) for regression analysis to determine Fe concentration among 37 purple rice landrace accessions and nine check genotypes.

Table S5. Zn standard concentration and absorbance obtained from atomic absorption spectrophotometer (AAS) for regression analysis to determined Zn concentration among 37 purple rice landrace accessions and nine check genotypes.

Sample	Zn concentration (mg/L)	Absorbance
Standard 1	0	-0.0006
Standard 2	0.1	0.0265
Standard 3	0.2	0.0533
Standard 4	0.4	0.0963
Standard 5	0.6	0.1204
Standard 6	0.8	0.1605
Standard 7	1.0	0.1952
Blank1		0.0007
Blank2		0.0005
Blank3		0.0006

Table S6. Fe standard concentration and absorbance obtained from atomic absorption spectrophotometer (AAS) for regression analysis to determined Zn concentration among 37 purple rice landrace accessions and nine check genotypes.

Sample	Fe concentration (mg/L)	Absorbance
Standard 1	0	0.0009
Standard 2	1	0.0028
Standard 3	2	0.0046
Standard 4	3	0.0083
Standard 5	4	0.0121
Standard 6	5	0.0158
Standard 7	10	0.0195
Blank1		0.0003
Blank2		0.0004
Blank3		0.0006

Table S7. Zn concentration from based on regression analysis of three replications among 37 purple rice landrace accessions and nine check genotypes.

Accession	Replication	Zn mg/kg
2	1	16.2
2	2	17.5
2	3	17.2
6	1	31.8
6	2	31.5
6	3	31.0
32	1	24.1
32	2	25.5
32	3	25.5
35	1	31.7
35	2	31.0
35	3	31.0
37	1	24.7
37	2	24.8
37	3	25.1
57	1	27.8
57	2	28.5
57	3	27.4
65	1	28.7
65	2	29.3
65	3	29.0
124	1	27.9
124	2	28.6
124	3	27.5
151	1	23.7
151	2	23.7
151	3	23.0
153	1	29.0
153	2	29.3
153	3	28.7
166	1	23.3
166	2	22.0
166	3	22.0
171	1	23.3
171	2	23.7
171	3	23.7
189	1	39.0
189	2	39.3
189	3	38.0
190	1	21.0
190	2	20.0
190	3	20.0

Table S7. Continued

Accession	Replication	Zn mg/kg *
222	1	21.3
222	2	21.7
222	3	21.0
223	1	20.0
223	2	19.0
223	3	18.0
227	1	19.3
227	2	20.7
227	3	19.3
232	1	25.0
232	2	24.7
232	3	23.3
233	1	19.4
233	2	18.9
233	3	21.0
234	1	27.5
234	2	26.9
234	3	28.3
242	1	24.2
242	2	23.1
242	3	23.9
243	1	24.7
243	2	25.5
243	3	24.6
244	1	31.2
244	2	32.8
244	3	30.2
245	1	27.8
245	2	28.2
245	3	26.5
250	1	24.9
250	2	24.1
250	3	25.3
260	1	23.0
260	2	23.0
260	3	24.7
265	1	19.4
265	2	19.2
265	3	19.4
267	1	28.1
267	2	27.3
267	3	25.9
270	1	24.3
270	2	24.0
270	3	25.5

Table S7. Continued

Accession	Replication	Zn mg/kg *
279	1	29.0
279	2	27.3
279	3	27.7
290	1	25.3
290	2	26.7
290	3	24.3
292	1	29.7
292	2	28.3
292	3	28.0
295	1	28.3
295	2	27.7
295	3	28.0
297	1	27.0
297	2	28.7
297	3	27.0
302	1	21.5
302	2	21.3
302	3	21.0
311	1	17.7
311	2	18.3
311	3	18.3
322	1	30.3
322	2	29.3
322	3	30.0
HN	1	31.7
HN	2	31.7
HN	3	31.5
KDK	1	24.0
KDK	2	24.0
KDK	3	22.7
KDML105	1	24.9
KDML105	2	24.9
KDML105	3	24.4
KH-CMU	1	26.8
KH-CMU	2	27.2
KH-CMU	3	26.2
KJ-CMU107	1	31.2
KJ-CMU107	2	31.5
KJ-CMU107	3	31.3
PTT1	1	15.6
PTT1	2	15.0
PTT1	3	14.9
RB	1	31.7
RB	2	31.0
RB	3	31.0

