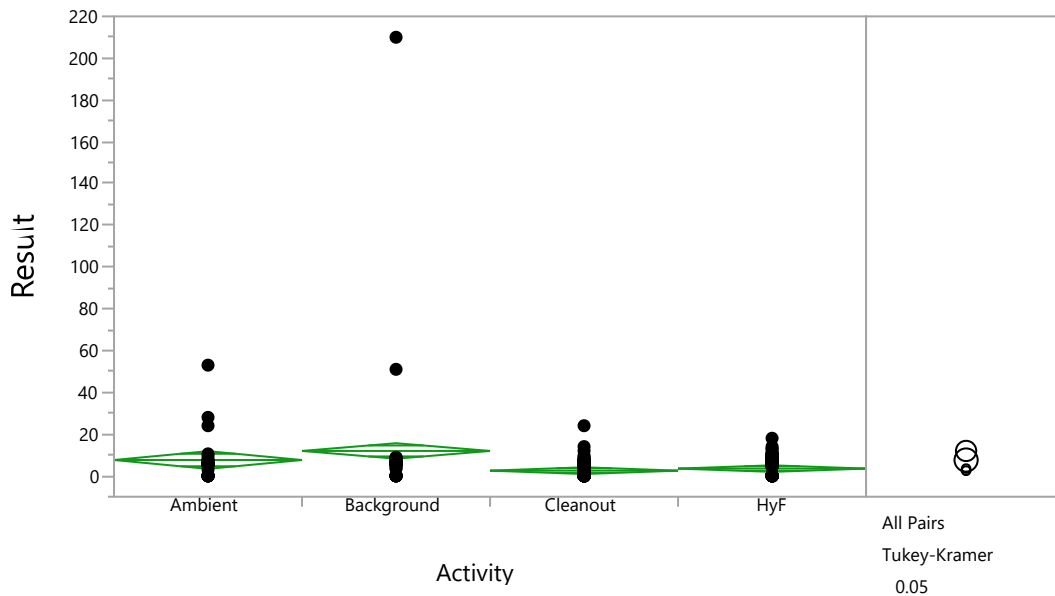


APPENDIX D

Tier 3 (30% - 49% detected) only. Analytes that are significantly different concentration between locations or events identified as ambient, background, cleanout, and HyF. This appendix contains only analytes in Tier #3, which have a percent detection between 30% - 49%, indicative of a predominantly left-censored data set and statistical analysis should be interpreted with caution. This appendix shows the results of comparisons between ambient, background, cleanout, and HyF by Tukey-Kramer HSD test for all pairs and the Wilcoxon paired comparison test.

Oneway Analysis of Result By Activity Analyte (Units)=Acetone TO-15 (ppb v/v)



Missing Rows 160

**Oneway Anova
 Summary of Fit**

Rsquare 0.054071
 Adj Rsquare 0.047394
 Root Mean Square Error 10.99018
 Mean of Response 3.972629
 Observations (or Sum Wgts) 429

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Activity	3	2934.302	978.101	8.0979	<.0001*
Error	425	51333.229	120.784		
C. Total	428	54267.531			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Ambient	26	7.5789	2.1554	3.3424	11.815
Background	34	11.9189	1.8848	8.2143	15.624
Cleanout	180	2.4794	0.8192	0.8693	4.089
HyF	189	3.4692	0.7994	1.8979	5.040

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
HyF	Cleanout	25.7769	10.09599	2.55318	0.0107*	0.00000	0.00000	0.00000
Background	Ambient	0.2376	4.48692	0.05294	0.9578	0.00000	-1.68388	2.00000
HyF	Ambient	-20.3449	12.15917	-1.67322	0.0943	-0.04835	-5.00000	0.00000
HyF	Background	-23.3029	11.31519	-2.05944	0.0395*	-0.54835	-3.90000	0.00000
Cleanout	Ambient	-35.7419	11.33470	-3.15331	0.0016*	-1.86699	-5.10000	0.00000
Cleanout	Background	-41.5412	10.61628	-3.91297	<.0001*	-3.01942	-5.47262	-0.17262

