

Red Wine

Analysis Dates: 1 Feb to 7 Feb 2024
Report Date: 8 February 2024

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Notes

Report version 1 generated on 08-02-2024.

Individual laboratory results are confidential and identified by their unique 'Stats ID' and laboratory number. No reference is made to participating laboratories, companies or people in this report. To avoid potential identification of participating laboratories, any methods with less than three total submissions are combined into the 'other' method category.

CV values will be hidden if above 50%

Z-scores and Youden plots were not done for Ascorbic acid due to < 7 data points

Free Sulfur Dioxide	Sample A	Sample B
No of cases	161	161
Minimum	24.7	24.0
Maximum	36.0	36.0
Range	11.3	12.0
Median	30.0	30.0
Mean	30.0	30.0
95% CI Upper	30.4	30.3
95% CI Lower	29.7	29.7
Standard Dev	2.2	2.1
CV	7.39%	7.16%
Lab Result		
Lab Z-Score		

Total Sulfur Dioxide	Sample A	Sample B
No of cases	156	156
Minimum	65.6	66.4
Maximum	83.0	84.7
Range	17.4	18.3
Median	75.0	75.0
Mean	74.9	75.1
95% CI Upper	75.5	75.6
95% CI Lower	74.4	74.6
Standard Dev	3.4	3.3
CV	4.52%	4.33%
Lab Result		
Lab Z-Score		

pH	Sample A	Sample B
No of cases	166	166
Minimum	3.51	3.50
Maximum	3.69	3.68
Range	0.18	0.18
Median	3.59	3.59
Mean	3.59	3.60
95% CI Upper	3.60	3.60
95% CI Lower	3.59	3.59
Standard Dev	0.03	0.03
CV	0.90%	0.93%
Lab Result		
Lab Z-Score		

Titrateable Acidity to pH 7.0	Sample A	Sample B
No of cases	32	32
Minimum	4.50	4.50
Maximum	4.85	4.96
Range	0.35	0.46
Median	4.72	4.72
Mean	4.72	4.73
95% CI Upper	4.74	4.76
95% CI Lower	4.69	4.69
Standard Dev	0.08	0.09
CV	1.66%	1.98%
Lab Result		
Lab Z-Score		

Titrateable Acidity to pH 8.2	Sample A	Sample B
No of cases	152	152
Minimum	5.00	5.04
Maximum	5.54	5.55
Range	0.54	0.51
Median	5.28	5.28
Mean	5.28	5.28
95% CI Upper	5.29	5.29
95% CI Lower	5.26	5.26
Standard Dev	0.09	0.08
CV	1.77%	1.59%
Lab Result		
Lab Z-Score		

Alcohol	Sample A	Sample B
No of cases	153	153
Minimum	13.50	13.50
Maximum	14.00	14.00
Range	0.50	0.50
Median	13.79	13.79
Mean	13.78	13.78
95% CI Upper	13.79	13.79
95% CI Lower	13.76	13.76
Standard Dev	0.09	0.09
CV	0.64%	0.69%
Lab Result		
Lab Z-Score		

Specific Gravity	Sample A	Sample B
No of cases	110	110
Minimum	0.9936	0.9935
Maximum	0.9967	0.9959
Range	0.0031	0.0023
Median	0.9952	0.9952
Mean	0.9951	0.9951
95% CI Upper	0.9952	0.9952
95% CI Lower	0.9950	0.9950
Standard Dev	0.0004	0.0004
CV	0.04%	0.04%
Lab Result		
Lab Z-Score		

Dissolved Carbon Dioxide	Sample A	Sample B
No of cases	72	72
Minimum	0.00	0.00
Maximum	0.20	0.20
Range	0.20	0.20
Median	0.07	0.06
Mean	0.07	0.06
95% CI Upper	0.08	0.07
95% CI Lower	0.06	0.05
Standard Dev	0.05	0.04
CV		
Lab Result		
Lab Z-Score		

Reducing Sugars	Sample A	Sample B
No of cases	30	30
Minimum	6.90	7.05
Maximum	9.30	9.30
Range	2.40	2.25
Median	8.05	8.08
Mean	8.11	8.15
95% CI Upper	8.29	8.32
95% CI Lower	7.93	7.98
Standard Dev	0.50	0.48
CV	6.19%	5.83%
Lab Result		
Lab Z-Score		

Glucose + Fructose	Sample A	Sample B
No of cases	130	130
Minimum	4.60	4.64
Maximum	7.14	7.00
Range	2.54	2.36
Median	5.93	5.99
Mean	5.94	5.97
95% CI Upper	6.01	6.03
95% CI Lower	5.88	5.91
Standard Dev	0.38	0.36
CV	6.35%	6.08%
Lab Result		
Lab Z-Score		

Volatile Acidity	Sample A	Sample B
No of cases	70	70
Minimum	0.25	0.27
Maximum	0.57	0.55
Range	0.32	0.28
Median	0.41	0.41
Mean	0.42	0.42
95% CI Upper	0.43	0.43
95% CI Lower	0.40	0.40
Standard Dev	0.06	0.06
CV	14.67%	13.82%
Lab Result		
Lab Z-Score		

Acetic Acid	Sample A	Sample B
No of cases	90	90
Minimum	0.28	0.29
Maximum	0.50	0.46
Range	0.22	0.17
Median	0.38	0.38
Mean	0.38	0.38
95% CI Upper	0.39	0.39
95% CI Lower	0.37	0.37
Standard Dev	0.04	0.04
CV	10.33%	9.38%
Lab Result		
Lab Z-Score		

Malic Acid	Sample A	Sample B
No of cases	130	130
Minimum	0.00	0.00
Maximum	0.20	0.20
Range	0.20	0.20
Median	0.08	0.08
Mean	0.08	0.08
95% CI Upper	0.09	0.09
95% CI Lower	0.07	0.07
Standard Dev	0.05	0.05
CV		
Lab Result		
Lab Z-Score		

Citric Acid	Sample A	Sample B
No of cases	16	16
Minimum	0.00	0.00
Maximum	0.08	0.09
Range	0.08	0.09
Median	0.03	0.03
Mean	0.04	0.04
95% CI Upper	0.04	0.05
95% CI Lower	0.03	0.03
Standard Dev	0.02	0.02
CV	49.11%	56.98%
Lab Result		
Lab Z-Score		

Turbidity	Sample A	Sample B
No of cases	138	138
Minimum	0.32	0.32
Maximum	1.99	1.96
Range	1.66	1.65
Median	0.92	0.88
Mean	0.99	0.96
95% CI Upper	1.04	1.02
95% CI Lower	0.93	0.91
Standard Dev	0.34	0.34
CV	33.97%	34.80%
Lab Result		
Lab Z-Score		

Sugar Free Extract	Sample A	Sample B
No of cases	22	22
Minimum	22.6	22.8
Maximum	34.1	34.2
Range	11.5	11.4
Median	27.3	27.4
Mean	27.9	27.8
95% CI Upper	29.1	29.0
95% CI Lower	26.7	26.7
Standard Dev	2.9	2.8
CV	10.25%	10.21%
Lab Result		
Lab Z-Score		

Methanol	Sample A	Sample B
No of cases	8	8
Minimum	158.0	160.0
Maximum	220.0	210.0
Range	62.0	50.0
Median	181.2	179.8
Mean	185.4	183.7
95% CI Upper	203.4	198.4
95% CI Lower	167.5	169.0
Standard Dev	25.9	21.2
CV	13.95%	11.54%
Lab Result		
Lab Z-Score		

Potassium	Sample A	Sample B
No of cases	19	19
Minimum	978	960
Maximum	1130	1131
Range	152	171
Median	1047	1044
Mean	1044	1045
95% CI Upper	1061	1067
95% CI Lower	1026	1023
Standard Dev	39	49
CV	3.73%	4.67%
Lab Result		
Lab Z-Score		

Sodium	Sample A	Sample B
No of cases	15	15
Minimum	57	53
Maximum	68	69
Range	11	16
Median	61	61
Mean	62	62
95% CI Upper	64	64
95% CI Lower	61	60
Standard Dev	4	4
CV	6.03%	6.64%
Lab Result		
Lab Z-Score		

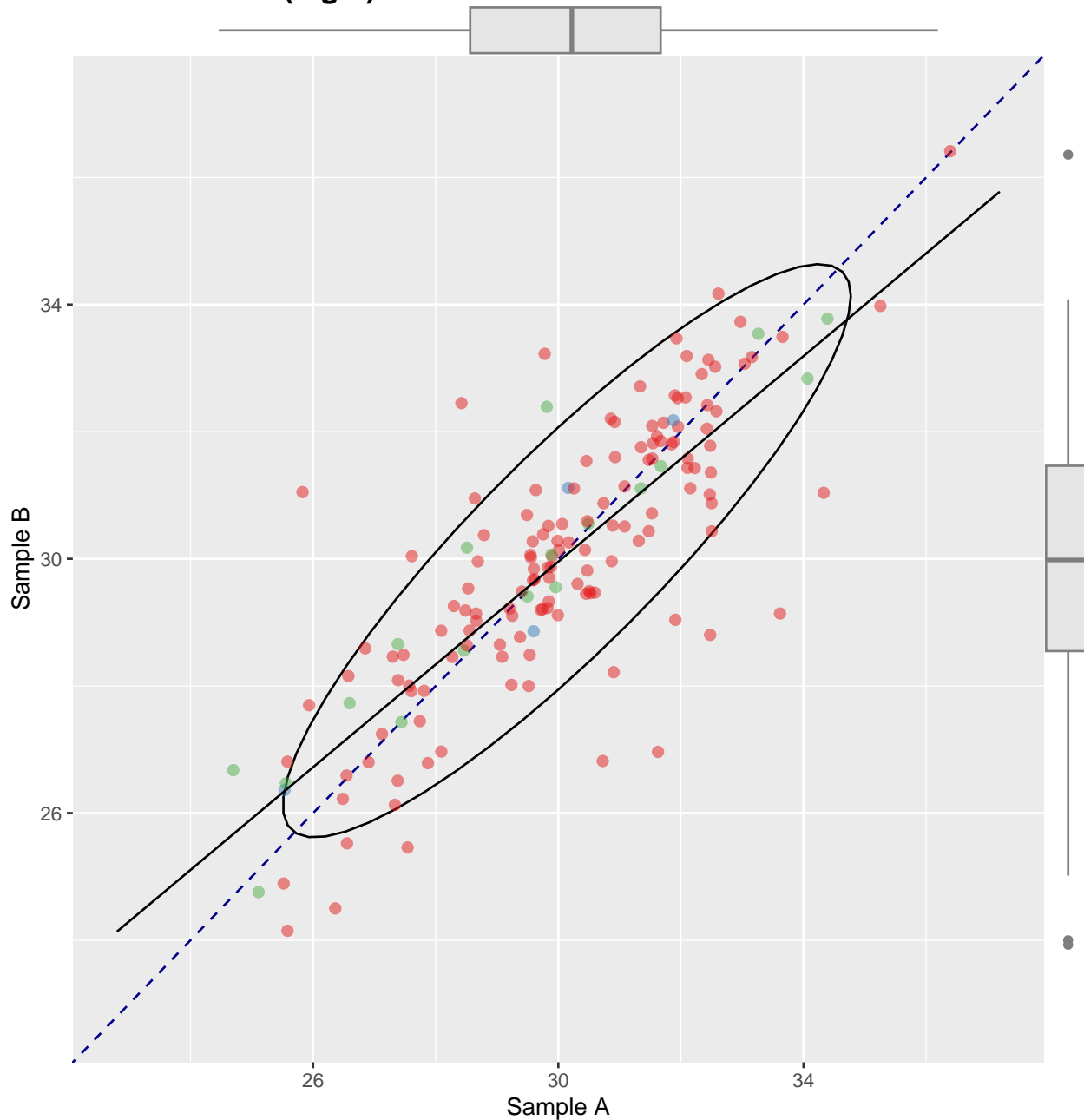
Calcium	Sample A	Sample B
No of cases	23	23
Minimum	44	44
Maximum	76	72
Range	32	28
Median	62	62
Mean	62	61
95% CI Upper	65	63
95% CI Lower	59	58
Standard Dev	7	6
CV	11.03%	10.38%
Lab Result		
Lab Z-Score		

Copper	Sample A	Sample B
No of cases	22	22
Minimum	0.11	0.10
Maximum	0.23	0.24
Range	0.12	0.14
Median	0.18	0.18
Mean	0.18	0.18
95% CI Upper	0.19	0.19
95% CI Lower	0.16	0.16
Standard Dev	0.03	0.04
CV	18.76%	21.25%
Lab Result		
Lab Z-Score		

Iron	Sample A	Sample B
No of cases	21	21
Minimum	2.11	2.10
Maximum	3.64	3.69
Range	1.53	1.59
Median	3.15	3.14
Mean	3.12	3.11
95% CI Upper	3.27	3.27
95% CI Lower	2.96	2.96
Standard Dev	0.36	0.37
CV	11.55%	11.81%
Lab Result		
Lab Z-Score		

Manganese	Sample A	Sample B
No of cases	8	8
Minimum	1.86	1.90
Maximum	2.19	2.18
Range	0.33	0.28
Median	2.08	2.08
Mean	2.06	2.06
95% CI Upper	2.12	2.12
95% CI Lower	1.99	2.01
Standard Dev	0.10	0.08
CV	4.69%	3.94%
Lab Result		
Lab Z-Score		

Free Sulfur Dioxide (mg/L)



Method ● Aspiration ● Automated Colourimetric ● Other

Sample	A	B
No of cases	161	161
Minimum	24.7	24.0
Maximum	36.0	36.0
Range	11.3	12.0
Median	30.0	30.0
Mean	30.0	30.0
95% CI Upper	30.4	30.3
95% CI Lower	29.7	29.7
Standard Deviation	2.2	2.1
Coefficient of Variation	7.39%	7.16%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Aspiration	139
Automated Colourimetric	4
Other	18

Free Sulfur Dioxide Z-Scores

Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B
1	-0.5	-0.5	122	1.8	0.5	238	-0.2	-0.2	378	0.0	-0.9	500	0.9	0.5			
3	0.0	0.0	126	-0.9	-0.5	244	1.3	1.4	380	0.0	0.5						
5	0.0	0.0	129	-0.9	-0.9	245	0.2	0.6	382	0.9	0.9						
9	0.4	0.0	131	0.4	0.5	247	0.4	1.4	385	-0.1	0.0						
10	2.7	2.8	132	0.4	0.5	250	0.0	0.0	393	-1.4	-0.9						
14	0.9	0.9	138	0.4	0.9	252	0.0	-0.5	398	0.9	0.9						
19	-1.4	-1.4	141	-1.8	0.5	253	-0.9	-1.4	399	0.6	1.1						
20	-0.5	0.0	144	-0.5	0.9	261	0.0	0.0	404	0.0	0.0						
29	-0.5	-0.5	145	0.9	0.5	266	-0.9	-0.9	408	1.3	0.5						
31	0.4	-1.4	153	0.9	1.4	267	0.4	0.9	409	-1.8	-0.9						
36	0.0	0.0	157	0.9	0.9	270	1.3	1.4	413	0.9	0.5						
39	0.9	0.9	167	-1.4	-0.9	273	0.9	0.5	417	-0.2	-0.9						
43	-0.9	-0.9	169	0.0	0.0	279	0.9	0.9	425	0.9	1.4						
45	0.0	0.0	171	1.3	0.5	281	-1.8	-2.8	426	0.0	-0.5						
47	0.0	0.0	173	0.9	0.9	284	0.4	-0.5	431	-2.3	-2.3						
49	0.0	0.0	176	0.9	0.9	286	0.0	-0.5	437	0.0	0.0						
51	-1.4	-1.9	177	0.9	0.9	287	-0.5	-0.5	438	-0.2	0.1						
53	-0.9	-0.9	179	-2.3	-1.4	289	0.9	0.9	442	0.0	0.0						
55	-0.3	-0.4	182	-1.8	-1.4	293	1.3	1.4	444	-0.5	-0.5						
59	-1.8	-1.9	183	0.0	0.0	295	-0.9	-0.9	445	0.9	0.9						
61	0.0	0.0	188	0.9	-1.4	296	0.9	0.9	447	0.9	1.4						
63	0.8	1.5	189	0.0	0.0	297	0.0	1.4	455	0.9	0.9						
64	0.9	0.9	192	-0.5	-0.5	299	0.0	0.0	458	-0.5	-0.5						
66	0.9	0.9	198	0.9	0.9	301	-1.1	-1.5	461	0.0	-0.5						
74	-1.4	-1.9	199	-0.9	0.0	308	0.4	0.5	464	0.2	0.2						
78	0.4	0.0	201	0.4	0.5	309	-0.5	0.0	467	-1.3	-0.8						
79	-0.8	-0.3	204	-1.4	-1.9	313	0.4	0.0	468	-1.8	-1.9						
84	0.0	0.9	205	-0.5	0.5	315	0.9	0.9	471	2.1	1.9						
88	-2.4	-1.4	208	-0.5	-0.5	318	0.2	0.0	474	0.0	0.0						
90	-1.4	-1.4	210	-1.4	-1.4	320	-1.3	-0.6	475	-0.5	-0.5						
93	0.9	0.9	212	0.4	0.5	321	-2.3	-2.3	479	-1.4	-0.9						
95	2.2	1.9	214	1.3	1.4	323	0.9	-0.5	480	1.3	1.9						
96	0.0	-0.5	215	0.2	-0.6	326	0.4	0.5	481	0.4	0.5						
99	1.3	1.9	216	0.4	0.0	332	-1.4	-0.5	483	-1.8	-1.9						
103	-0.9	-0.5	220	1.8	1.4	340	1.0	0.9	484	-0.6	-0.6						
105	-1.4	-0.9	223	0.4	0.0	346	0.0	0.0	486	0.0	0.0						
107	0.9	-0.5	225	1.8	-0.5	358	1.3	1.4	488	0.0	0.5						
108	-1.4	-1.4	226	1.8	1.4	364	0.4	0.5	489	0.0	-0.5						
116	0.0	0.5	233	0.0	0.0	365	0.0	0.0	493	-0.5	-0.5						
118	-0.5	0.0	236	-1.8	-2.8	366	-0.5	-0.5	499	0.9	0.5						