Table S7. Continued

Accession	Zn mg/kg *
RD6	25.8
RD6	25.8
RD6	25.1
SPT1	22.7
SPT1	24.2
SPT1	23.7

Table S8. Fe concentration from based on regression analysis of three replications among 37 purple rice landrace accessions and nine check genotypes.

Accession	Replication	Fe mg/kg
2	1	9.5
2	2	9.1
2	3	9.4
6	1	10.8
6	2	11.0
6	3	10.0
32	1	14.4
32	2	13.2
32	3	14.2
35	1	14.4
35	2	13.8
35	3	14.1
37	1	14.1
37	2	13.3
37	3	13.4
57	1	14.5
57	2	15.6
57	3	15.2
65	1	13.0
65	2	12.7
65	3	11.1
124	1	13.5
124	2	12.9
124	3	13.2
151	1	14.5
151	2	14.5
151	3	15.0
153	1	15.1
153	2	14.9
153	3	14.2
166	1	13.5
166	2	13.0
166	3	13.2
171	1	13.7
171	2	13.5
171	3	13.6
189	1	15.5
189	2	15.0
189	3	14.6

Table S8. Continued

Accession	Replication	Fe mg/kg
190	1	10.7
190	2	10.3
190	3	10.7
222	1	13.0
222	2	13.0
222	3	12.5
223	1	12.0
223	2	11.5
223	3	13.1
227	1	15.3
227	2	14.8
227	3	15.2
232	1	11.5
232	2	11.2
232	3	12.2
233	1	10.9
233	2	11.0
233	3	10.5
234	1	14.4
234	2	13.3
234	3	14.0
242	1	12.7
242	2	11.0
242	3	11.9
243	1	9.3
243	2	9.6
243	3	9.3
244	1	8.6
244	2	10.0
244	3	9.6
245	1	9.8
245	2	10.4
245	3	10.1
250	1	11.4
250	2	10.2
250	3	11.4
260	1	14.2
260	2	15.0
260	3	14.7
265	1	12.7
265	2	12.4
265	3	12.9

Table S8. Continued

Accession	Replication	Fe mg/kg
267	1	15.2
267	2	15.6
267	3	14.9
270	1	14.4
270	2	14.3
270	3	14.8
279	1	12.5
279	2	11.9
279	3	12.7
290	1	10.9
290	2	11.4
290	3	9.9
292	1	14.1
292	2	14.0
292	3	13.1
295	1	13.3
295	2	13.0
295	3	12.5
297	1	12.2
297	2	11.4
297	3	11.9
302	1	8.4
302	2	7.6
302	3	7.6
311	1	9.9
311	2	11.2
311	3	9.5
322	1	11.8
322	2	11.8
322	3	12.5
HN	1	10.9
HN	2	11.6
HN	3	12.1
KDK	1	7.3
KDK	2	8.1
KDK	3	7.4
KDML105	1	9.4
KDML105	2	9.9
KDML105	3	9.0
KH-CMU	1	19.1
KH-CMU	2	19.9
KH-CMU	3	18.7

Table S8. Continued

Accession	Replication	Fe mg/kg
KJ-CMU107	1	10.6
KJ-CMU107	2	11.2
KJ-CMU107	3	10.8
PTT1	1	5.1
PTT1	2	6.2
PTT1	3	5.9
RB	1	11.0
RB	2	11.8
RB	3	11.0
RD6	1	6.8
RD6	2	6.4
RD6	3	6.7
SPT1	1	6.1
SPT1	2	6.0
SPT1	3	6.8

Table S9. No of allele and expected heterozygosity of 37 purple rice landrace accessions and nine check genotypes using 16 SSRs markers.