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
Ambient	26	6864.00	5590.00	264.000	2.244
Background	34	9174.50	7310.00	269.838	2.902
Cleanout	180	34322.0	38700.0	190.678	-3.730
HyF	189	41874.5	40635.0	221.558	1.049

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
21.1847	3	<.0001*

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD Confidence Quantile

q*	Alpha
2.57926	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	Background	Ambient	HyF	Cleanout
Background	-6.8750	-3.0450	3.1692	4.1389
Ambient	-3.0450	-7.8619	-1.8195	-0.8476
HyF	3.1692	-1.8195	-2.9160	-1.9624
Cleanout	4.1389	-0.8476	-1.9624	-2.9880

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
Background A	11.918944

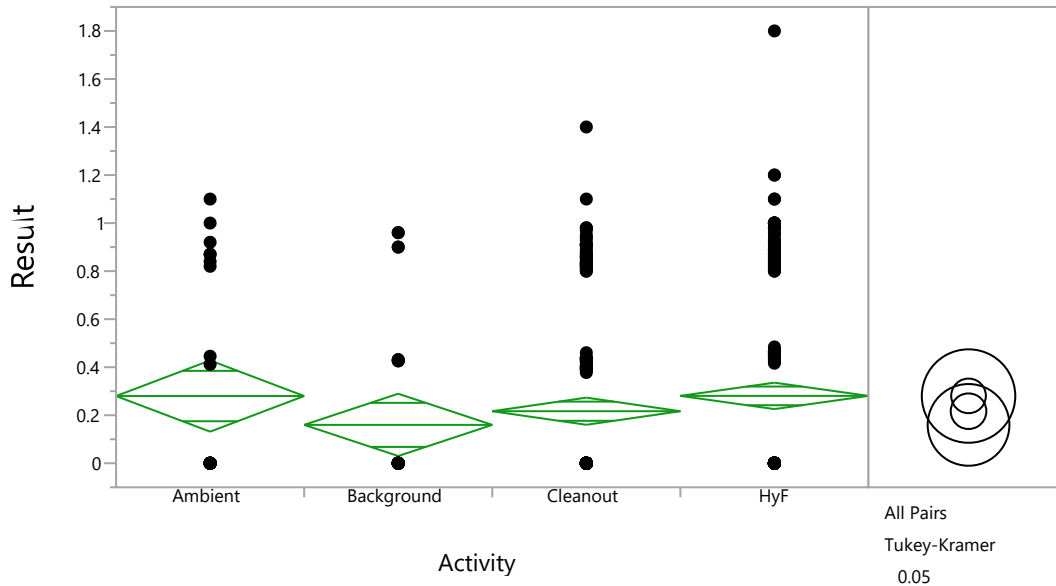
Level		Mean
Ambient	A B	7.578918
HyF	B	3.469178
Cleanout	B	2.479374

Levels not connected by same letter are significantly different.

Ordered Differences Report

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value
Background	Cleanout	9.439571	2.055114	4.13889	14.74025	<.0001*
Background	HyF	8.449766	2.047326	3.16918	13.73035	0.0003*
Ambient	Cleanout	5.099544	2.305767	-0.84763	11.04672	0.1217
Background	Ambient	4.340027	2.863217	-3.04496	11.72501	0.4289
Ambient	HyF	4.109739	2.298828	-1.81954	10.03902	0.2806
HyF	Cleanout	0.989805	1.144592	-1.96240	3.94201	0.8230

Oneway Analysis of Result By Activity Analyte (Units)=Chloromethane (ppb v/v)



Missing Rows 161

Oneway Anova

Summary of Fit

Rsquare	0.010412
Adj Rsquare	0.00341
Root Mean Square Error	0.384737
Mean of Response	0.244251
Observations (or Sum Wgts)	428

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Activity	3	0.660345	0.220115	1.4870	0.2174
Error	424	62.761669	0.148023		
C. Total	427	63.422015			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Ambient	26	0.279890	0.07545	0.13158	0.42820
Background	34	0.159831	0.06598	0.03014	0.28952
Cleanout	179	0.216742	0.02876	0.16022	0.27327
HyF	189	0.280589	0.02799	0.22558	0.33560