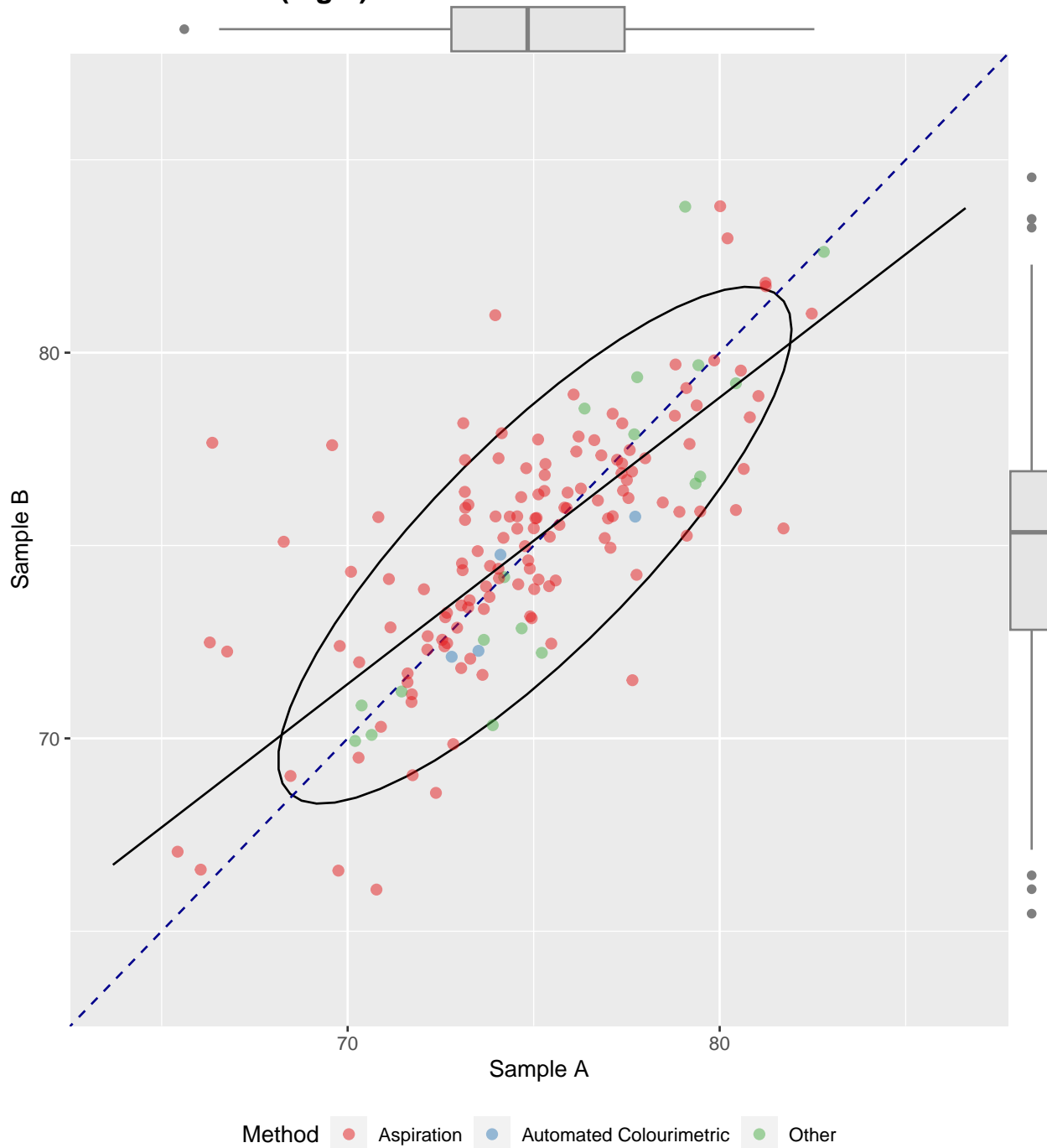
Outliers

152
278
285
396
406
428

-4.1
3.6
-9.0
-9.6
-4.5
-4.5

-2.8
1.9
-2.8
-0.7
-1.4
0.2

Total Sulfur Dioxide (mg/L)



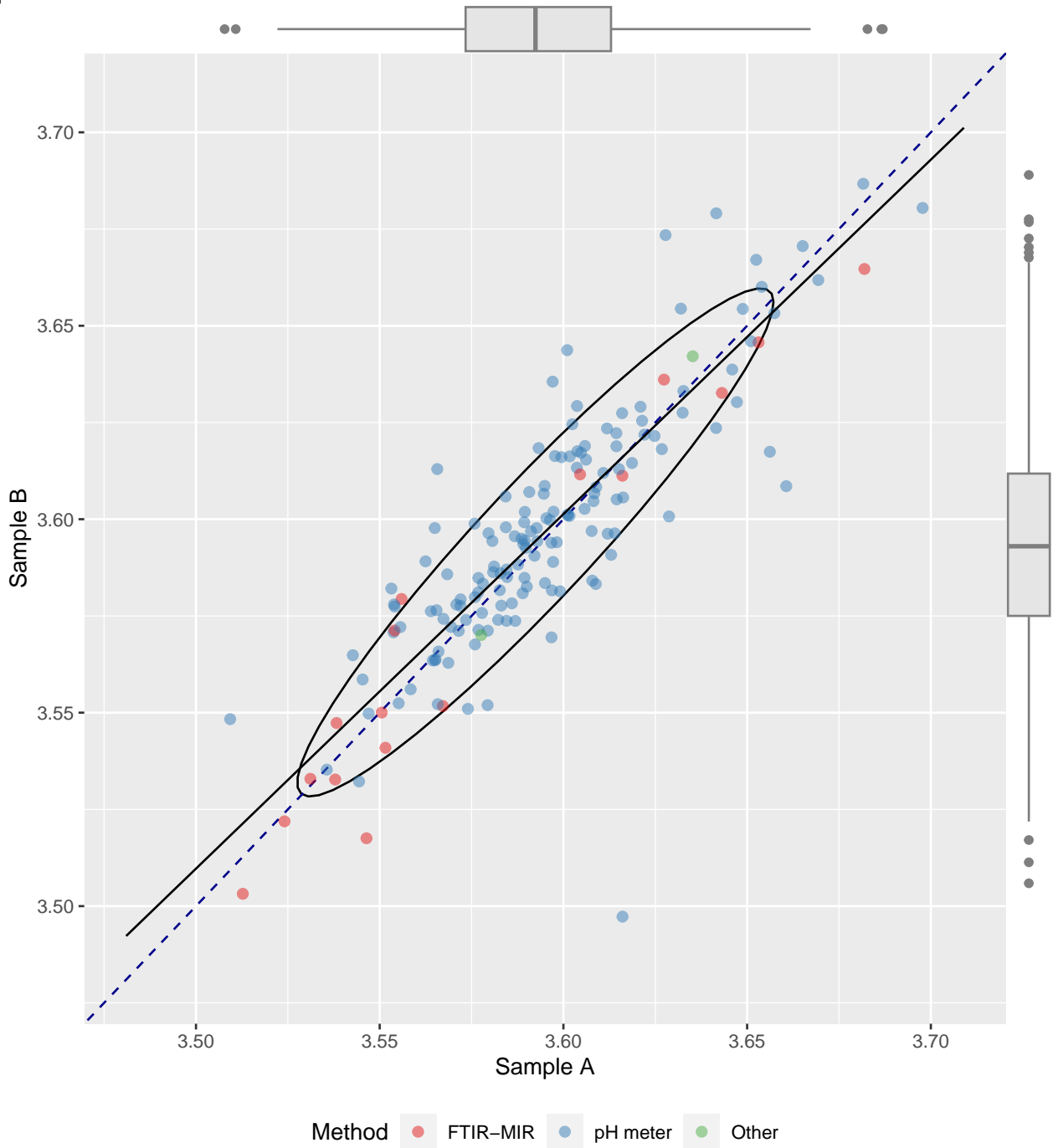
Sample	A	B
No of cases	156	156
Minimum	65.6	66.4
Maximum	83.0	84.7
Range	17.4	18.3
Median	75.0	75.0
Mean	74.9	75.1
95% CI Upper	75.5	75.6
95% CI Lower	74.4	74.6
Standard Deviation	3.4	3.3
Coefficient of Variation	4.52%	4.33%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Aspiration	134
Automated Colourimetric	4
Other	18

Total Sulfur Dioxide Z-Scores

Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B
1	-0.9	-0.9	126	-0.3	-0.3	244	1.8	2.1	385	-0.3	-0.4						
3	0.9	0.9	129	-0.9	-1.9	245	0.3	-0.1	393	0.0	0.3						
5	-0.6	-0.9	131	0.3	0.5	247	-1.2	-1.3	398	-0.3	-0.3						
9	0.5	0.2	132	0.6	0.6	250	0.0	0.0	399	1.1	1.2						
10	1.2	1.2	138	-0.6	-0.3	252	-2.3	-0.9	404	0.3	1.2						
14	-0.3	0.3	141	-0.3	0.6	253	-1.5	-2.5	408	0.3	0.6						
19	1.5	0.9	144	-1.8	0.0	261	-1.2	-1.3	409	-0.3	0.9						
20	1.5	2.4	145	-0.3	-0.3	266	0.9	0.0	413	1.2	1.2						
29	0.0	0.0	152	-1.5	-0.3	267	0.0	0.3	426	0.9	0.3						
31	0.9	0.0	153	0.6	1.2	270	0.9	1.2	428	-2.8	-2.7						
36	-0.6	0.3	157	-0.9	-0.9	273	1.5	1.5	437	0.9	0.6						
39	0.6	0.3	167	0.8	1.0	281	-0.6	-0.9	438	0.3	0.0						
43	0.6	0.6	169	-0.3	-0.9	284	0.0	0.6	442	-0.3	0.3						
45	0.3	0.6	171	1.5	1.2	286	0.9	0.3	444	-0.3	0.0						
47	-0.3	0.0	173	-0.9	-0.6	287	0.0	0.0	445	-0.3	-0.3						
49	0.0	0.0	177	0.9	0.9	289	0.1	-0.5	447	1.2	0.3						
53	-0.9	-0.9	179	-1.5	-1.6	293	0.0	0.0	455	-0.3	-0.3						
55	-0.4	2.1	182	0.0	0.6	295	1.5	0.6	458	-0.9	-0.6						
59	-0.9	-1.9	183	-0.6	-1.3	297	0.6	0.9	461	-0.3	-0.3						
61	0.6	0.6	188	1.5	0.3	299	-0.3	0.0	464	0.1	0.0						
63	0.1	0.1	189	0.6	0.6	301	-0.8	-0.6	467	-1.2	0.0						
64	-0.9	-1.6	192	1.8	1.2	308	0.3	0.3	468	-2.3	-2.5						
66	-0.6	-0.9	198	1.2	0.6	309	1.8	1.5	471	2.4	2.1						
74	-1.8	-0.9	199	-0.6	-0.6	313	0.6	0.9	474	0.0	0.0						
78	-1.8	-1.9	201	-1.2	-1.3	315	0.6	0.0	475	0.0	-0.9						
79	0.8	0.4	204	0.0	-0.6	318	-1.3	-2.5	479	1.8	0.3						
84	1.2	1.5	205	-0.6	0.6	320	-2.5	-0.9	480	0.0	0.3						
88	1.5	3.0	208	-0.6	-0.3	321	0.3	0.3	481	-0.6	-0.9						
90	-0.6	-0.9	212	1.2	0.3	323	0.6	0.6	483	-0.6	-0.9						
93	-0.3	-0.3	214	-0.6	-0.6	326	-0.3	-0.3	484	0.1	0.0				Outliers		
95	-1.5	0.9	215	-1.3	-1.4	332	-1.5	-1.6	486	-0.9	-0.9				51	-4.4	-0.6
96	1.8	1.8	216	0.6	0.3	340	0.8	0.8	488	0.0	0.6				176	9.1	9.9
99	0.0	0.3	218	2.4	1.8	346	0.6	0.6	489	0.0	0.0				210	-3.2	-3.7
103	-1.2	-1.3	220	1.2	1.2	358	-0.6	-0.6	493	-0.3	-0.9				278	2.1	3.4
105	-0.6	-0.6	223	0.9	0.3	364	-0.3	-0.3	499	0.0	-0.3				279	8.6	8.9
107	-0.9	-0.3	225	1.5	2.4	365	-1.5	-0.9	500	1.5	0.7				285	-9.4	-0.9
108	-0.9	-0.9	226	0.0	-0.9	366	0.9	0.6							296	2.1	6.4
116	0.6	0.3	233	0.0	0.0	378	0.9	-0.9							396	-8.1	-4.3
118	-0.3	0.3	236	-2.3	0.6	380	0.3	0.3							406	-3.5	-0.9
122	0.0	-0.3	238	-1.1	-1.2	382	-0.3	-0.3							417	-3.7	-9.1
															425	9.2	9.8

