LCN: Lichen interaction network study

MK Lau

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## No targets to load in loadd().
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Methods

- Genotypes with at least 3 replicates with observations for all variables.
- The pseudo-species physcioids was removed.
- Lecanoras were merged into a single pseudo-species.

Results

Heritability Values

	Response	H2	R2	p-value
prb.reml.result	Percent Rough Bark	0.385	0.385	0
ph.reml.result	pH	0.054	0.054	0.294
ct.reml.result	Condensed Tannins (CT)	0.28	0.28	0.014
cnr.reml.result	Carbon-Nitrogen (CN) Ratio	0	0	0.448
ptc.reml.result	Percent Lichen Cover	0.079	0.079	0.172
spr.reml.result	Lichen Species Richness	0	0	1
spe.reml.result	Lichen Species Evenness	0.015	0.015	0.388
spd.reml.result	Lichen Species Diversity	0.01	0.01	0.417
link.reml.result	Number of Network Links	0.07	0.07	0.238
mod.reml.result	Network Modularity	0	0	1
cen.reml.result	Network Centrality	0.085	0.085	0.199
cn.perm.h2	Lichen Network	0.16	0.233	0
com.perm.h2	Community Composition	0.052	0.173	0.102

Predictors of Lichen Network Similarity

	Df	SumOfSqs	R2	F	Pr(>F)
geno	10	304.927955	0.2334811	19.295533	0.0001000
BR	1	16.259420	0.0124497	10.288797	0.0024998
pH	1	5.037083	0.0038569	3.187415	0.0830917
CN	1	39.666365	0.0303722	25.100475	0.0001000
CT	1	70.770152	0.0541882	44.782636	0.0001000
PC	1	56.352276	0.0431485	35.659150	0.0001000
SR	1	332.417384	0.2545296	210.350358	0.0001000
SE	1	55.107744	0.0421956	34.871623	0.0001000
L	1	326.526452	0.2500189	206.622636	0.0001000
mod.lik	1	7.768315	0.0059481	4.915711	0.0304970
Cen	1	43.764631	0.0335103	27.693816	0.0001000
Residual	30	47.409102	0.0363008	NA	NA

	Df	SumOfSqs	R2	F	Pr(>F)
Total	50	1306.006880	1.0000000	NA	NA

Predictors of Lichen Community Similarity

	Df	SumOfSqs	R2	F	Pr(>F)
geno	10	1.8466995	0.1733428	1.3006048	0.1018898
BR	1	0.1474919	0.0138445	1.0387653	0.3739626
pH	1	0.1302223	0.0122235	0.9171375	0.4566543
CN	1	0.1651059	0.0154979	1.1628182	0.3102690
CT	1	0.1895417	0.0177916	1.3349157	0.2373763
PC	1	2.4602836	0.2309377	17.3274361	0.0001000
SR	1	0.5485856	0.0514937	3.8636125	0.0031997
SE	1	0.4799261	0.0450489	3.3800531	0.0074993
Residual	33	4.6855957	0.4398195	NA	NA
Total	50	10.6534523	1.0000000	NA	NA

Statistical Assumption Checks

Shapiro-Wilks Tests for Normality of Residuals

formula	statistic	p.value	method
~I(BR^(1/4))(1 | geno)	0.98621	0.81358	Shapiro-Wilk normality test
~I(pH^(1/4))(1 | geno)	0.91192	0.00108	Shapiro-Wilk normality test
~I(CT^(1/4))(1 | geno)	0.74548	0.00000	Shapiro-Wilk normality test
~I(CN^(1/4))(1 | geno)	0.95939	0.07855	Shapiro-Wilk normality test
~I(PC^(1/4))(1 | geno)	0.78751	0.00000	Shapiro-Wilk normality test
~I(SR^(1/4))(1 | geno)	0.71653	0.00000	Shapiro-Wilk normality test
~I(SE^(1/4))(1 | geno)	0.65134	0.00000	Shapiro-Wilk normality test
~I(SD^(1/4))(1 | geno)	0.73027	0.00000	Shapiro-Wilk normality test
~I(L^(1/4))(1 | geno)	0.82941	0.00000	Shapiro-Wilk normality test
~I(mod.lik^(1/4))(1 | geno)	0.42655	0.00000	Shapiro-Wilk normality test
~I(Cen^(1/4))(1 | geno)	0.80978	0.00000	Shapiro-Wilk normality test