Rice samples	Altitude	Ecotype	Accession	Local name	Na	<i>h</i>
Landrace	Highlands (>500 m)	Upland	2	Pi I Soo	1.0	0
			32	Khao Neaw Dum	1.0	0
			35	Khao Neaw Dum	1.2	0.08
			37	Pi I Soo	1.0	0
			57	Pi I Soo	1.0	0
			124	Pi I Soo	1.1	0.02
			151	Deaw Ma O Na	1.0	0
			153	Deaw Ma O Na	1.5	0.16
			265	Ja Noo Nae Nae	1.0	0
			267	Ja Noo Nae Nae	1.1	0.05
			270	Ja Noo Nae Nae	1.1	0.03
			279	Khao Saeng	1.1	0.03
			290	Khao Saeng	1.0	0
			292	Khao Loog Kery	1.0	0
			295	Ja Nor Na	1.1	0.04
			297	Khao Luam Pua	1.0	0
			302	Khao Saeng Mag Bok	1.1	0.02
			311	Khao Neaw Dum	1.5	0.22
			322	Chi Nor Na	1.1	0.02
		Wetland	65	MHS065	1.1	0.03
	Lowlands (<500 m)	Upland	6	Kum E San	1.1	0.03
			166	Ngoa X	1.1	0.02
			171	Ple Cha	1.1	0.02
			190	Khao Kum	1.1	0.05
			222	Ar Cha	1.0	0
			223	V5 Khao Rai Khao Neaw (1309)	1.0	0
			227	V6 Khao Rai Khao Joa (1318)	1.0	0
			232	Pi I Soo	1.1	0.02
			233	V9 Khao Rai Khao Neaw 1310	1.1	0.02
			234	Luam Pua	1.3	0.08
		Wetland	189	Chi Nor Na	1.3	0.11
			243	Kum Viet Nam	1.0	0
			244	5153	1.0	0
			260	Bean Koo	1.1	0.04
			245	87061	1.2	0.08
			250	Kum Pa Yao	1.1	0.02
			242	Kum Viang Sa	1	0
Purple rice check	Lowland	Wetland	RB	Riceberry	1	0
			HN	Hom nin	1	0.00
			KDK	Kum Dai Saket	1	0
			KJ-CMU107	Kum Jao Morchor 107	1	0
			KH-CMU	Kum Hom Morchor	1	0
Non-pigmented rice check	Lowlands	Wetland	PTT1	Pratumthani1	1	0
			KDML105	Khao Dok Mali 105	1	0
			RD6	Rice Department 6	1	0
			SPT1	Sanpathong1	1	0

Na; number of alleles per locus, *h*; expected heterozygosity

Table S10. Mean and standard error of mean (SE) of anthocyanin and gamma oryzanol concentration of 37 purple rice landrace accessions and nine check genotypes with their mean of three replications.

Rice samples	Altitude	Ecotype	Accession	Anthocyanin (mg/100g)		Gamma oryzanol (mg/100g)	
				Mean	SE	Mean	SE
Landrace	Highland (>500 m)	Upland	2	0.5	0.1	56.1	3.7
			32	13.6	0.1	71.8	3.1
			35	13.5	0.4	52.0	4.4
			37	15.3	0.2	67.0	3.9
			57	16.0	0.2	59.6	1.3
			124	4.4	0.2	59.8	1.8
			151	3.6	0.3	58.3	1.1
			153	8.6	0.2	55.3	0.6
			265	5.1	0.3	71.5	1.7
			267	3.7	0.2	71.1	2.4
			270	7.1	0.6	70.1	2.2
			279	8.2	0.1	68.7	2.0
			290	7.6	0.1	70.4	2.8
			292	2.7	0.1	69.4	2.5
			295	5.7	0.3	74.5	2.8
			297	7.8	0.7	68.6	1.6
			302	3.8	0.4	82.7	0.8
			311	1.6	0.2	78.6	0.8
			322	5.1	0.4	72.4	1.6
	Lowland (<500 m)	Wetland	65	2.9	0.0	62.1	2.1
		Upland	6	4.4	0.3	87.2	3.2
			166	8.3	0.5	66.7	3.6
			171	8.5	0.6	60.8	2.4
			190	1.3	0.0	57.0	2.5
			222	6.4	0.4	63.3	4.9
			223	7.9	0.5	69.6	2.0
			227	4.6	0.4	70.1	1.0
			232	11.6	0.2	72.2	1.2
			233	7.7	0.5	58.8	0.4
			234	4.1	0.2	69.8	1.2
		Wetland	189	4.0	0.4	63.0	2.8
			243	3.5	0.4	103.6	2.6
			244	11.2	0.3	90.1	1.0
			260	7.3	0.6	66.0	3.2
			245	2.6	0.6	59.5	3.2
			250	10.7	0.4	111.4	2.5
			242	10.8	0.5	93.7	1.9
Purple rice check	Lowland	Wetland	RB	0.7	0.2	69.4	1.5
			HN	1.1	0.3	72.3	2.1
			KDK	13.3	0.1	82.3	2.4
			KJ-CMU107	10.7	0.2	63.6	8.1
		Upland	KH-CMU	12.5	0.1	72.4	7.3
Non-pigmented rice check	Lowland	Wetland	PTT1	nd		40.3	3.1
			KDML105	nd		50.8	3.0
			RD6	nd		49.1	5.1
			SPT1	nd		63.7	3.2