pH



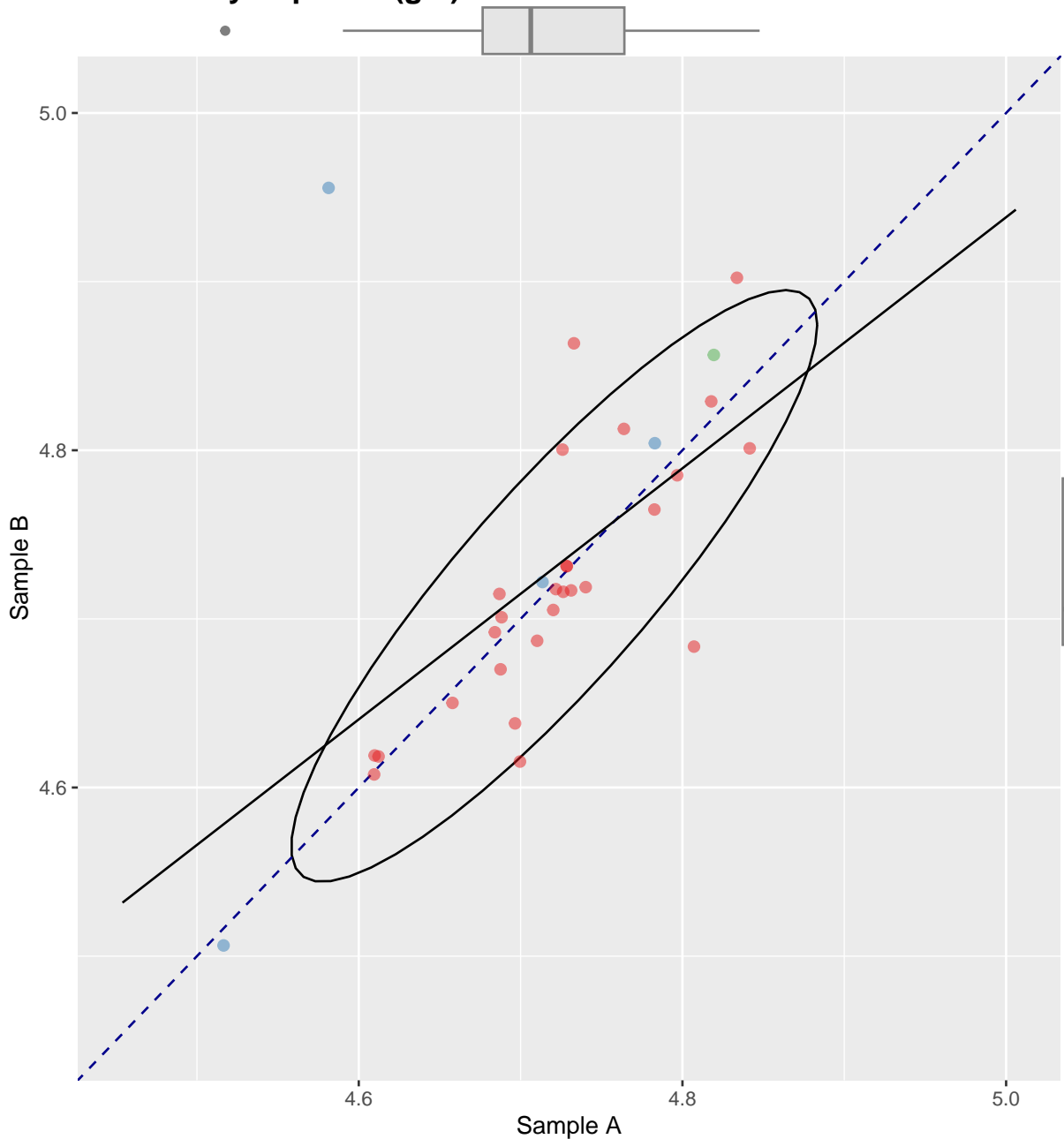
Sample	A	B
No of cases	166	166
Minimum	3.51	3.50
Maximum	3.69	3.68
Range	0.18	0.18
Median	3.59	3.59
Mean	3.59	3.60
95% CI Upper	3.60	3.60
95% CI Lower	3.59	3.59
Standard Deviation	0.03	0.03
Coefficient of Variation	0.90%	0.93%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
FTIR-MIR	17
pH meter	147
Other	2

pH Z-Scores

Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	
1	-1.4	-0.8	118	0.2	0.1	236	0.2	-0.2	365	-1.0	-1.4	486	-2.0	-2.0				
3	0.2	0.1	122	-1.0	-0.5	238	0.8	2.2	366	-0.4	-0.5	488	0.2	-0.2				
5	-0.1	-0.2	126	0.2	0.1	244	1.4	1.6	378	0.5	1.0	489	-0.7	-0.8				
6	-0.7	-1.1	129	-0.7	-0.8	245	0.5	0.4	380	-0.7	-0.5	493	-0.1	-0.2				
9	-0.4	-0.5	131	0.2	0.4	247	2.7	2.2	382	0.2	0.1	499	-0.1	-0.2				
10	-0.4	-0.5	132	-0.1	-0.2	250	0.8	0.7	385	-1.4	-1.4	500	0.5	-2.9				
14	-0.4	-0.5	138	-0.7	-0.2	252	-1.4	-1.1	393	-0.4	-0.5							
19	-2.0	-2.0	144	-0.1	-0.2	253	-0.1	-0.5	398	0.8	0.4							
20	0.8	0.7	145	1.4	1.9	261	-1.7	-2.3	399	0.8	0.7							
29	0.5	0.7	152	-0.4	0.1	266	0.5	0.4	404	0.5	1.3							
31	2.0	2.2	153	-1.0	-1.1	267	-1.7	-1.7	406	2.7	2.5							
36	0.2	0.1	157	-1.0	-0.5	270	0.5	0.4	408	-0.4	-0.5							
39	-0.1	-0.2	167	0.2	0.1	273	0.2	0.1	409	1.7	1.9							
43	1.7	1.6	169	-0.7	0.1	279	0.5	0.1	413	-1.0	-1.1							
45	-0.1	-0.2	171	0.5	0.4	281	-1.0	-1.4	417	-0.7	0.4							
47	-0.4	-0.2	173	0.2	1.3	284	-0.7	-0.5	425	-0.1	-0.2							
49	-1.0	-0.8	176	0.2	0.4	285	2.3	0.1	426	-0.7	-0.8							
51	-0.4	-0.2	177	-1.0	-1.1	286	-0.7	-0.5	428	1.4	1.3							
53	-0.1	-0.2	179	1.1	1.0	287	-0.1	-0.2	431	-1.4	-0.8							
55	0.2	0.1	182	-0.7	-1.1	289	-0.1	-0.2	437	0.8	1.0							
59	-0.7	-0.8	183	-0.4	-0.5	293	0.8	0.7	438	-1.0	-1.1							
61	0.2	0.1	188	-1.7	-1.7	295	0.2	0.7	442	0.5	1.0							
63	0.5	0.1	189	0.5	0.4	296	-2.6	-1.4	444	0.2	0.1							
64	-0.4	-0.5	192	-0.4	-0.5	297	-0.1	-0.2	445	1.4	1.0							
66	-0.4	-0.5	198	-1.0	-0.5	299	-0.4	-0.5	447	-0.1	-0.5							
74	2.0	2.2	199	0.2	0.1	301	0.2	0.4	455	-0.4	0.1							
78	-0.1	-0.2	201	0.8	-0.2	308	1.4	2.5	458	-0.7	-0.8							
79	-0.1	-0.2	204	-0.1	-0.2	309	-1.0	-0.8	460	-1.0	-0.5							
84	-0.4	0.1	205	-1.0	-0.8	313	1.4	1.0	461	-0.1	0.1							
88	1.7	0.7	208	0.5	0.4	315	-0.7	-0.8	464	1.1	1.0							
90	-0.4	-0.5	210	0.8	0.7	318	3.0	2.5	467	-1.0	-1.1							
93	1.7	1.6	212	0.2	0.4	320	0.2	0.4	468	0.2	0.1							
95	0.2	-0.2	214	-2.3	-2.6	321	0.2	0.1	471	1.1	1.0							
96	-0.1	-0.2	215	0.8	1.0	323	-1.7	-1.7	474	0.8	0.7							
99	0.2	0.4	216	1.7	1.6	326	0.8	0.7	475	-0.1	-0.2							
103	-0.4	-0.8	218	-0.1	-0.2	332	-1.7	-1.4	479	-1.0	-1.4					Outliers		
105	-0.4	-0.5	220	-0.1	-0.2	340	0.8	0.4	480	-0.7	-0.8					141	-5.4	-8.2
107	-0.1	-0.8	225	0.8	0.4	346	1.4	1.3	481	2.3	2.2					223	-3.2	-3.2
108	0.2	0.4	226	-2.0	-2.0	358	-0.7	-1.1	483	0.5	0.4					278	12.5	12.1
116	0.8	0.7	233	-0.1	-0.2	364	-0.7	-0.8	484	1.4	1.3					396	-4.1	-4.4

Titrateable Acidity to pH 7.0 (g/L)

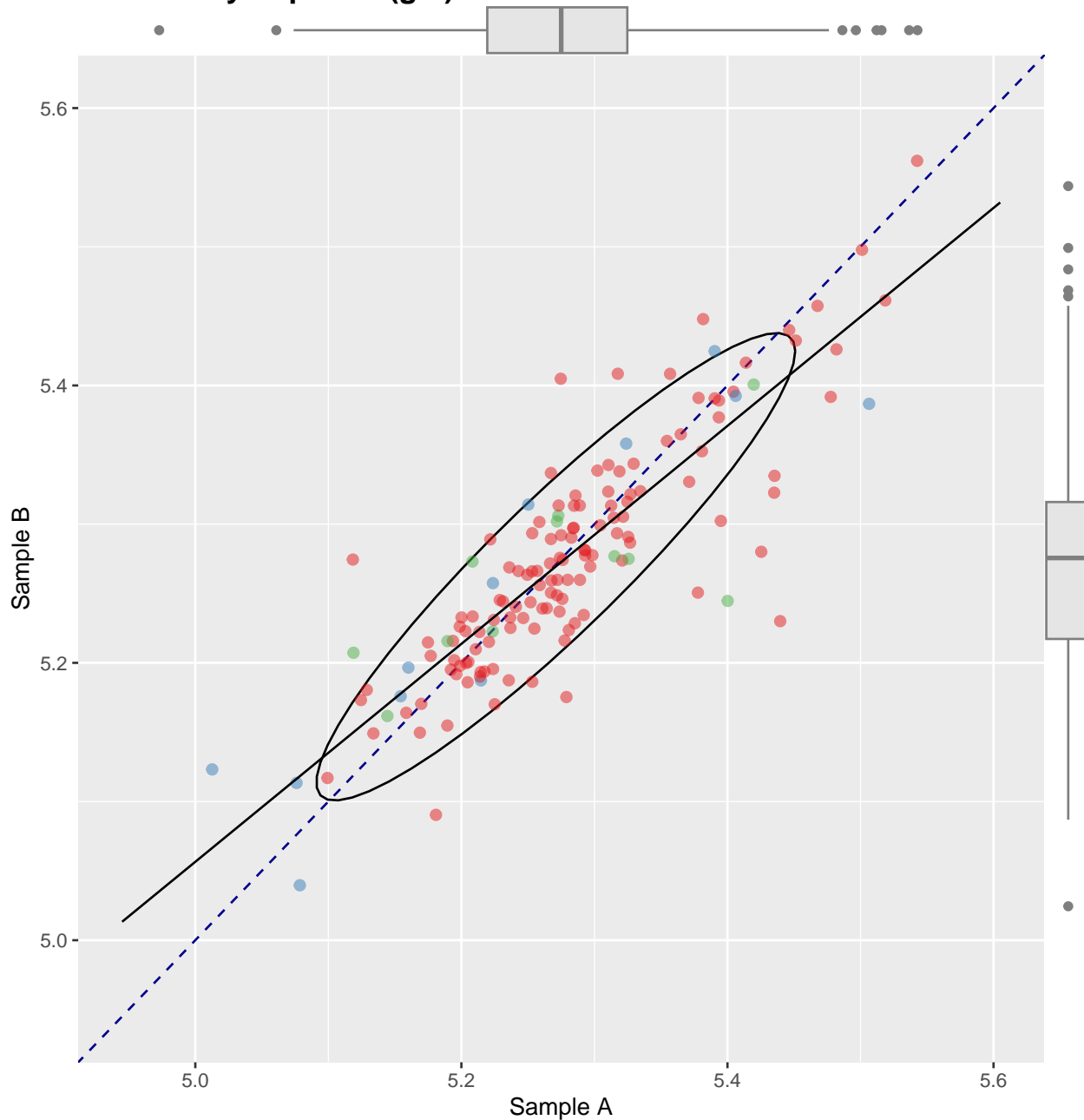


Method ● Autotitrator ● Manual Titration ● Other

Sample	A	B
No of cases	32	32
Minimum	4.50	4.50
Maximum	4.85	4.96
Range	0.35	0.46
Median	4.72	4.72
Mean	4.72	4.73
95% CI Upper	4.74	4.76
95% CI Lower	4.69	4.69
Standard Deviation	0.08	0.09
Coefficient of Variation	1.66%	1.98%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Autotitrator	27
Manual Titration	4
Other	1

Titrateable Acidity to pH 8.2 (g/L)

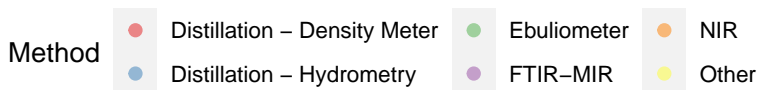
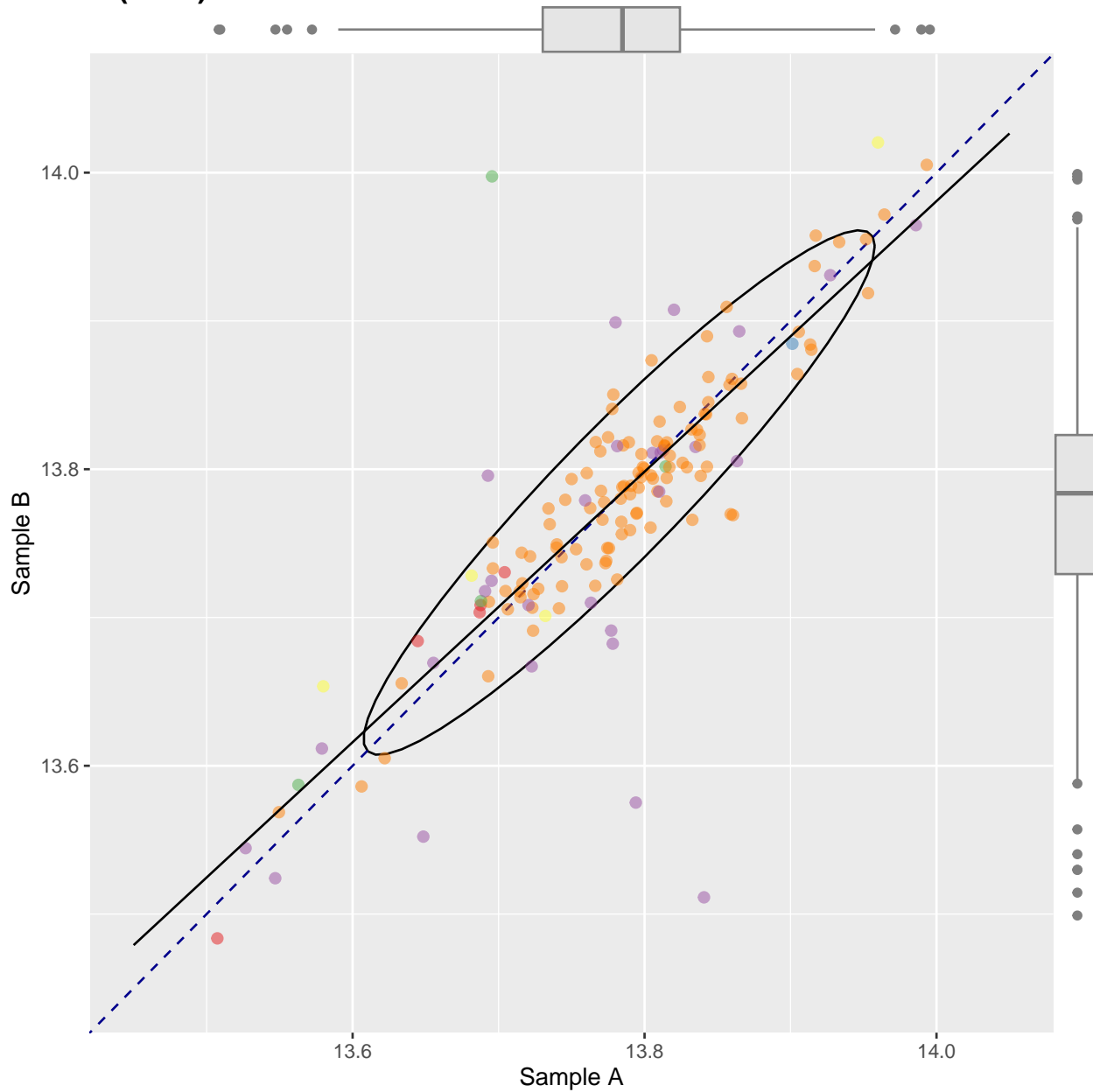