Fligner Tests for Homogeneity of Variance

transformation	X1	X2	value.statistic	value.parameter	value.p.value	value.method
y	PC	statistic	6.60001	c(df = 10)	0.76259	Fligner-Killeen test of homogene
y	SR	statistic	6.13714	c(df = 10)	0.80361	Fligner-Killeen test of homogene
y	SD	statistic	8.33549	c(df = 10)	0.59610	Fligner-Killeen test of homogene
y	SE	statistic	6.35292	c(df = 10)	0.78479	Fligner-Killeen test of homogene
y	BR	statistic	8.82097	c(df = 10)	0.54917	Fligner-Killeen test of homogene
y	L	statistic	12.22552	c(df = 10)	0.27025	Fligner-Killeen test of homogene
y	Cen	statistic	11.86070	c(df = 10)	0.29449	Fligner-Killeen test of homogene
y	mod.lik	statistic	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
y	C	statistic	7.55860	c(df = 10)	0.67186	Fligner-Killeen test of homogene
y	N	statistic	8.37451	c(df = 10)	0.59231	Fligner-Killeen test of homogene

transformation	X1	X2	value.statistic	value.parameter	value.p.value	value.method
y	CN	statistic	6.47349	c(df = 10)	0.77404	Fligner-Killeen test of homogene
y	CT	statistic	8.65884	c(df = 10)	0.56476	Fligner-Killeen test of homogene
y	pH	statistic	10.59576	c(df = 10)	0.38987	Fligner-Killeen test of homogene
y	PC	parameter	6.60001	c(df = 10)	0.76259	Fligner-Killeen test of homogene
y	SR	parameter	6.13714	c(df = 10)	0.80361	Fligner-Killeen test of homogene
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y	pH	p.value	10.59576	c(df = 10)	0.38987	Fligner-Killeen test of homogene
y	PC	method	6.60001	c(df = 10)	0.76259	Fligner-Killeen test of homogene
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y	pH	method	10.59576	c(df = 10)	0.38987	Fligner-Killeen test of homogene
y	PC	data.name	6.60001	c(df = 10)	0.76259	Fligner-Killeen test of homogene
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transformation	X1	X2	value.statistic	value.parameter	value.p.value	value.method
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y	CT	data.name	8.65884	c(df = 10)	0.56476	Fligner-Killeen test of homogene
y	pH	data.name	10.59576	c(df = 10)	0.38987	Fligner-Killeen test of homogene
y2	PC	statistic	4.18740	c(df = 10)	0.93850	Fligner-Killeen test of homogene
y2	SR	statistic	3.59576	c(df = 10)	0.96375	Fligner-Killeen test of homogene
y2	SD	statistic	8.69799	c(df = 10)	0.56099	Fligner-Killeen test of homogene
y2	SE	statistic	10.07641	c(df = 10)	0.43382	Fligner-Killeen test of homogene
y2	BR	statistic	15.38571	c(df = 10)	0.11862	Fligner-Killeen test of homogene
y2	L	statistic	14.43681	c(df = 10)	0.15398	Fligner-Killeen test of homogene
y2	Cen	statistic	17.89448	c(df = 10)	0.05677	Fligner-Killeen test of homogene
y2	mod.lik	statistic	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
y2	C	statistic	7.82940	c(df = 10)	0.64550	Fligner-Killeen test of homogene
y2	N	statistic	9.85431	c(df = 10)	0.45337	Fligner-Killeen test of homogene
y2	CN	statistic	7.89526	c(df = 10)	0.63907	Fligner-Killeen test of homogene
y2	CT	statistic	13.60700	c(df = 10)	0.19168	Fligner-Killeen test of homogene
y2	pH	statistic	11.67367	c(df = 10)	0.30749	Fligner-Killeen test of homogene