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
HyF	Background	15.0089	10.06766	1.49081	0.1360	0	0	0
HyF	Cleanout	14.2551	9.21710	1.54659	0.1220	0	0	0
Cleanout	Background	6.1422	9.19917	0.66769	0.5043	0	0	0
HyF	Ambient	0.2844	11.07058	0.02569	0.9795	0	0	0
Background	Ambient	-3.6991	3.61671	-1.02278	0.3064	0	0	0
Cleanout	Ambient	-7.7745	10.11881	-0.76832	0.4423	0	0	0

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
Ambient	26	5802.00	5577.00	223.154	0.445
Background	34	6629.00	7293.00	194.971	-1.161
Cleanout	179	37083.5	38395.5	207.170	-1.258
HyF	189	42291.5	40540.5	223.765	1.668

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
3.9030	3	0.2721

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD Confidence Quantile

q*	Alpha
2.57929	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	HyF	Ambient	Cleanout	Background
HyF	-0.10208	-0.20687	-0.03965	-0.06410
Ambient	-0.20687	-0.27523	-0.14512	-0.13847
Cleanout	-0.03965	-0.14512	-0.10489	-0.12874
Background	-0.06410	-0.13847	-0.12874	-0.24068

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
HyF	0.28058868

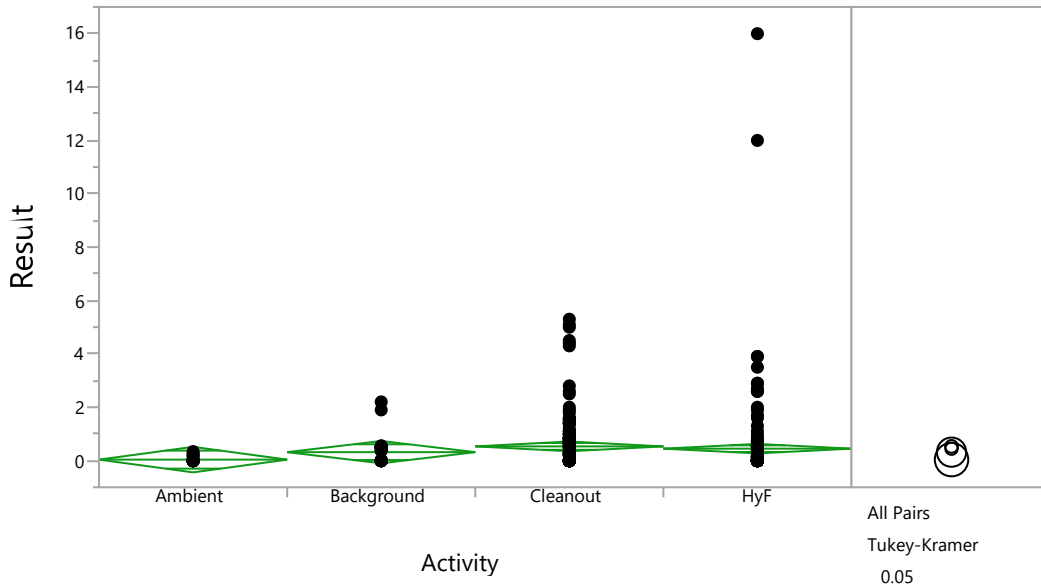
Level		Mean
Ambient	A	0.27988962
Cleanout	A	0.21674238
Background	A	0.15983118

Levels not connected by same letter are significantly different.