Method ● Autotitrator ● FTIR-MIR ● Manual Titration

Sample	A	B
No of cases	152	152
Minimum	5.00	5.04
Maximum	5.54	5.55
Range	0.54	0.51
Median	5.28	5.28
Mean	5.28	5.28
95% CI Upper	5.29	5.29
95% CI Lower	5.26	5.26
Standard Deviation	0.09	0.08
Coefficient of Variation	1.77%	1.59%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Autotitrator	129
FTIR-MIR	12
Manual Titration	11

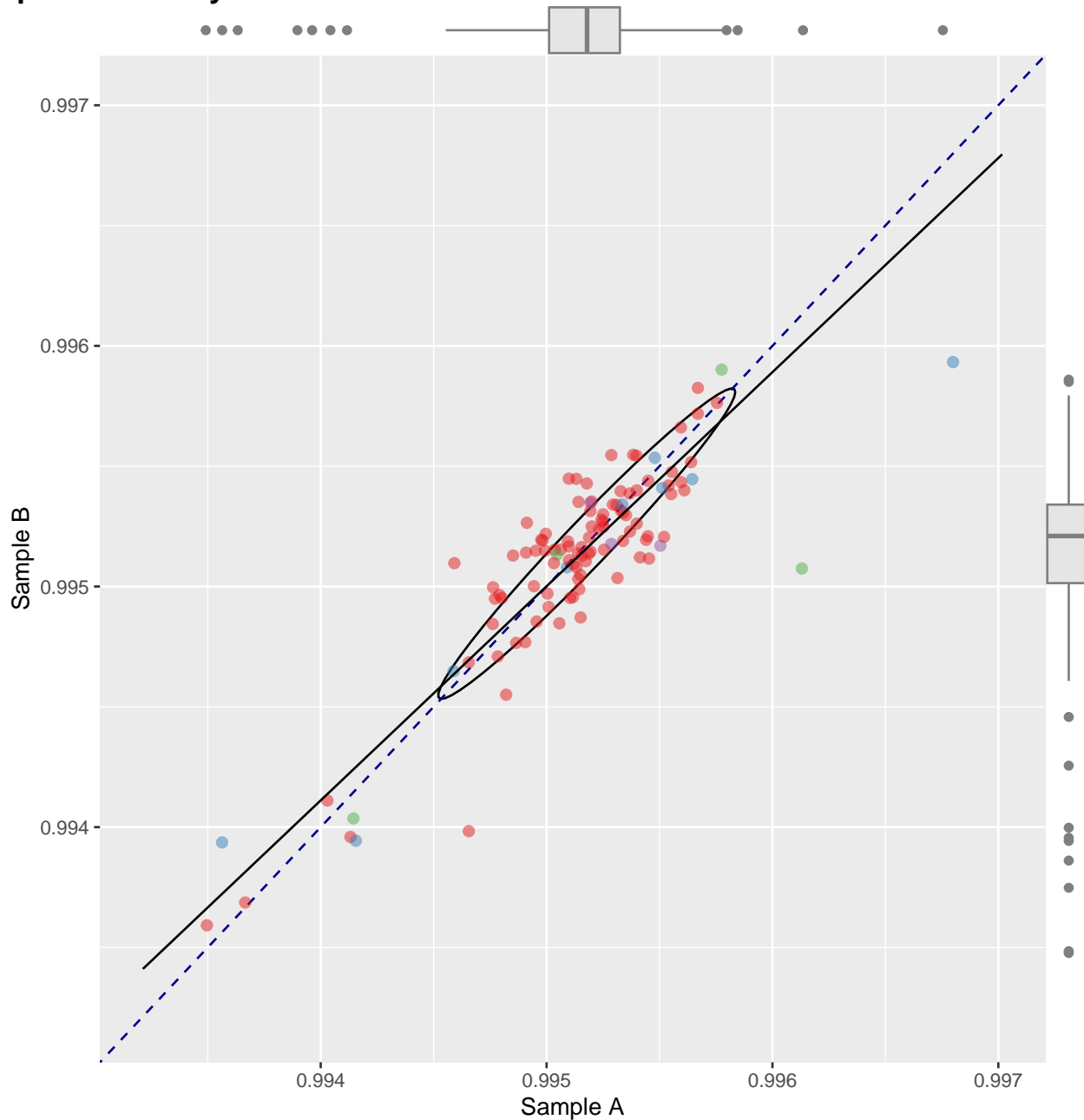
Alcohol (%v/v)



Sample	A	B
No of cases	153	153
Minimum	13.50	13.50
Maximum	14.00	14.00
Range	0.50	0.50
Median	13.79	13.79
Mean	13.78	13.78
95% CI Upper	13.79	13.79
95% CI Lower	13.76	13.76
Standard Deviation	0.09	0.09
Coefficient of Variation	0.64%	0.69%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Distillation – Density Meter	5
Ebulliometer	4
FTIR–MIR	28
NIR	111
Other	5

Specific Gravity

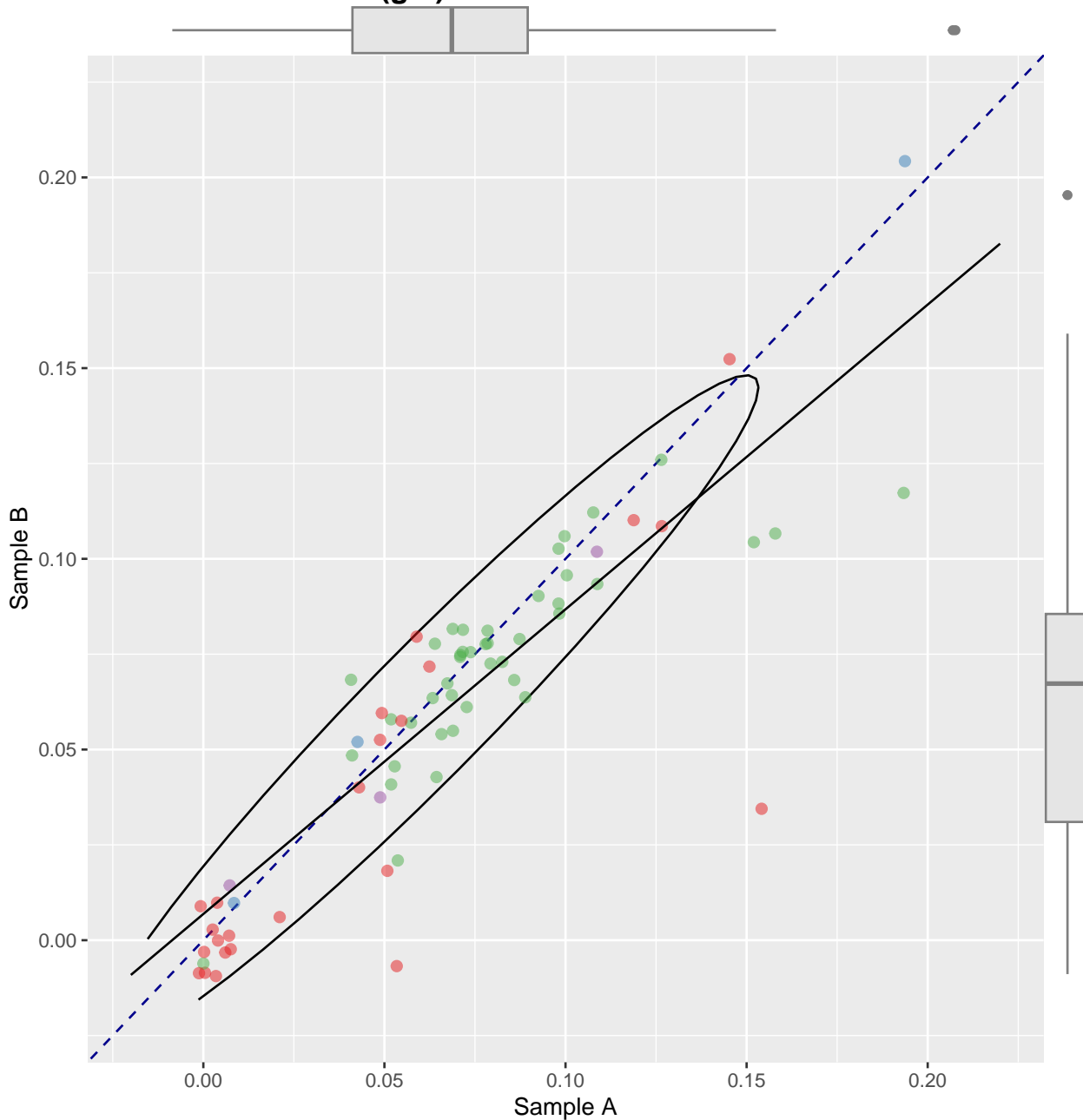


Method ● Density Meter ● FTIR-MIR ● Hydrometry ● Other

Sample	A	B
No of cases	110	110
Minimum	0.9936	0.9935
Maximum	0.9967	0.9959
Range	0.0031	0.0023
Median	0.9952	0.9952
Mean	0.9951	0.9951
95% CI Upper	0.9952	0.9952
95% CI Lower	0.9950	0.9950
Standard Deviation	0.0004	0.0004
Coefficient of Variation	0.04%	0.04%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Density Meter	94
FTIR-MIR	9
Hydrometry	4
Other	3

Dissolved Carbon Dioxide (g/L)



Method ● Carbodoseur ● FTIR-MIR ● Multiple Volume Expansion ● Other

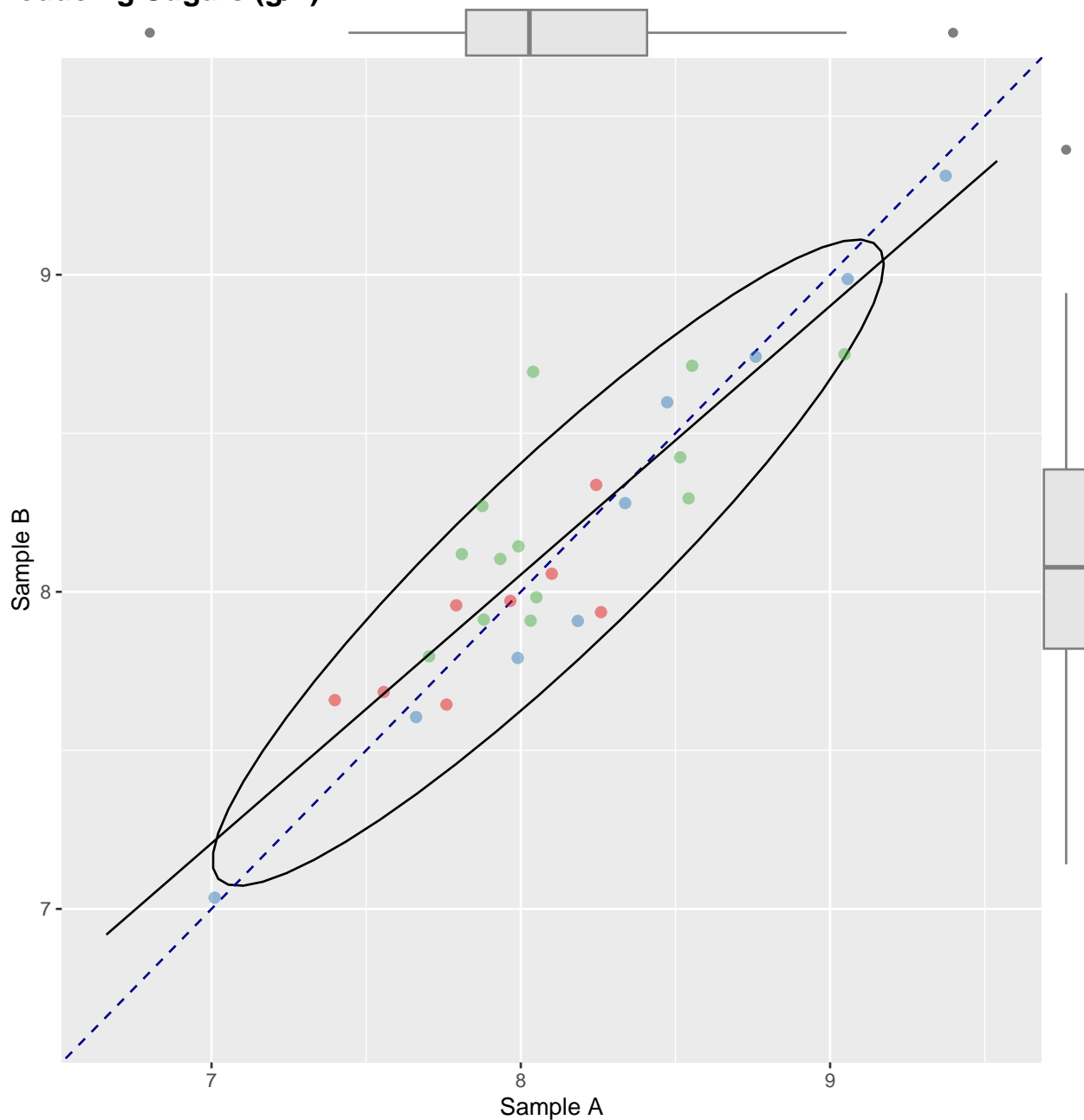
Sample	A	B
No of cases	72	72
Minimum	0.00	0.00
Maximum	0.20	0.20
Range	0.20	0.20
Median	0.07	0.06
Mean	0.07	0.06
95% CI Upper	0.08	0.07
95% CI Lower	0.06	0.05
Standard Deviation	0.05	0.04
Coefficient of Variation		
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Carbodoseur	24
FTIR-MIR	3
Multiple Volume Expansion	42
Other	3

Dissolved Carbon Dioxide Z-Scores

Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B
3	1.8	1.0	244	-0.4	-0.2												
9	0.1	0.2	245	0.3	0.5												
19	1.4	1.4	270	2.9	3.4												
20	-1.2	-1.2	273	0.1	0.2												
31	-0.4	-1.5	278	-1.4	-1.5												
36	-1.4	-1.5	281	-0.4	-0.5												
43	-1.4	-1.5	284	0.3	0.5												
49	-1.4	-1.5	285	-0.1	0.0												
53	0.1	0.2	286	-0.1	-1.0												
55	0.1	-0.2	287	0.1	0.2												
59	-0.1	0.0	293	-1.4	-1.5												
63	0.3	0.5	295	0.9	1.2												
74	0.0	0.2	315	0.2	0.4												
88	-0.4	-0.2	318	1.4	1.0												
99	0.1	0.0	346	1.8	1.0												
103	-0.1	0.2	364	-1.4	-1.5												
105	0.3	0.5	365	-0.5	-1.0												
107	0.3	0.4	378	-1.4	-1.5												
108	0.3	0.0	380	1.8	2.2												
116	0.5	0.7	408	0.7	1.0												
118	-1.4	-1.5	417	-1.4	-1.5												
126	0.2	0.4	425	-0.1	0.0												
129	0.7	1.0	426	0.3	0.0												
131	0.7	1.0	437	-0.3	-0.1												
132	0.9	1.2	445	0.7	0.7												
169	-0.4	-0.2	460	2.9	1.4												
179	-0.4	0.2	464	0.0	0.1												
182	0.3	0.2	468	0.0	0.2												
183	0.3	0.5	471	-0.4	0.0												
189	-0.4	-0.2	475	-0.7	-0.1												
198	-0.1	-0.2	479	-1.4	-1.5												
199	0.1	0.2	489	-1.1	-1.1												
201	-0.4	0.0															Outliers
205	-1.4	-1.5															208 3.7 4.3
212	1.1	1.4															220 22.3 25.3
214	0.7	1.2															296 105.7 119.3
216	-1.4	-1.5															320 187.0 223.1
225	0.5	0.7															438 10.3 10.6
233	1.8	-0.5															474 3.8 4.5
236	-1.4	-1.5															481 3.7 4.1
																	500 6.1 7.0

Reducing Sugars (g/L)