y2	PC	parameter	4.18740	c(df = 10)	0.93850	Fligner-Killeen test of homogene
y2	SR	parameter	3.59576	c(df = 10)	0.96375	Fligner-Killeen test of homogene
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y2	CT	parameter	13.60700	c(df = 10)	0.19168	Fligner-Killeen test of homogene
y2	pH	parameter	11.67367	c(df = 10)	0.30749	Fligner-Killeen test of homogene
y2	PC	p.value	4.18740	c(df = 10)	0.93850	Fligner-Killeen test of homogene
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y2	pH	p.value	11.67367	c(df = 10)	0.30749	Fligner-Killeen test of homogene
y2	PC	method	4.18740	c(df = 10)	0.93850	Fligner-Killeen test of homogene
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transformation	X1	X2	value.statistic	value.parameter	value.p.value	value.method
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y2	PC	data.name	4.18740	c(df = 10)	0.93850	Fligner-Killeen test of homogene
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y2	CT	data.name	13.60700	c(df = 10)	0.19168	Fligner-Killeen test of homogene
y2	pH	data.name	11.67367	c(df = 10)	0.30749	Fligner-Killeen test of homogene
r2y	PC	statistic	9.55162	c(df = 10)	0.48067	Fligner-Killeen test of homogene
r2y	SR	statistic	8.83365	c(df = 10)	0.54796	Fligner-Killeen test of homogene
r2y	SD	statistic	10.66680	c(df = 10)	0.38406	Fligner-Killeen test of homogene
r2y	SE	statistic	5.65092	c(df = 10)	0.84369	Fligner-Killeen test of homogene
r2y	BR	statistic	5.70093	c(df = 10)	0.83973	Fligner-Killeen test of homogene
r2y	L	statistic	8.68311	c(df = 10)	0.56242	Fligner-Killeen test of homogene
r2y	Cen	statistic	8.81387	c(df = 10)	0.54985	Fligner-Killeen test of homogene
r2y	mod.lik	statistic	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
r2y	C	statistic	7.53952	c(df = 10)	0.67372	Fligner-Killeen test of homogene
r2y	N	statistic	8.09015	c(df = 10)	0.62003	Fligner-Killeen test of homogene
r2y	CN	statistic	5.79771	c(df = 10)	0.83196	Fligner-Killeen test of homogene
r2y	CT	statistic	8.03537	c(df = 10)	0.62538	Fligner-Killeen test of homogene
r2y	pH	statistic	10.25274	c(df = 10)	0.41861	Fligner-Killeen test of homogene
r2y	PC	parameter	9.55162	c(df = 10)	0.48067	Fligner-Killeen test of homogene
r2y	SR	parameter	8.83365	c(df = 10)	0.54796	Fligner-Killeen test of homogene
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r2y	pH	parameter	10.25274	c(df = 10)	0.41861	Fligner-Killeen test of homogene
r2y	PC	p.value	9.55162	c(df = 10)	0.48067	Fligner-Killeen test of homogene
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r2y	SE	method	5.65092	c(df = 10)	0.84369	Fligner-Killeen test of homogene
r2y	BR	method	5.70093	c(df = 10)	0.83973	Fligner-Killeen test of homogene
r2y	L	method	8.68311	c(df = 10)	0.56242	Fligner-Killeen test of homogene
r2y	Cen	method	8.81387	c(df = 10)	0.54985	Fligner-Killeen test of homogene
r2y	mod.lik	method	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
r2y	C	method	7.53952	c(df = 10)	0.67372	Fligner-Killeen test of homogene
r2y	N	method	8.09015	c(df = 10)	0.62003	Fligner-Killeen test of homogene