Table S11. Mean and standard error of mean (SE) of Fe and Zn concentration of 37 purple rice landrace accessions and nine check genotypes with their mean of three replications.

Rice samples	Altitude	Ecotype	Accession	Fe (mg/kg)		Zn (mg/kg)	
				Mean	SE	Mean	SE
Landrace	Highland (>500 m)	Upland	2	9.3	0.1	16.9	0.4
			32	13.9	0.4	25.0	0.5
			35	14.1	0.2	31.2	0.2
			37	13.6	0.3	24.9	0.1
			57	15.1	0.3	27.9	0.3
			124	13.2	0.2	28.0	0.3
			151	14.7	0.2	23.4	0.2
			153	14.7	0.3	29.0	0.2
			265	12.7	0.1	19.3	0.0
			267	15.2	0.2	27.1	0.7
			270	14.5	0.1	24.6	0.5
			279	12.4	0.3	28.0	0.5
			290	10.8	0.4	25.4	0.7
			292	13.7	0.3	28.7	0.5
			295	12.9	0.2	28.0	0.2
			297	11.8	0.2	27.6	0.6
			302	7.8	0.3	21.3	0.1
			311	10.2	0.5	18.1	0.2
			322	12.0	0.2	29.9	0.3
	Lowland (<500 m)	Wetland	65	12.3	0.6	29.0	0.2
		Upland	6	10.6	0.3	31.4	0.2
			166	13.2	0.2	22.4	0.4
			171	13.6	0.0	23.6	0.1
			190	10.6	0.1	20.3	0.3
			222	12.8	0.2	21.3	0.2
			223	12.2	0.5	19.0	0.6
			227	15.1	0.2	19.8	0.4
			232	11.6	0.3	24.3	0.5
			233	10.8	0.1	19.8	0.6
			234	13.9	0.3	27.6	0.4
		Wetland	189	15.1	0.2	38.8	0.4
			243	9.4	0.1	24.9	0.3
			244	9.4	0.4	31.4	0.8
			260	14.6	0.2	23.6	0.6
			245	10.1	0.2	27.5	0.5
			250	11.0	0.4	24.8	0.4
			242	11.9	0.5	23.7	0.3
Purple rice check	Lowland	Wetland	RB	11.3	0.3	31.2	0.2
			HN	11.5	0.3	31.6	0.1
			KDK	7.6	0.2	23.6	0.4
			KJ-CMU107	10.9	0.2	31.3	0.1
		Upland	KH-CMU	19.2	0.3	26.7	0.3
Non-pigmented rice check	Lowland	Wetland	PTT1	5.7	0.3	15.2	0.2
			KDML105	9.4	0.2	24.7	0.2
			RD6	6.6	0.1	25.6	0.2
			SPT1	6.3	0.2	23.5	0.4