Ordered Differences Report

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value
HyF	Background	0.1207575	0.0716715	-0.064104	0.3056187	0.3329
Ambient	Background	0.1200584	0.1002337	-0.138473	0.3785897	0.6286
HyF	Cleanout	0.0638463	0.0401265	-0.039651	0.1673439	0.3848
Ambient	Cleanout	0.0631472	0.0807473	-0.145123	0.2714176	0.8626
Cleanout	Background	0.0569112	0.0719761	-0.128736	0.2425580	0.8587
HyF	Ambient	0.0006991	0.0804759	-0.206871	0.2082694	1.0000

Oneway Analysis of Result By Activity Analyte (Units)=Cyclohexane (ppb v/v)



Missing Rows 160

Oneway Anova

Summary of Fit

Rsquare	0.009503
Adj Rsquare	0.002511
Root Mean Square Error	1.239551
Mean of Response	0.447954
Observations (or Sum Wgts)	429

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Activity	3	6.26518	2.08839	1.3592	0.2547
Error	425	653.00699	1.53649		
C. Total	428	659.27217			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Ambient	26	0.036821	0.24310	-0.4410	0.51464
Background	34	0.316562	0.21258	-0.1013	0.73440
Cleanout	180	0.532394	0.09239	0.3508	0.71399
HyF	189	0.447729	0.09016	0.2705	0.62495

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
Cleanout	Ambient	38.0088	11.23636	3.38266	0.0007*	0	0	0.3200000
HyF	Ambient	23.2107	10.78424	2.15228	0.0314*	0	0	0.0000000
Background	Ambient	11.6403	3.81417	3.05185	0.0023*	0	0	0.4000000
Cleanout	Background	8.3922	10.64217	0.78858	0.4304	0	0	0.0180157
HyF	Background	-13.0829	10.35152	-1.26387	0.2063	0	0	0.0000000
HyF	Cleanout	-29.2152	9.84345	-2.96799	0.0030*	0	0	0.0000000

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
Ambient	26	4023.00	5590.00	154.731	-2.904
Background	34	7619.00	7310.00	224.088	0.505
Cleanout	180	42498.5	38700.0	236.103	3.405
HyF	189	38094.5	40635.0	201.558	-2.263

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
17.7622	3	0.0005*

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD Confidence Quantile

q*	Alpha
2.57926	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	Cleanout	HyF	Background	Ambient
Cleanout	-0.33701	-0.24831	-0.38202	-0.17519
HyF	-0.24831	-0.32888	-0.46442	-0.25784
Background	-0.38202	-0.46442	-0.77542	-0.55319
Ambient	-0.17519	-0.25784	-0.55319	-0.88672

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
Cleanout	A 0.53239358

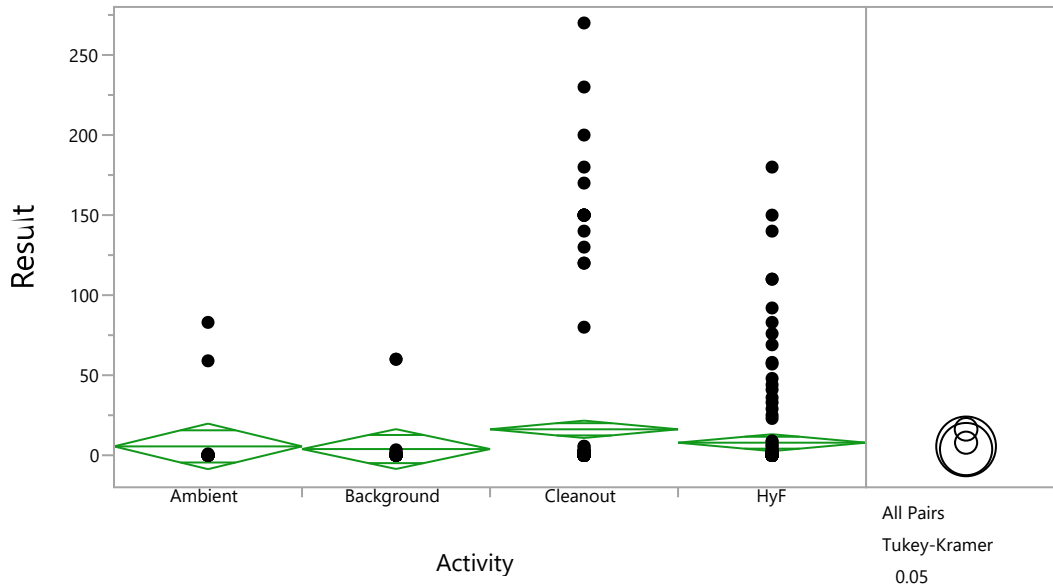
Level		Mean
HyF	A	0.44772915
Background	A	0.31656229
Ambient	A	0.03682066

Levels not connected by same letter are significantly different.