r2y	CN	method	5.79771	c(df = 10)	0.83196	Fligner-Killeen test of homogene
r2y	CT	method	8.03537	c(df = 10)	0.62538	Fligner-Killeen test of homogene
r2y	pH	method	10.25274	c(df = 10)	0.41861	Fligner-Killeen test of homogene
r2y	PC	data.name	9.55162	c(df = 10)	0.48067	Fligner-Killeen test of homogene
r2y	SR	data.name	8.83365	c(df = 10)	0.54796	Fligner-Killeen test of homogene
r2y	SD	data.name	10.66680	c(df = 10)	0.38406	Fligner-Killeen test of homogene
r2y	SE	data.name	5.65092	c(df = 10)	0.84369	Fligner-Killeen test of homogene
r2y	BR	data.name	5.70093	c(df = 10)	0.83973	Fligner-Killeen test of homogene
r2y	L	data.name	8.68311	c(df = 10)	0.56242	Fligner-Killeen test of homogene
r2y	Cen	data.name	8.81387	c(df = 10)	0.54985	Fligner-Killeen test of homogene
r2y	mod.lik	data.name	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
r2y	C	data.name	7.53952	c(df = 10)	0.67372	Fligner-Killeen test of homogene
r2y	N	data.name	8.09015	c(df = 10)	0.62003	Fligner-Killeen test of homogene
r2y	CN	data.name	5.79771	c(df = 10)	0.83196	Fligner-Killeen test of homogene
r2y	CT	data.name	8.03537	c(df = 10)	0.62538	Fligner-Killeen test of homogene
r2y	pH	data.name	10.25274	c(df = 10)	0.41861	Fligner-Killeen test of homogene
r4y	PC	statistic	11.50535	c(df = 10)	0.31952	Fligner-Killeen test of homogene
r4y	SR	statistic	9.59483	c(df = 10)	0.47673	Fligner-Killeen test of homogene
r4y	SD	statistic	10.01958	c(df = 10)	0.43878	Fligner-Killeen test of homogene
r4y	SE	statistic	5.08250	c(df = 10)	0.88560	Fligner-Killeen test of homogene
r4y	BR	statistic	5.47242	c(df = 10)	0.85747	Fligner-Killeen test of homogene
r4y	L	statistic	8.81243	c(df = 10)	0.54999	Fligner-Killeen test of homogene
r4y	Cen	statistic	9.27900	c(df = 10)	0.50585	Fligner-Killeen test of homogene
r4y	mod.lik	statistic	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
r4y	C	statistic	7.53934	c(df = 10)	0.67373	Fligner-Killeen test of homogene
r4y	N	statistic	7.85372	c(df = 10)	0.64312	Fligner-Killeen test of homogene
r4y	CN	statistic	5.50477	c(df = 10)	0.85502	Fligner-Killeen test of homogene
r4y	CT	statistic	7.00275	c(df = 10)	0.72519	Fligner-Killeen test of homogene
r4y	pH	statistic	10.17797	c(df = 10)	0.42502	Fligner-Killeen test of homogene
r4y	PC	parameter	11.50535	c(df = 10)	0.31952	Fligner-Killeen test of homogene
r4y	SR	parameter	9.59483	c(df = 10)	0.47673	Fligner-Killeen test of homogene
r4y	SD	parameter	10.01958	c(df = 10)	0.43878	Fligner-Killeen test of homogene
r4y	SE	parameter	5.08250	c(df = 10)	0.88560	Fligner-Killeen test of homogene
r4y	BR	parameter	5.47242	c(df = 10)	0.85747	Fligner-Killeen test of homogene
r4y	L	parameter	8.81243	c(df = 10)	0.54999	Fligner-Killeen test of homogene
r4y	Cen	parameter	9.27900	c(df = 10)	0.50585	Fligner-Killeen test of homogene
r4y	mod.lik	parameter	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
r4y	C	parameter	7.53934	c(df = 10)	0.67373	Fligner-Killeen test of homogene
r4y	N	parameter	7.85372	c(df = 10)	0.64312	Fligner-Killeen test of homogene