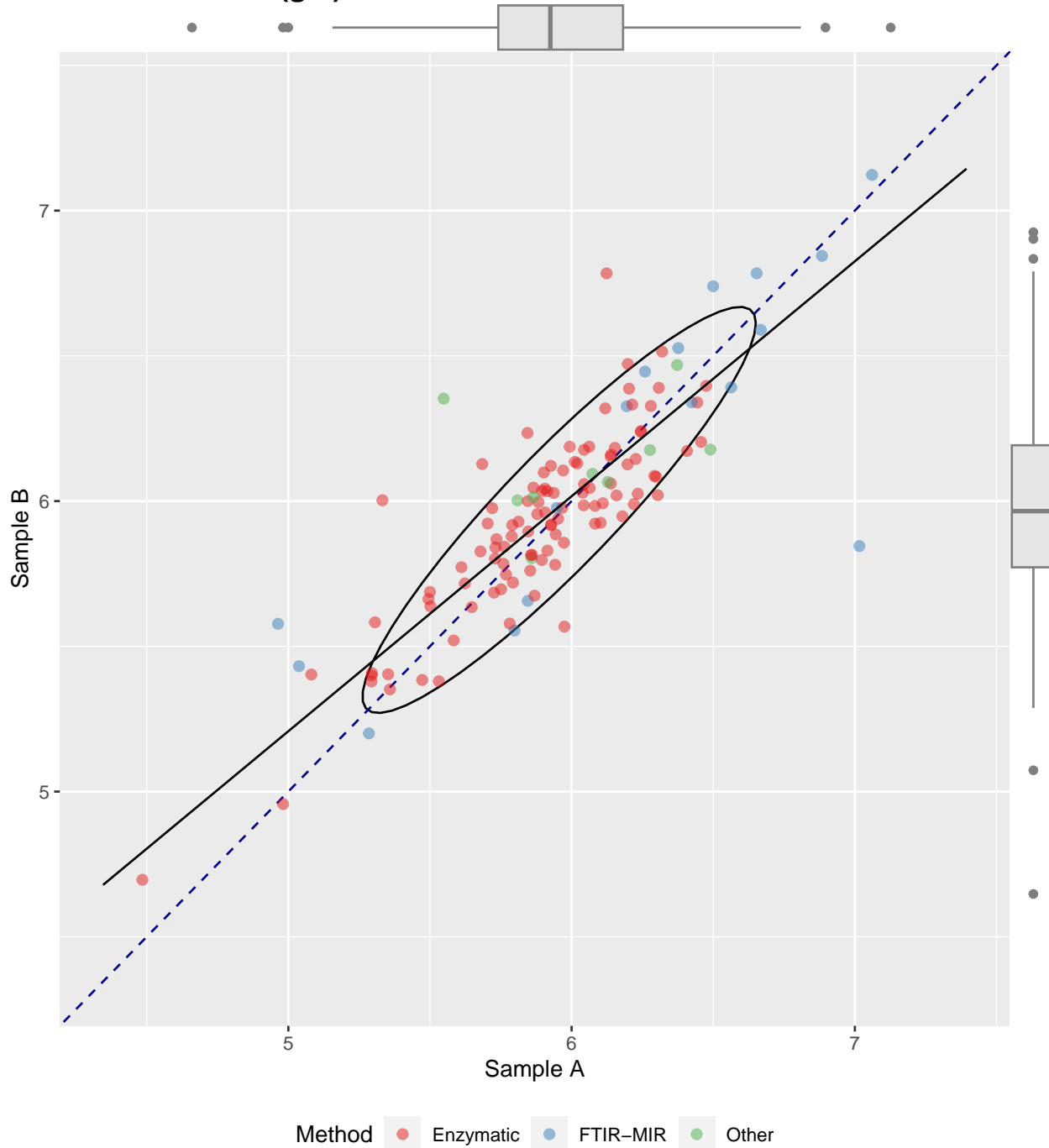


Method ● Lane & Eynon ● Other ● Rebelein

Sample	A	B
No of cases	30	30
Minimum	6.90	7.05
Maximum	9.30	9.30
Range	2.40	2.25
Median	8.05	8.08
Mean	8.11	8.15
95% CI Upper	8.29	8.32
95% CI Lower	7.93	7.98
Standard Deviation	0.50	0.48
Coefficient of Variation	6.19%	5.83%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Lane & Eynon	8
Other	9
Rebelein	13

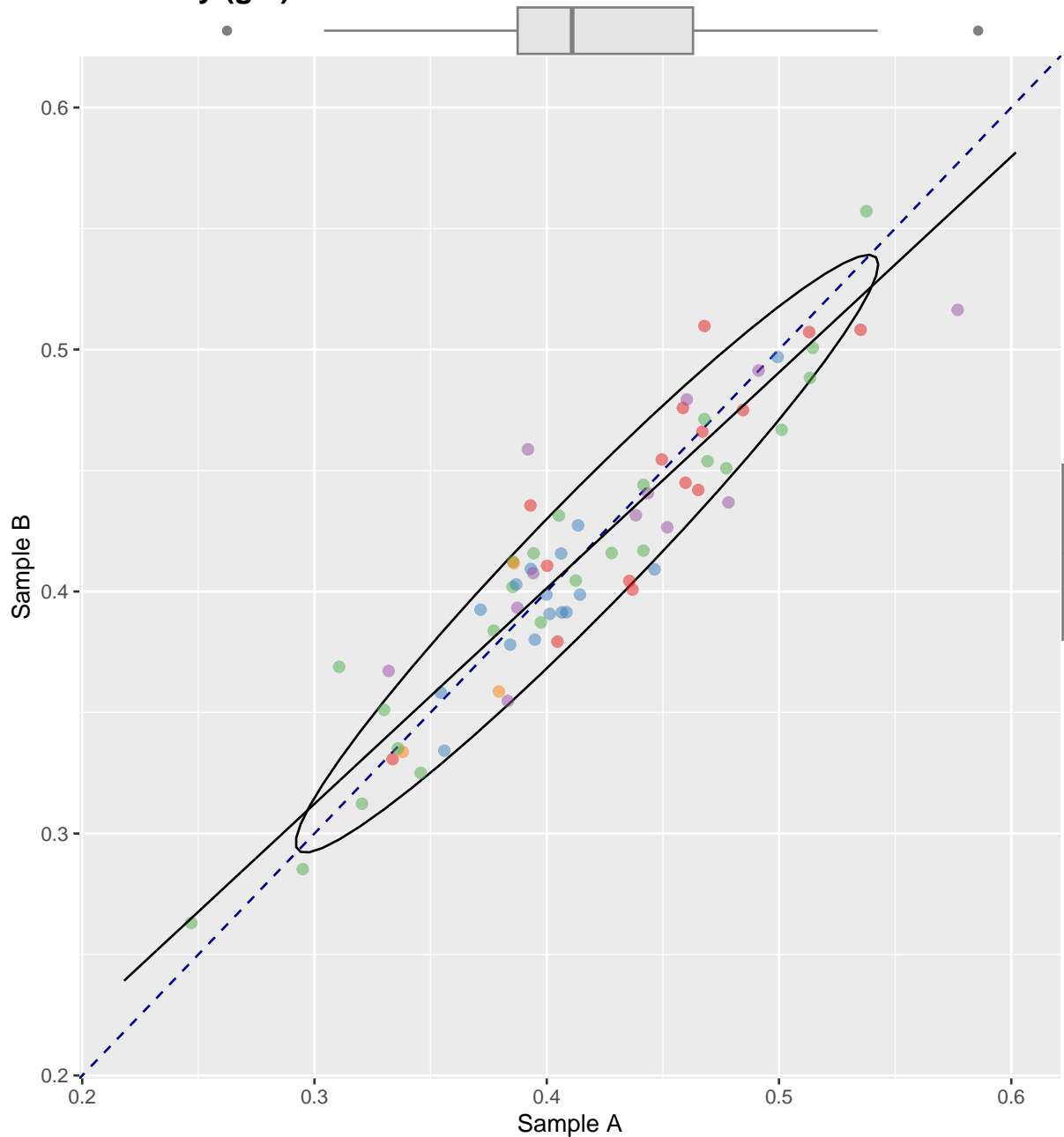
Glucose + Fructose (g/L)



Sample	A	B
No of cases	130	130
Minimum	4.60	4.64
Maximum	7.14	7.00
Range	2.54	2.36
Median	5.93	5.99
Mean	5.94	5.97
95% CI Upper	6.01	6.03
95% CI Lower	5.88	5.91
Standard Deviation	0.38	0.36
Coefficient of Variation	6.35%	6.08%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Enzymatic	104
FTIR-MIR	17
Other	9

Volatile Acidity (g/L)

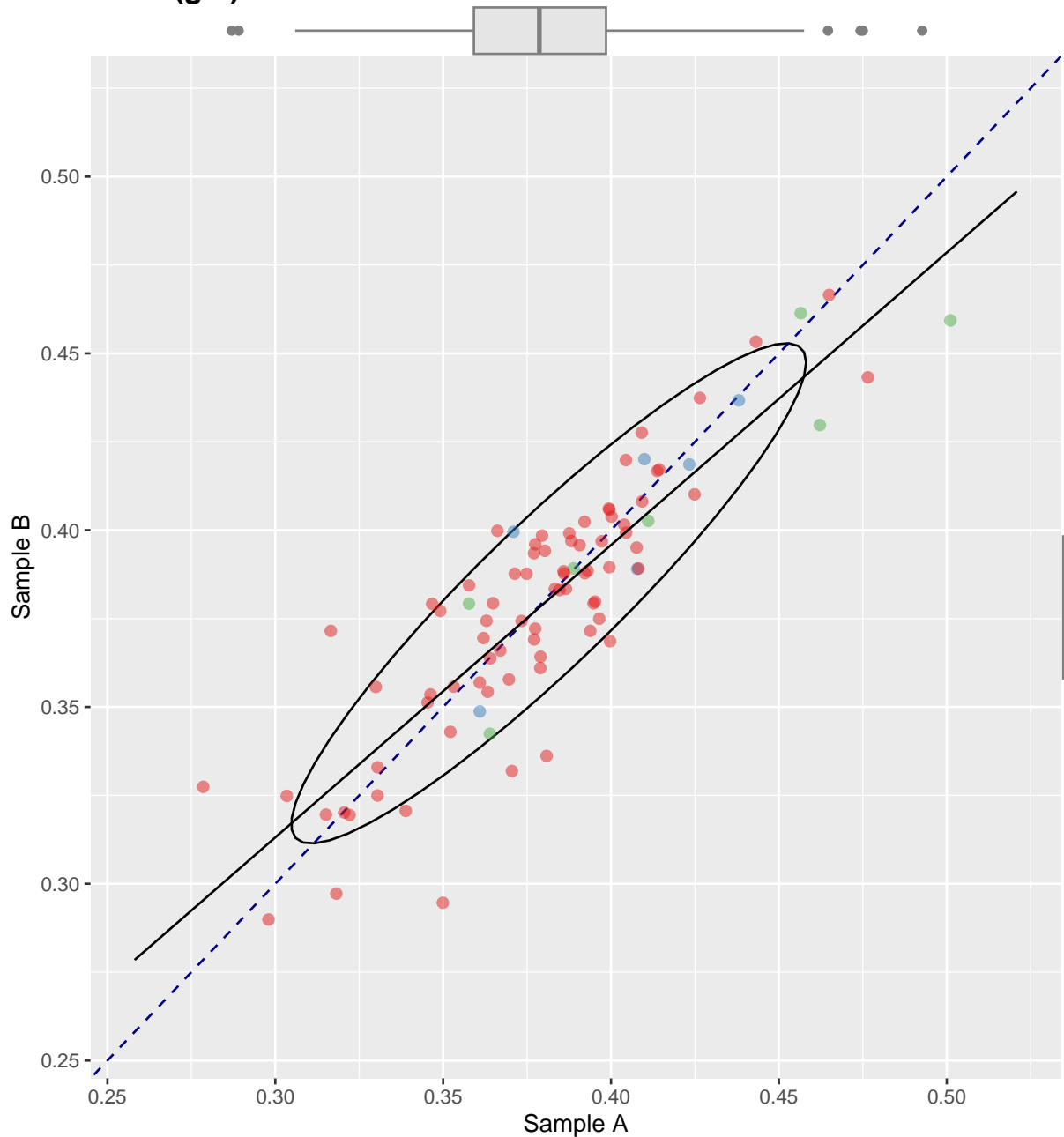


Sample	A	B
No of cases	70	70
Minimum	0.25	0.27
Maximum	0.57	0.55
Range	0.32	0.28
Median	0.41	0.41
Mean	0.42	0.42
95% CI Upper	0.43	0.43
95% CI Lower	0.40	0.40
Standard Deviation	0.06	0.06
Coefficient of Variation	14.67%	13.82%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Automated Steam Distillation	15
Enzymatic	16
FTIR-MIR	24
Manual Steam Distillation	12
Other	3

Method ● Automated Steam Distillation ● Enzymatic ● FTIR-MIR ● Manual Steam Distillation ● Other

Acetic Acid (g/L)

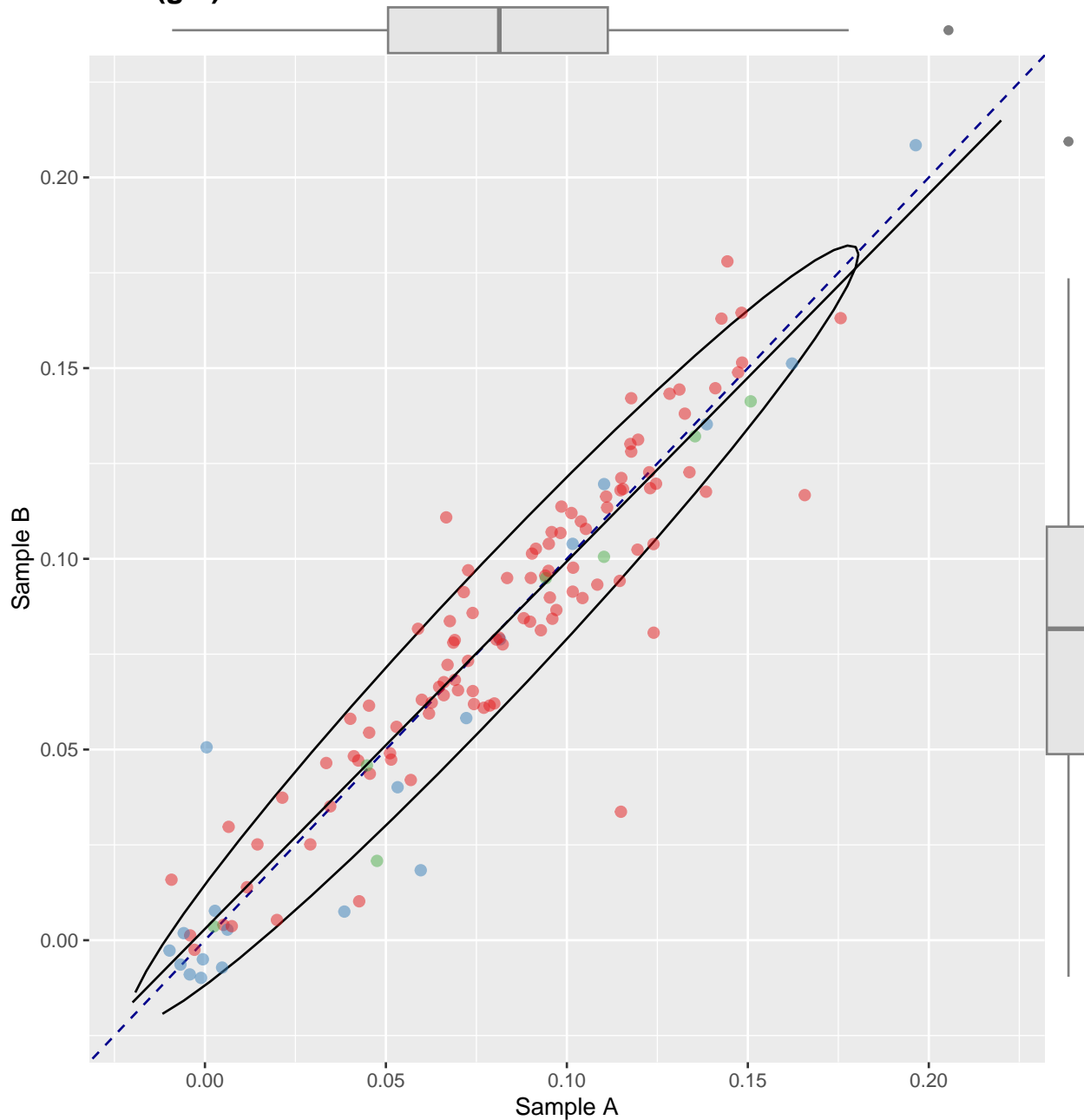


Sample	A	B
No of cases	90	90
Minimum	0.28	0.29
Maximum	0.50	0.46
Range	0.22	0.17
Median	0.38	0.38
Mean	0.38	0.38
95% CI Upper	0.39	0.39
95% CI Lower	0.37	0.37
Standard Deviation	0.04	0.04
Coefficient of Variation	10.33%	9.38%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Enzymatic	77
FTIR-MIR	6
Other	7