Ordered Differences Report

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value
Cleanout	Ambient	0.4955729	0.2600609	-0.175192	1.166338	0.2272
HyF	Ambient	0.4109085	0.2592783	-0.257838	1.079655	0.3884
Background	Ambient	0.2797416	0.3229341	-0.553190	1.112673	0.8223
Cleanout	Background	0.2158313	0.2317905	-0.382017	0.813679	0.7881
HyF	Background	0.1311669	0.2309120	-0.464415	0.726749	0.9415
Cleanout	HyF	0.0846644	0.1290953	-0.248306	0.417635	0.9135

Oneway Analysis of Result By Activity Analyte (Units)=Hexane+ (ppb v/v)



Missing Rows 160

Oneway Anova

Summary of Fit

Rsquare	0.015777
Adj Rsquare	0.008829
Root Mean Square Error	36.88187
Mean of Response	10.90677
Observations (or Sum Wgts)	429

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Activity	3	9267.02	3089.01	2.2709	0.0797
Error	425	578115.64	1360.27		
C. Total	428	587382.66			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Ambient	26	5.5392	7.2331	-8.68	19.756
Background	34	3.8767	6.3252	-8.56	16.309
Cleanout	180	16.2166	2.7490	10.81	21.620
HyF	189	7.8529	2.6828	2.58	13.126

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
Cleanout	Ambient	19.4115	10.77869	1.80092	0.0717	0	0	0
HyF	Ambient	15.4446	11.07098	1.39506	0.1630	0	0	0
Cleanout	Background	10.9448	10.02019	1.09227	0.2747	0	0	0
HyF	Background	7.8081	10.27402	0.75999	0.4473	0	0	0
Background	Ambient	2.4774	3.54084	0.69966	0.4841	0	0	0
HyF	Cleanout	-7.4679	9.65027	-0.77385	0.4390	0	0	0

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
Ambient	26	4758.00	5590.00	183.000	-1.581
Background	34	6808.00	7310.00	200.235	-0.842
Cleanout	180	40144.0	38700.0	223.022	1.327
HyF	189	40525.0	40635.0	214.418	-0.100

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
4.0346	3	0.2577

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD Confidence Quantile

q*	Alpha
2.57926	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	Cleanout	HyF	Ambient	Background
Cleanout	-10.027	-1.544	-9.281	-5.449
HyF	-1.544	-9.786	-17.584	-13.745
Ambient	-9.281	-17.584	-26.384	-23.121
Background	-5.449	-13.745	-23.121	-23.072

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
Cleanout	A 16.216574

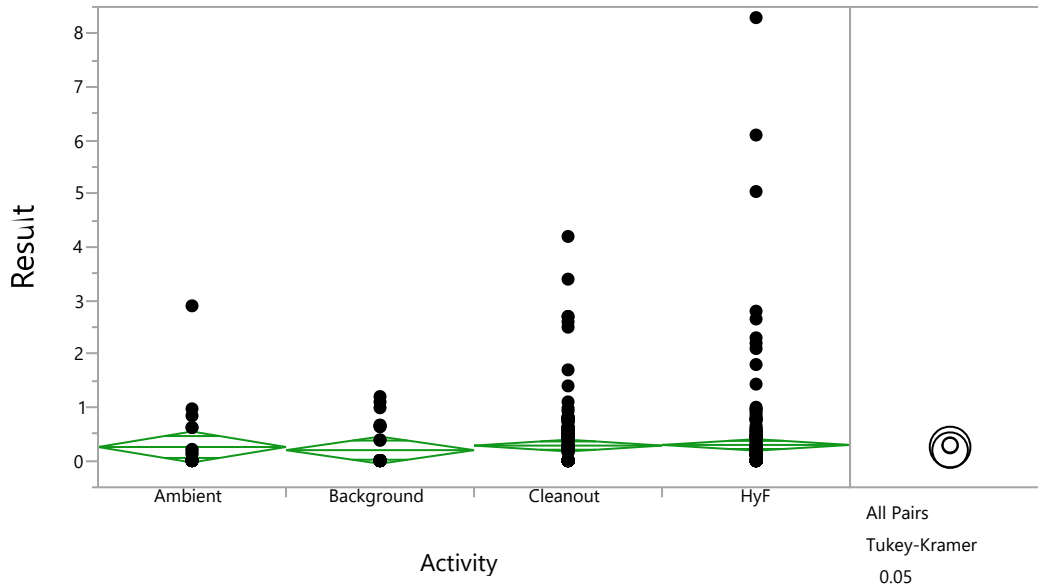
Level		Mean
HyF	A	7.852867
Ambient	A	5.539203
Background	A	3.876712