transformation	X1	X2	value.statistic	value.parameter	value.p.value	value.method
r4y	CN	parameter	5.50477	c(df = 10)	0.85502	Fligner-Killeen test of homogene
r4y	CT	parameter	7.00275	c(df = 10)	0.72519	Fligner-Killeen test of homogene
r4y	pH	parameter	10.17797	c(df = 10)	0.42502	Fligner-Killeen test of homogene
r4y	PC	p.value	11.50535	c(df = 10)	0.31952	Fligner-Killeen test of homogene
r4y	SR	p.value	9.59483	c(df = 10)	0.47673	Fligner-Killeen test of homogene
r4y	SD	p.value	10.01958	c(df = 10)	0.43878	Fligner-Killeen test of homogene
r4y	SE	p.value	5.08250	c(df = 10)	0.88560	Fligner-Killeen test of homogene
r4y	BR	p.value	5.47242	c(df = 10)	0.85747	Fligner-Killeen test of homogene
r4y	L	p.value	8.81243	c(df = 10)	0.54999	Fligner-Killeen test of homogene
r4y	Cen	p.value	9.27900	c(df = 10)	0.50585	Fligner-Killeen test of homogene
r4y	mod.lik	p.value	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
r4y	C	p.value	7.53934	c(df = 10)	0.67373	Fligner-Killeen test of homogene
r4y	N	p.value	7.85372	c(df = 10)	0.64312	Fligner-Killeen test of homogene
r4y	CN	p.value	5.50477	c(df = 10)	0.85502	Fligner-Killeen test of homogene
r4y	CT	p.value	7.00275	c(df = 10)	0.72519	Fligner-Killeen test of homogene
r4y	pH	p.value	10.17797	c(df = 10)	0.42502	Fligner-Killeen test of homogene
r4y	PC	method	11.50535	c(df = 10)	0.31952	Fligner-Killeen test of homogene
r4y	SR	method	9.59483	c(df = 10)	0.47673	Fligner-Killeen test of homogene
r4y	SD	method	10.01958	c(df = 10)	0.43878	Fligner-Killeen test of homogene
r4y	SE	method	5.08250	c(df = 10)	0.88560	Fligner-Killeen test of homogene
r4y	BR	method	5.47242	c(df = 10)	0.85747	Fligner-Killeen test of homogene
r4y	L	method	8.81243	c(df = 10)	0.54999	Fligner-Killeen test of homogene
r4y	Cen	method	9.27900	c(df = 10)	0.50585	Fligner-Killeen test of homogene
r4y	mod.lik	method	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
r4y	C	method	7.53934	c(df = 10)	0.67373	Fligner-Killeen test of homogene
r4y	N	method	7.85372	c(df = 10)	0.64312	Fligner-Killeen test of homogene
r4y	CN	method	5.50477	c(df = 10)	0.85502	Fligner-Killeen test of homogene
r4y	CT	method	7.00275	c(df = 10)	0.72519	Fligner-Killeen test of homogene
r4y	pH	method	10.17797	c(df = 10)	0.42502	Fligner-Killeen test of homogene
r4y	PC	data.name	11.50535	c(df = 10)	0.31952	Fligner-Killeen test of homogene
r4y	SR	data.name	9.59483	c(df = 10)	0.47673	Fligner-Killeen test of homogene
r4y	SD	data.name	10.01958	c(df = 10)	0.43878	Fligner-Killeen test of homogene
r4y	SE	data.name	5.08250	c(df = 10)	0.88560	Fligner-Killeen test of homogene
r4y	BR	data.name	5.47242	c(df = 10)	0.85747	Fligner-Killeen test of homogene
r4y	L	data.name	8.81243	c(df = 10)	0.54999	Fligner-Killeen test of homogene
r4y	Cen	data.name	9.27900	c(df = 10)	0.50585	Fligner-Killeen test of homogene
r4y	mod.lik	data.name	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
r4y	C	data.name	7.53934	c(df = 10)	0.67373	Fligner-Killeen test of homogene
r4y	N	data.name	7.85372	c(df = 10)	0.64312	Fligner-Killeen test of homogene
r4y	CN	data.name	5.50477	c(df = 10)	0.85502	Fligner-Killeen test of homogene
r4y	CT	data.name	7.00275	c(df = 10)	0.72519	Fligner-Killeen test of homogene
r4y	pH	data.name	10.17797	c(df = 10)	0.42502	Fligner-Killeen test of homogene
logy	PC	statistic	12.68909	c(df = 10)	0.24158	Fligner-Killeen test of homogene
logy	SR	statistic	9.93983	c(df = 10)	0.44579	Fligner-Killeen test of homogene
logy	SD	statistic	9.88275	c(df = 10)	0.45084	Fligner-Killeen test of homogene
logy	SE	statistic	4.97993	c(df = 10)	0.89251	Fligner-Killeen test of homogene
logy	BR	statistic	5.96171	c(df = 10)	0.81847	Fligner-Killeen test of homogene
logy	L	statistic	9.37692	c(df = 10)	0.49674	Fligner-Killeen test of homogene
logy	Cen	statistic	9.13583	c(df = 10)	0.51926	Fligner-Killeen test of homogene
logy	mod.lik	statistic	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
logy	C	statistic	7.53939	c(df = 10)	0.67373	Fligner-Killeen test of homogene
logy	N	statistic	8.35121	c(df = 10)	0.59457	Fligner-Killeen test of homogene