Method ● Enzymatic ● FTIR-MIR ● Other

Malic Acid (g/L)



Method ● Enzymatic ● FTIR-MIR ● Other

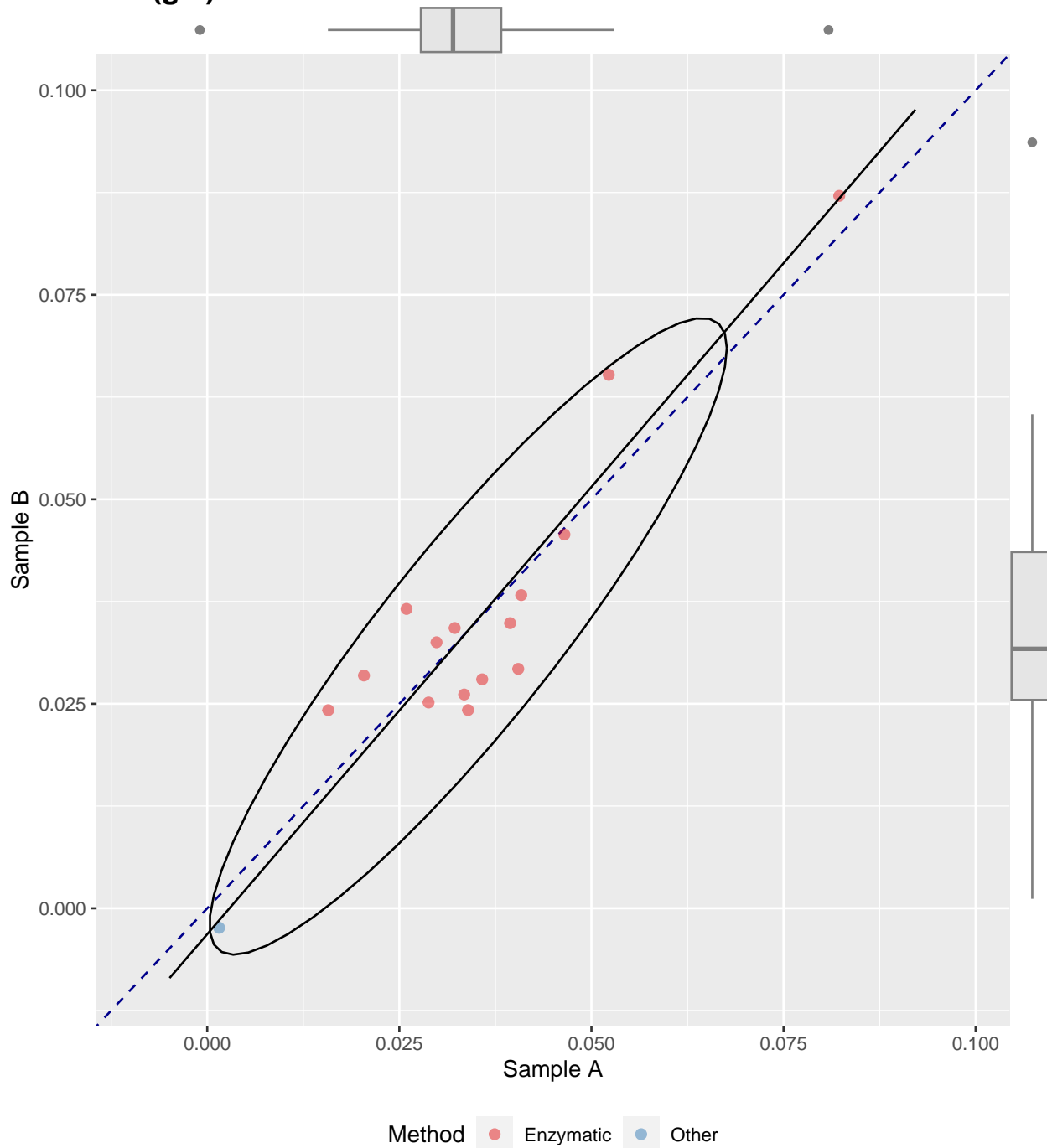
Sample	A	B
No of cases	130	130
Minimum	0.00	0.00
Maximum	0.20	0.20
Range	0.20	0.20
Median	0.08	0.08
Mean	0.08	0.08
95% CI Upper	0.09	0.09
95% CI Lower	0.07	0.07
Standard Deviation	0.05	0.05
Coefficient of Variation		
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Enzymatic	103
FTIR-MIR	20
Other	7

Malic Acid Z-Scores

Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B
1	-1.5	-0.4	132	-1.7	-1.7	281	-1.7	-1.7	464	1.5	1.7						
3	0.5	0.4	138	-0.9	-0.6	284	-0.6	-1.3	468	-0.9	-0.6						
5	1.1	0.7	141	0.0	-0.2	286	0.5	0.4	474	-1.7	-1.7						
9	1.1	1.3	153	1.8	0.7	289	2.0	2.0	479	-0.4	-0.6						
10	1.1	1.1	157	0.9	1.3	293	-0.6	-0.6	481	-0.6	-1.3						
14	-0.9	-0.8	167	-0.5	0.5	295	-0.2	-0.2	483	0.5	0.4						
19	2.6	2.6	171	-1.1	-1.1	296	-0.4	-0.4	484	1.5	1.7						
20	0.0	-0.2	173	-0.4	0.0	308	0.9	0.9	486	1.8	1.7						
29	0.5	0.4	177	-0.6	-0.6	309	1.1	1.3	489	0.2	0.4						
31	0.9	0.2	179	0.5	0.4	313	0.0	0.0	499	-1.1	-1.1						
36	-0.2	-0.2	183	0.9	0.9	318	-0.2	0.2									
43	-0.9	-0.8	188	0.0	0.2	320	-0.6	-0.6									
45	0.7	0.9	189	0.0	0.2	321	-0.4	-0.4									
49	0.5	0.7	192	-0.4	-0.4	323	-1.7	-1.7									
51	-1.7	-1.1	198	-0.4	-0.2	326	0.9	0.9									
53	0.2	0.2	199	-0.2	-0.2	332	0.9	1.1									
59	-0.6	-0.2	201	0.2	0.7	340	-0.2	-0.2									
61	-1.7	-1.7	204	-0.2	-0.2	346	-0.9	-1.1									
63	1.3	2.0	205	0.7	-1.0	358	-1.7	-1.7									
64	0.8	1.0	208	0.9	1.1	366	0.3	0.5									
66	-1.3	-1.3	210	0.2	0.0	378	1.3	1.3									
74	-0.6	-0.6	212	0.9	0.9	380	0.9	0.9									
78	-0.6	-0.4	215	0.2	0.2	382	0.9	0.7									
79	0.5	0.4	216	0.0	0.0	393	-0.9	-0.8									
84	-0.4	-0.4	220	1.8	1.5	396	0.1	0.0									
88	-1.5	-1.5	223	-1.7	-1.7	398	0.5	0.4									
90	1.3	1.3	225	-1.5	-1.5	399	0.5	0.2									
93	-1.7	-1.7	226	1.5	1.5	404	-1.3	-1.3									
96	-0.2	-0.2	233	0.0	-0.2	406	0.5	0.4									
99	0.9	0.9	236	1.3	1.3	426	0.0	-0.6									
103	-0.6	-0.4	238	1.3	1.3	431	-1.7	-1.7									
105	0.0	0.0	245	0.2	0.2	437	1.1	0.9									
107	0.2	0.0	247	-0.9	-1.7	438	0.7	0.7									
108	0.9	0.7	250	1.6	2.2	442	-0.6	-0.6									
116	-0.4	-0.4	261	0.5	0.2	444	-1.7	-1.7									
118	-1.7	-1.7	266	0.2	0.0	445	0.9	0.7									
122	0.7	0.4	267	0.5	0.4	447	0.4	0.4									
126	-0.2	-0.2	273	0.4	0.6	455	-1.7	-1.7							Outliers		
129	0.5	0.4	278	-1.7	-1.7	458	-0.2	-0.4							214	2.4	3.7
131	0.5	0.4	279	-1.7	-1.3	461	0.2	0.2							428	7.6	8.0

Citric Acid (g/L)



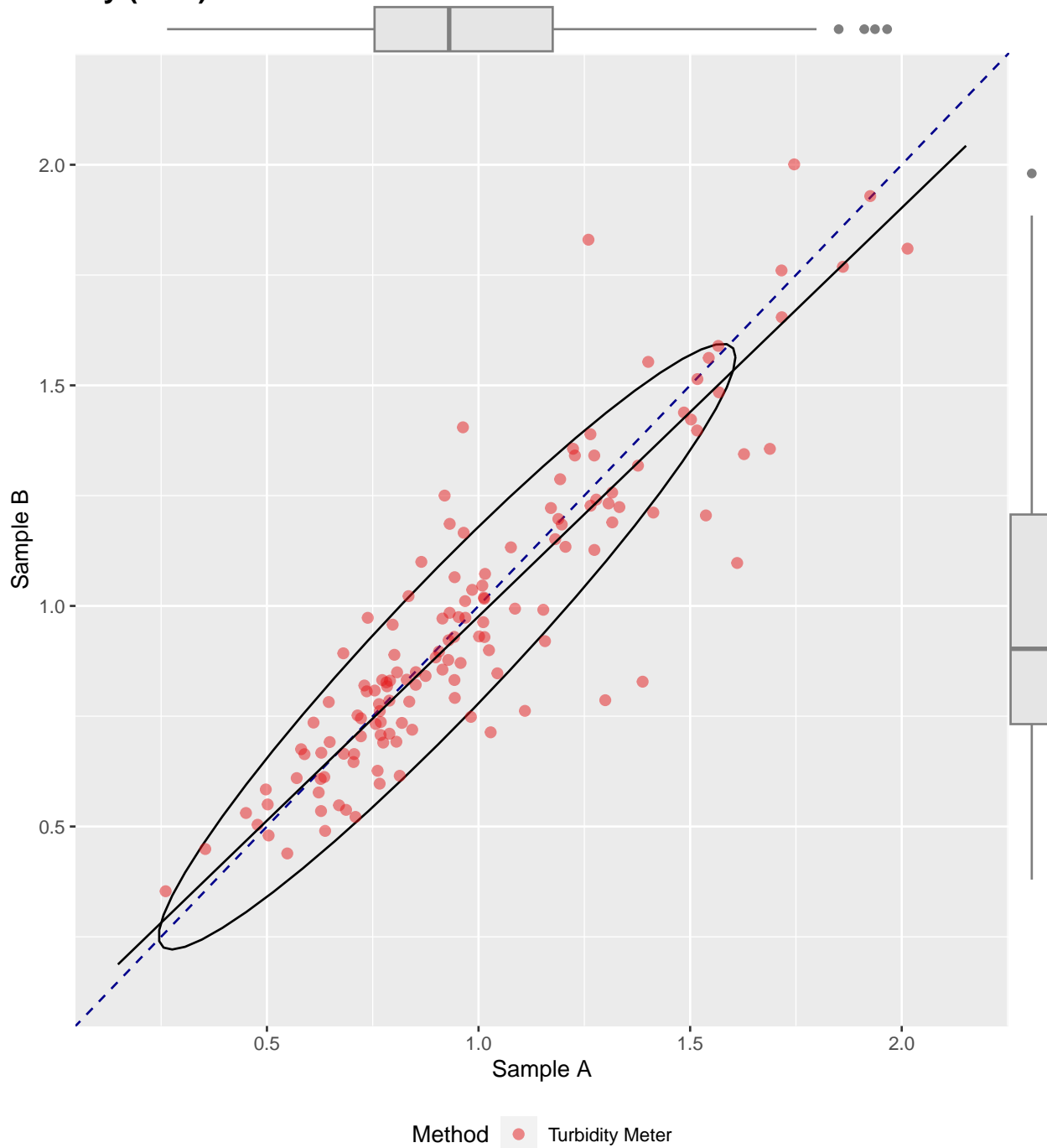
Sample	A	B
No of cases	16	16
Minimum	0.00	0.00
Maximum	0.08	0.09
Range	0.08	0.09
Median	0.03	0.03
Mean	0.04	0.04
95% CI Upper	0.04	0.05
95% CI Lower	0.03	0.03
Standard Deviation	0.02	0.02
Coefficient of Variation	49.11%	56.98%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Enzymatic	15
Other	1

Citric Acid Z-Scores

Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B
14	-0.9	-0.8															
39	-0.3	-0.6															
66	0.3	-0.3															
79	-0.3	0.2															
84	-0.3	-0.8															
90	0.3	-0.3															
108	2.6	2.7															
129	-0.3	-0.3															
132	-2.0	-1.8															
167	1.1	1.4															
218	0.0	0.0															
273	-0.1	-0.3															
295	-0.2	-0.1															
308	-0.9	-0.3															
332	0.3	0.2															
404	0.9	0.7															

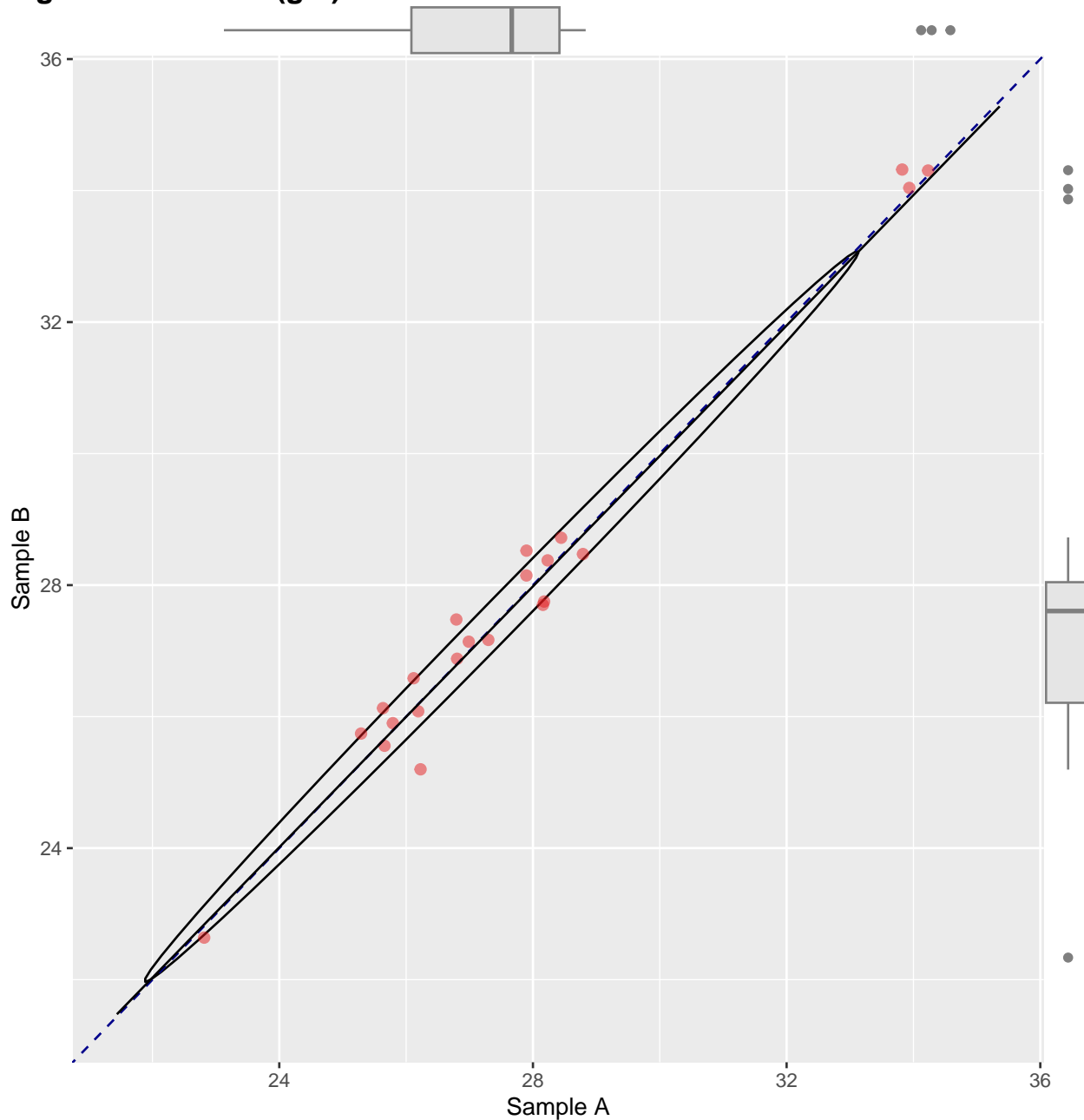
Turbidity (NTU)