Levels not connected by same letter are significantly different.

Ordered Differences Report

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value
Cleanout	Background	12.33986	6.896743	-5.4486	30.12836	0.2799
Cleanout	Ambient	10.67737	7.737908	-9.2807	30.63546	0.5127
Cleanout	HyF	8.36371	3.841129	-1.5436	18.27098	0.1312
HyF	Background	3.97615	6.870605	-13.7449	21.69724	0.9384
HyF	Ambient	2.31366	7.714620	-17.5844	22.21168	0.9906
Ambient	Background	1.66249	9.608650	-23.1207	26.44571	0.9982

Oneway Analysis of Result By Activity Analyte (Units)=Toluene (ppb v/v)



Missing Rows 160

Oneway Anova

Summary of Fit

Rsquare	0.001206
Adj Rsquare	-0.00584
Root Mean Square Error	0.753278
Mean of Response	0.278322
Observations (or Sum Wgts)	429

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Activity	3	0.29116	0.097052	0.1710	0.9159
Error	425	241.15660	0.567427		
C. Total	428	241.44776			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Ambient	26	0.254719	0.14773	-0.0357	0.54509
Background	34	0.195897	0.12919	-0.0580	0.44982
Cleanout	180	0.281255	0.05615	0.1709	0.39161
HyF	189	0.293603	0.05479	0.1859	0.40130

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
Cleanout	Background	7.9201	9.86558	0.80280	0.4221	0	0	0
Cleanout	Ambient	3.2353	10.77912	0.30014	0.7641	0	0	0
HyF	Background	2.0475	9.74695	0.21006	0.8336	0	0	0
Background	Ambient	-1.3575	3.68797	-0.36808	0.7128	0	0	0
HyF	Ambient	-4.2221	10.68136	-0.39528	0.6926	0	0	0
HyF	Cleanout	-12.9128	9.34266	-1.38214	0.1669	0	0	0

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
Ambient	26	5633.50	5590.00	216.673	0.084
Background	34	7003.00	7310.00	205.971	-0.528
Cleanout	180	40192.0	38700.0	223.289	1.406
HyF	189	39406.5	40635.0	208.500	-1.151

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
2.1539	3	0.5411

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD Confidence Quantile

q*	Alpha
2.57926	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	HyF	Cleanout	Ambient	Background
HyF	-0.19986	-0.19000	-0.36751	-0.26423
Cleanout	-0.19000	-0.20480	-0.38109	-0.27796
Ambient	-0.36751	-0.38109	-0.53886	-0.44735
Background	-0.26423	-0.27796	-0.44735	-0.47122

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
HyF	A 0.29360294

Level		Mean
Cleanout	A	0.28125513
Ambient	A	0.25471937
Background	A	0.19589704

Levels not connected by same letter are significantly different.

Ordered Differences Report

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value
HyF	Background	0.0977059	0.1403257	-0.264231	0.4596425	0.8985
Cleanout	Background	0.0853581	0.1408595	-0.277955	0.4486716	0.9302
Ambient	Background	0.0588223	0.1962477	-0.447352	0.5649964	0.9906
HyF	Ambient	0.0388836	0.1575639	-0.367515	0.4452820	0.9947
Cleanout	Ambient	0.0265358	0.1580396	-0.381090	0.4341610	0.9983
HyF	Cleanout	0.0123478	0.0784515	-0.189999	0.2146947	0.9986