Sample	A	B
No of cases	138	138
Minimum	0.32	0.32
Maximum	1.99	1.96
Range	1.66	1.65
Median	0.92	0.88
Mean	0.99	0.96
95% CI Upper	1.04	1.02
95% CI Lower	0.93	0.91
Standard Deviation	0.34	0.34
Coefficient of Variation	33.97%	34.80%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Turbidity Meter	138

Sugar Free Extract (g/L)

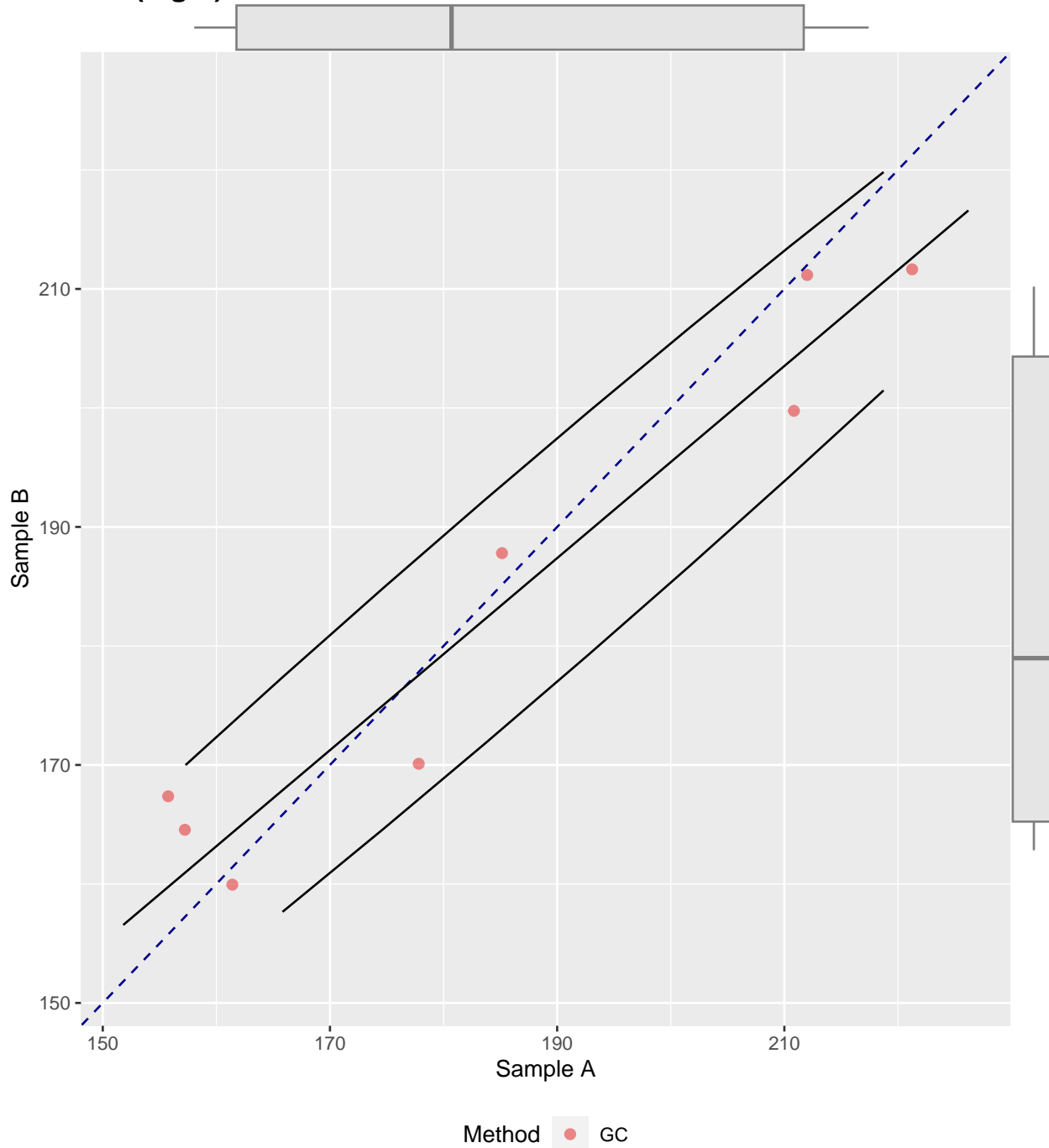


Method ● Calculation

Sample	A	B
No of cases	22	22
Minimum	22.6	22.8
Maximum	34.1	34.2
Range	11.5	11.4
Median	27.3	27.4
Mean	27.9	27.8
95% CI Upper	29.1	29.0
95% CI Lower	26.7	26.7
Standard Deviation	2.9	2.8
Coefficient of Variation	10.25%	10.21%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Calculation	22

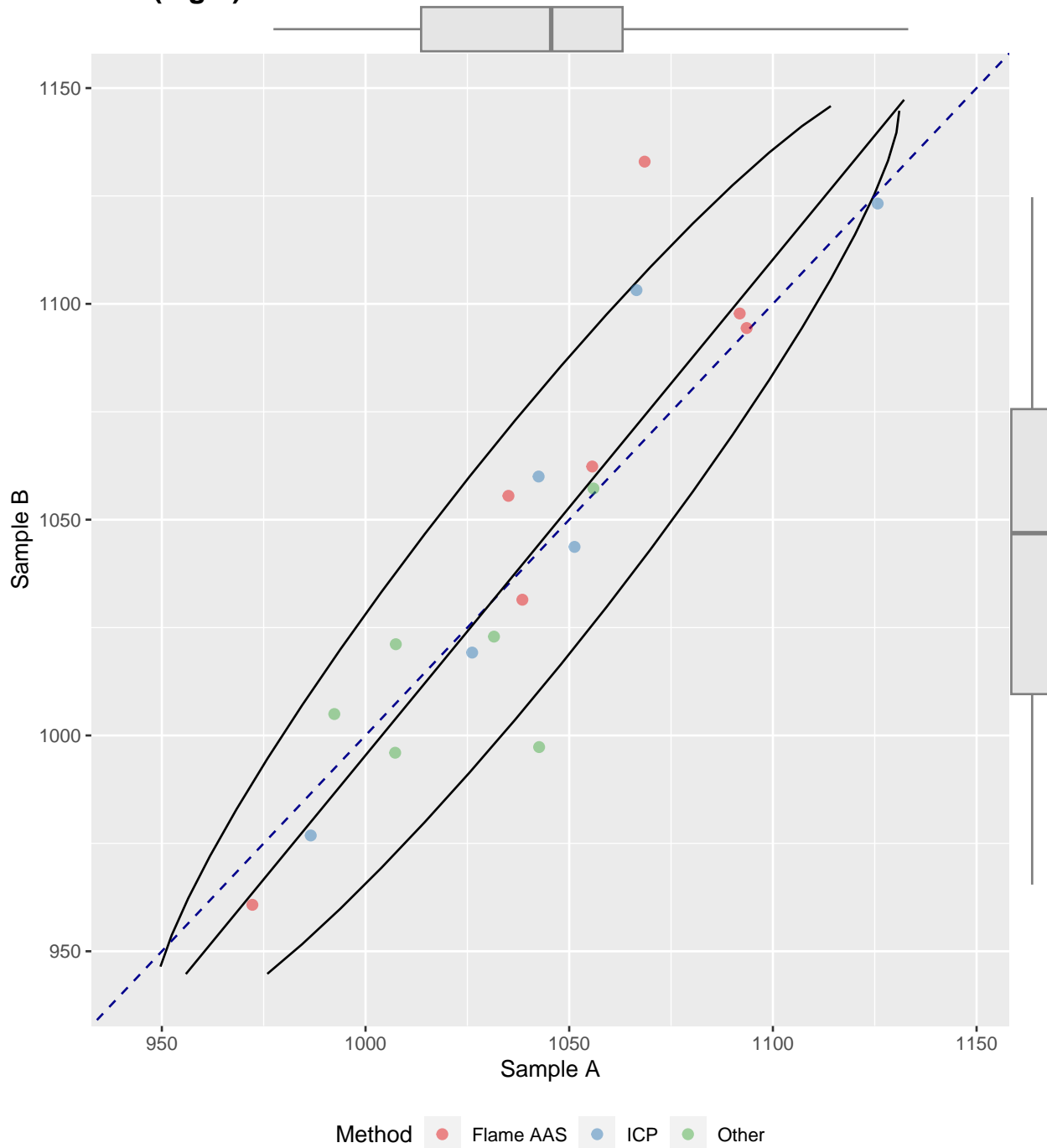
Methanol (mg/L)



Sample	A	B
No of cases	8	8
Minimum	158.0	160.0
Maximum	220.0	210.0
Range	62.0	50.0
Median	181.2	179.8
Mean	185.4	183.7
95% CI Upper	203.4	198.4
95% CI Lower	167.5	169.0
Standard Deviation	25.9	21.2
Coefficient of Variation	13.95%	11.54%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
GC	8

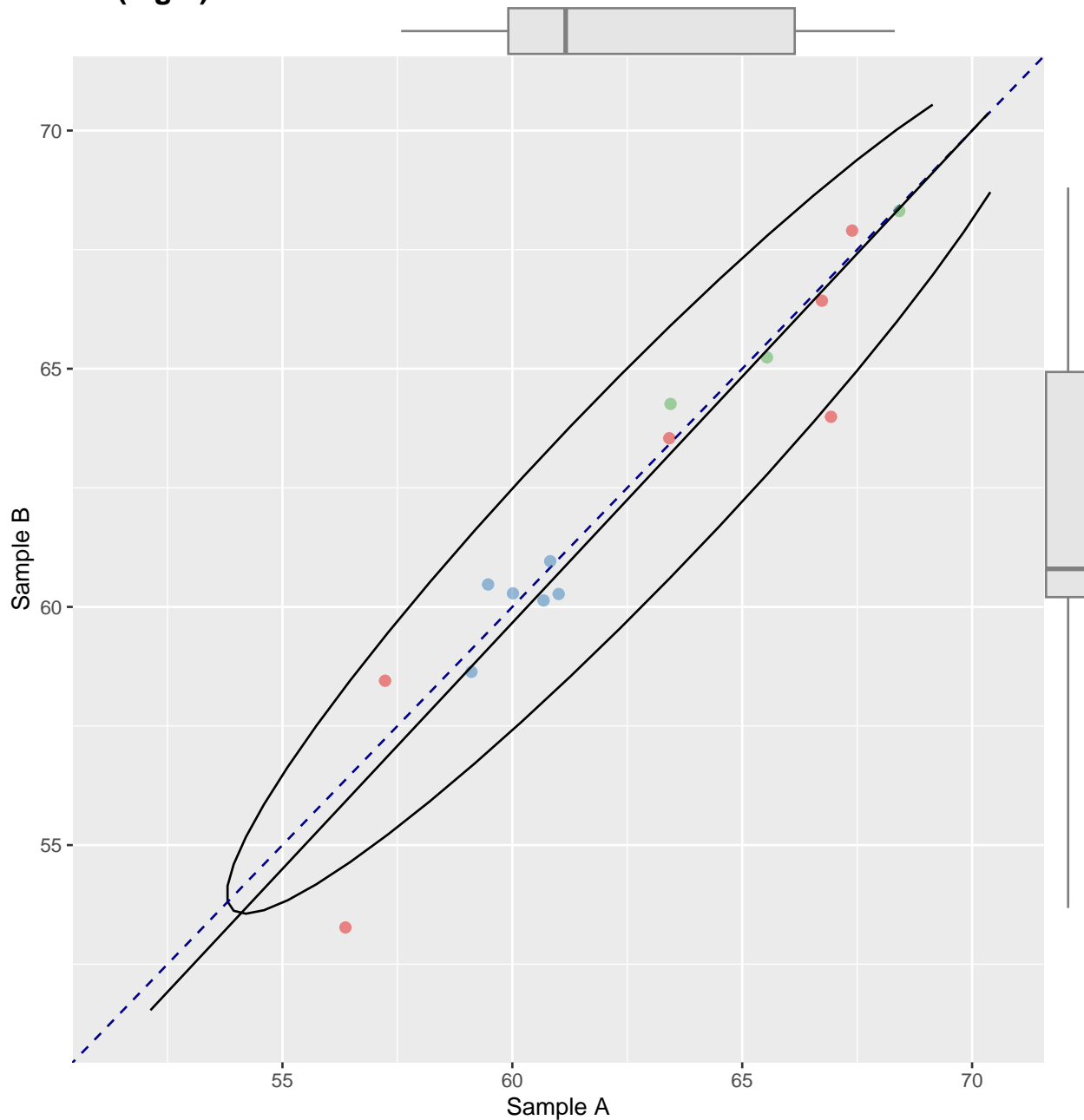
Potassium (mg/L)



Sample	A	B
No of cases	19	19
Minimum	978	960
Maximum	1130	1131
Range	152	171
Median	1047	1044
Mean	1044	1045
95% CI Upper	1061	1067
95% CI Lower	1026	1023
Standard Deviation	39	49
Coefficient of Variation	3.73%	4.67%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Flame AAS	7
ICP	6
Other	6

Sodium (mg/L)

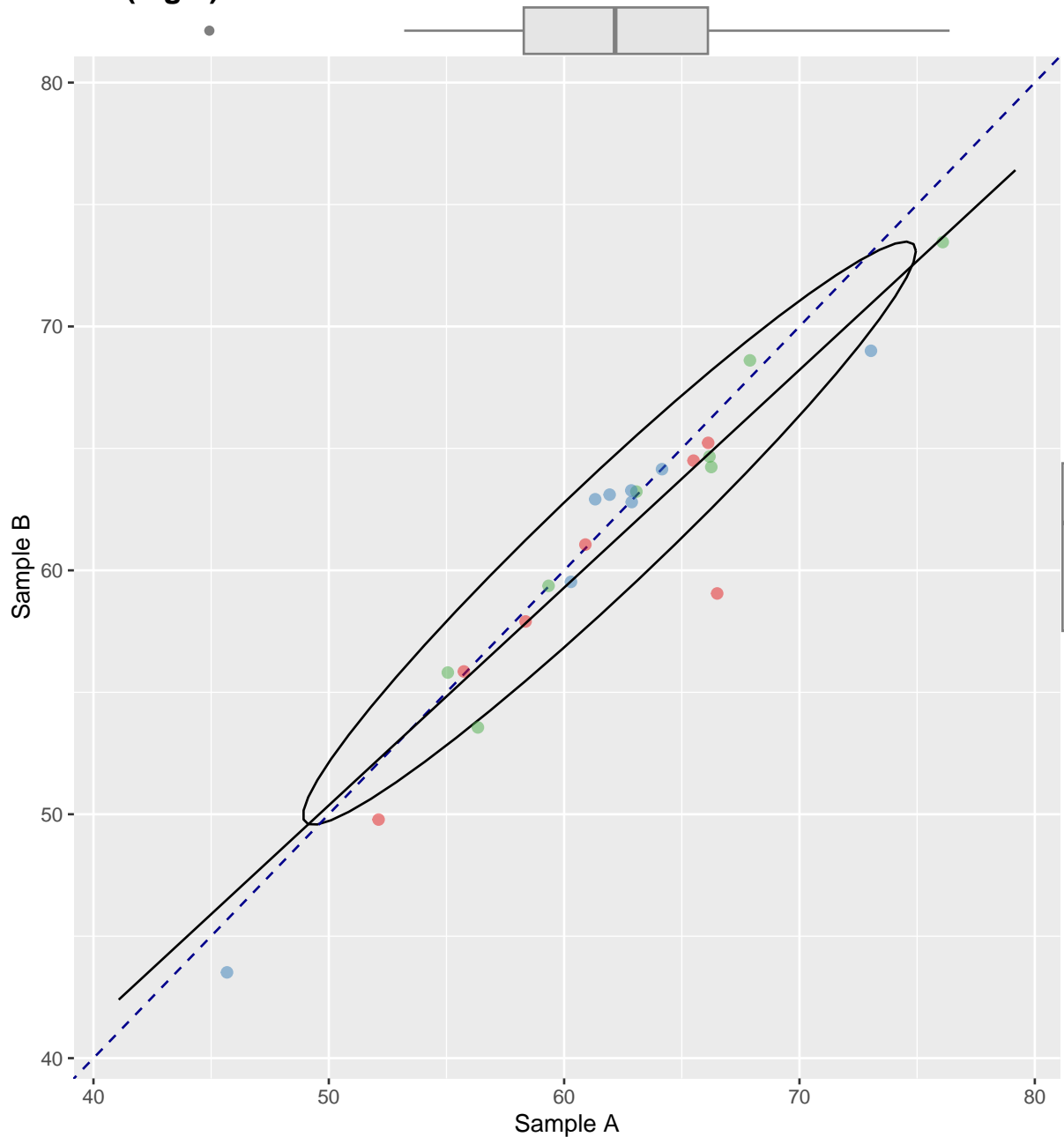


Method ● Flame AAS ● ICP ● Other

Sample	A	B
No of cases	15	15
Minimum	57	53
Maximum	68	69
Range	11	16
Median	61	61
Mean	62	62
95% CI Upper	64	64
95% CI Lower	61	60
Standard Deviation	4	4
Coefficient of Variation	6.03%	6.64%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Flame AAS	6
ICP	6
Other	3

Calcium (mg/L)

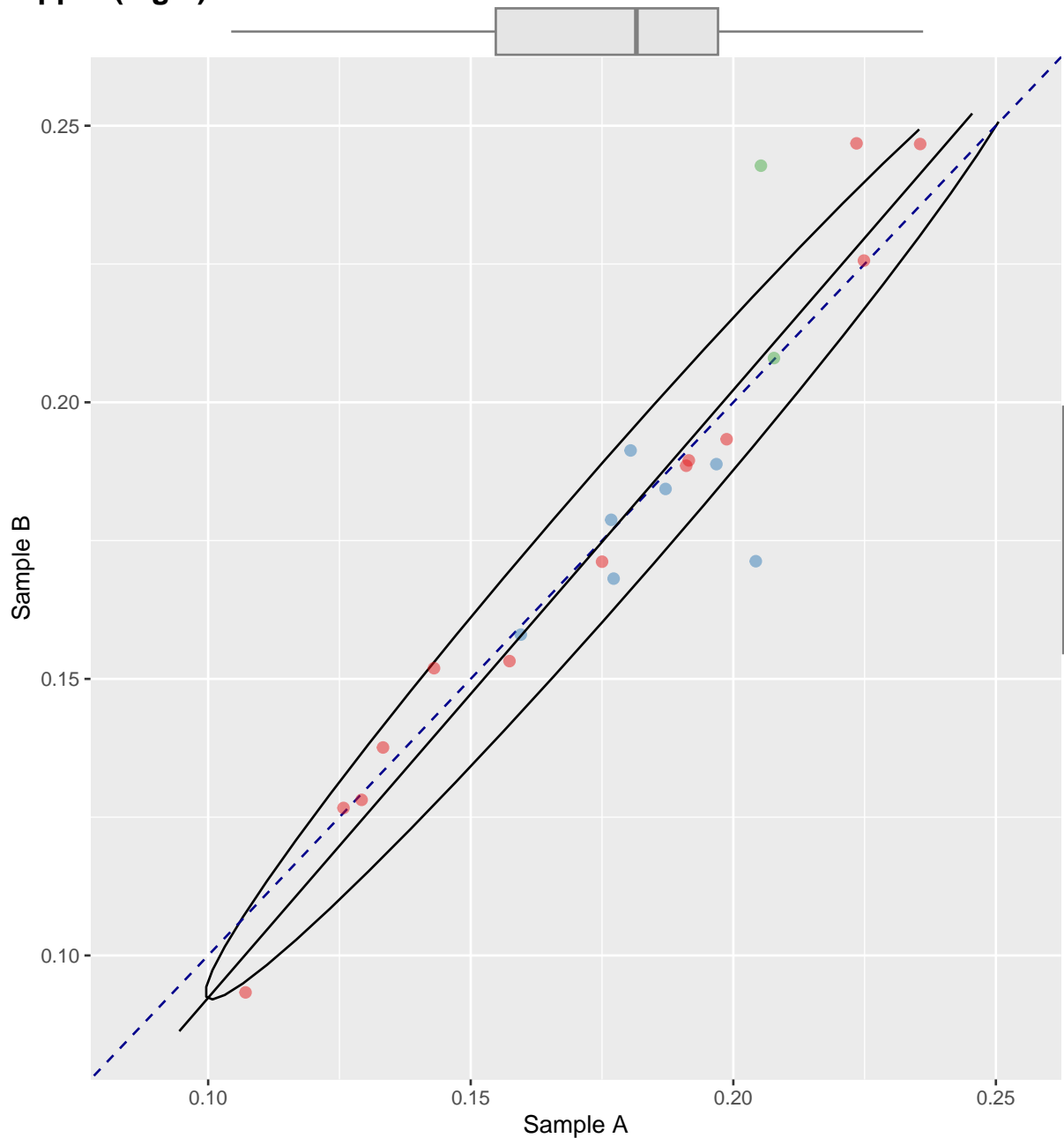


Method ● Flame AAS ● ICP ● Other

Sample	A	B
No of cases	23	23
Minimum	44	44
Maximum	76	72
Range	32	28
Median	62	62
Mean	62	61
95% CI Upper	65	63
95% CI Lower	59	58
Standard Deviation	7	6
Coefficient of Variation	11.03%	10.38%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Flame AAS	7
ICP	8
Other	8

Copper (mg/L)

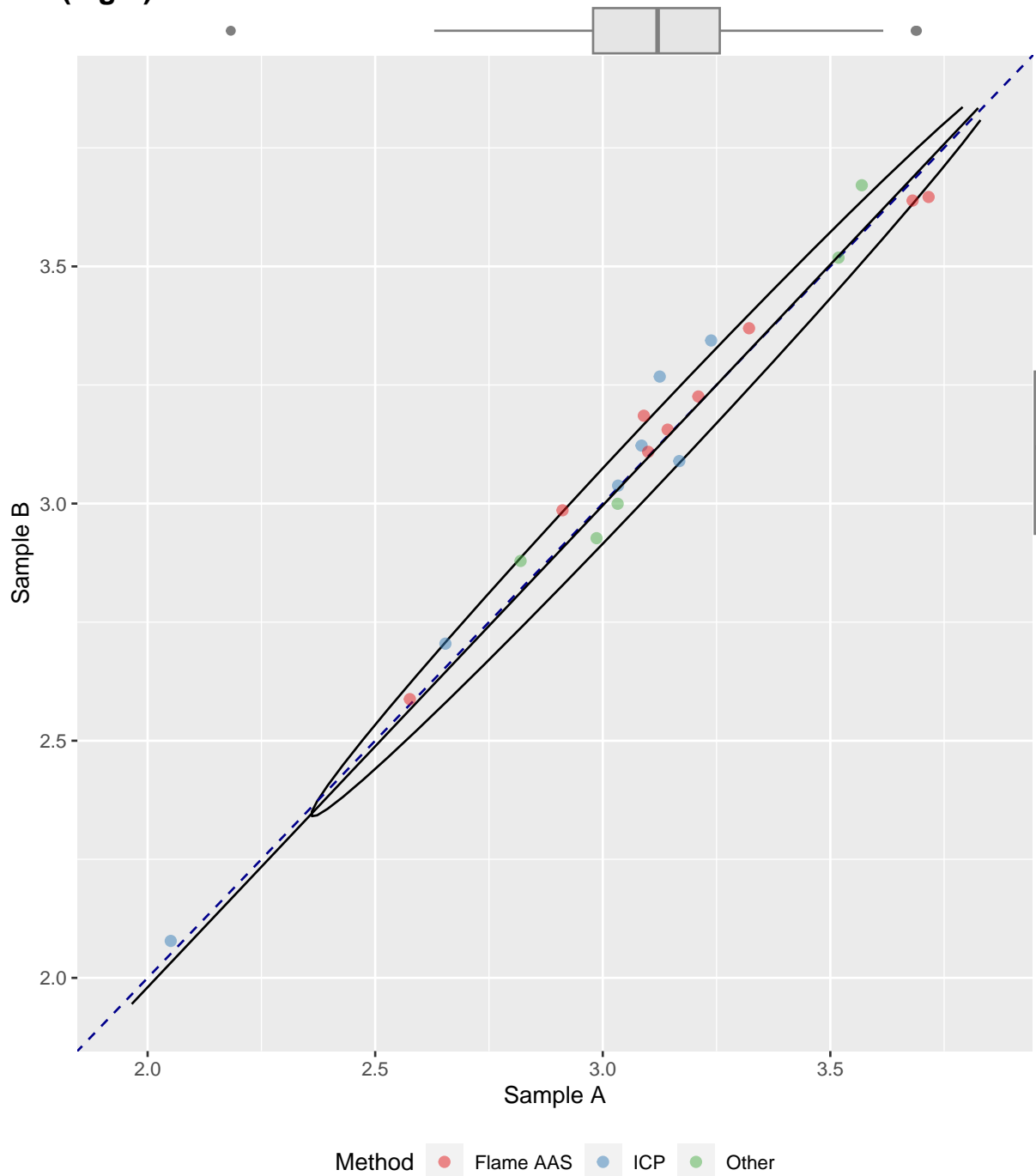


Method ● Flame AAS ● ICP ● Other

Sample	A	B
No of cases	22	22
Minimum	0.11	0.10
Maximum	0.23	0.24
Range	0.12	0.14
Median	0.18	0.18
Mean	0.18	0.18
95% CI Upper	0.19	0.19
95% CI Lower	0.16	0.16
Standard Deviation	0.03	0.04
Coefficient of Variation	18.76%	21.25%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Flame AAS	13
ICP	7
Other	2

Iron (mg/L)



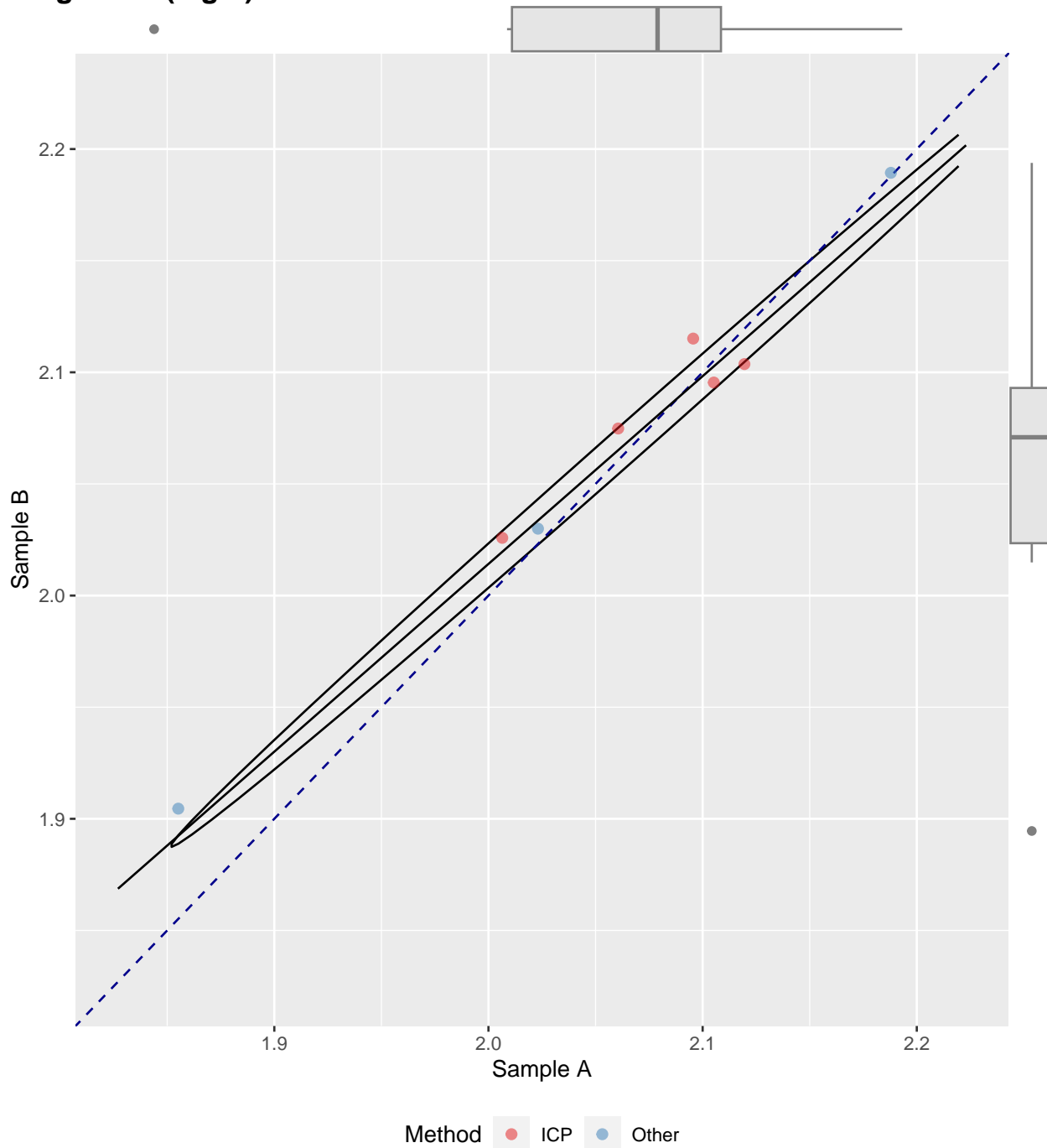
Sample	A	B
No of cases	21	21
Minimum	2.11	2.10
Maximum	3.64	3.69
Range	1.53	1.59
Median	3.15	3.14
Mean	3.12	3.11
95% CI Upper	3.27	3.27
95% CI Lower	2.96	2.96
Standard Deviation	0.36	0.37
Coefficient of Variation	11.55%	11.81%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
Flame AAS	9
ICP	7
Other	5

Iron Z-Scores

Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B	Stats ID	Sample A	Sample B
9	-0.2	-0.2															
20	0.5	0.5															
36	0.2	0.2															
45	0.2	0.2															
59	0.0	0.0															
66	0.5	0.8															
78	-1.4	-1.4															
84	1.5	1.6															
90	-0.3	-0.4															
99	1.0	0.9															
108	1.4	1.4															
126	-0.7	-0.7															
138	0.0	0.0															
167	0.3	0.1															
201	1.5	1.3															
218	0.2	0.2															
278	-0.3	-0.3															
332	-1.2	-1.1															
426	0.1	0.3															
458	-0.5	-0.5															
486	-2.8	-2.8															

Manganese (mg/L)



Sample	A	B
No of cases	8	8
Minimum	1.86	1.90
Maximum	2.19	2.18
Range	0.33	0.28
Median	2.08	2.08
Mean	2.06	2.06
95% CI Upper	2.12	2.12
95% CI Lower	1.99	2.01
Standard Deviation	0.10	0.08
Coefficient of Variation	4.69%	3.94%
Lab Result		
Lab Z-Score Result		
Other Result		

Method	Count
ICP	5
Other	3

END OF REPORT