transformation	X1	X2	value.statistic	value.parameter	value.p.value	value.method
logy	CN	statistic	5.49108	c(df = 10)	0.85606	Fligner-Killeen test of homogene
logy	CT	statistic	7.46756	c(df = 10)	0.68069	Fligner-Killeen test of homogene
logy	pH	statistic	10.26625	c(df = 10)	0.41745	Fligner-Killeen test of homogene
logy	PC	parameter	12.68909	c(df = 10)	0.24158	Fligner-Killeen test of homogene
logy	SR	parameter	9.93983	c(df = 10)	0.44579	Fligner-Killeen test of homogene
logy	SD	parameter	9.88275	c(df = 10)	0.45084	Fligner-Killeen test of homogene
logy	SE	parameter	4.97993	c(df = 10)	0.89251	Fligner-Killeen test of homogene
logy	BR	parameter	5.96171	c(df = 10)	0.81847	Fligner-Killeen test of homogene
logy	L	parameter	9.37692	c(df = 10)	0.49674	Fligner-Killeen test of homogene
logy	Cen	parameter	9.13583	c(df = 10)	0.51926	Fligner-Killeen test of homogene
logy	mod.lik	parameter	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
logy	C	parameter	7.53939	c(df = 10)	0.67373	Fligner-Killeen test of homogene
logy	N	parameter	8.35121	c(df = 10)	0.59457	Fligner-Killeen test of homogene
logy	CN	parameter	5.49108	c(df = 10)	0.85606	Fligner-Killeen test of homogene
logy	CT	parameter	7.46756	c(df = 10)	0.68069	Fligner-Killeen test of homogene
logy	pH	parameter	10.26625	c(df = 10)	0.41745	Fligner-Killeen test of homogene
logy	PC	p.value	12.68909	c(df = 10)	0.24158	Fligner-Killeen test of homogene
logy	SR	p.value	9.93983	c(df = 10)	0.44579	Fligner-Killeen test of homogene
logy	SD	p.value	9.88275	c(df = 10)	0.45084	Fligner-Killeen test of homogene
logy	SE	p.value	4.97993	c(df = 10)	0.89251	Fligner-Killeen test of homogene
logy	BR	p.value	5.96171	c(df = 10)	0.81847	Fligner-Killeen test of homogene
logy	L	p.value	9.37692	c(df = 10)	0.49674	Fligner-Killeen test of homogene
logy	Cen	p.value	9.13583	c(df = 10)	0.51926	Fligner-Killeen test of homogene
logy	mod.lik	p.value	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
logy	C	p.value	7.53939	c(df = 10)	0.67373	Fligner-Killeen test of homogene
logy	N	p.value	8.35121	c(df = 10)	0.59457	Fligner-Killeen test of homogene
logy	CN	p.value	5.49108	c(df = 10)	0.85606	Fligner-Killeen test of homogene
logy	CT	p.value	7.46756	c(df = 10)	0.68069	Fligner-Killeen test of homogene
logy	pH	p.value	10.26625	c(df = 10)	0.41745	Fligner-Killeen test of homogene
logy	PC	method	12.68909	c(df = 10)	0.24158	Fligner-Killeen test of homogene
logy	SR	method	9.93983	c(df = 10)	0.44579	Fligner-Killeen test of homogene
logy	SD	method	9.88275	c(df = 10)	0.45084	Fligner-Killeen test of homogene
logy	SE	method	4.97993	c(df = 10)	0.89251	Fligner-Killeen test of homogene
logy	BR	method	5.96171	c(df = 10)	0.81847	Fligner-Killeen test of homogene
logy	L	method	9.37692	c(df = 10)	0.49674	Fligner-Killeen test of homogene
logy	Cen	method	9.13583	c(df = 10)	0.51926	Fligner-Killeen test of homogene
logy	mod.lik	method	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
logy	C	method	7.53939	c(df = 10)	0.67373	Fligner-Killeen test of homogene
logy	N	method	8.35121	c(df = 10)	0.59457	Fligner-Killeen test of homogene
logy	CN	method	5.49108	c(df = 10)	0.85606	Fligner-Killeen test of homogene
logy	CT	method	7.46756	c(df = 10)	0.68069	Fligner-Killeen test of homogene
logy	pH	method	10.26625	c(df = 10)	0.41745	Fligner-Killeen test of homogene
logy	PC	data.name	12.68909	c(df = 10)	0.24158	Fligner-Killeen test of homogene
logy	SR	data.name	9.93983	c(df = 10)	0.44579	Fligner-Killeen test of homogene
logy	SD	data.name	9.88275	c(df = 10)	0.45084	Fligner-Killeen test of homogene
logy	SE	data.name	4.97993	c(df = 10)	0.89251	Fligner-Killeen test of homogene
logy	BR	data.name	5.96171	c(df = 10)	0.81847	Fligner-Killeen test of homogene
logy	L	data.name	9.37692	c(df = 10)	0.49674	Fligner-Killeen test of homogene
logy	Cen	data.name	9.13583	c(df = 10)	0.51926	Fligner-Killeen test of homogene
logy	mod.lik	data.name	9.38661	c(df = 10)	0.49585	Fligner-Killeen test of homogene
logy	C	data.name	7.53939	c(df = 10)	0.67373	Fligner-Killeen test of homogene
logy	N	data.name	8.35121	c(df = 10)	0.59457	Fligner-Killeen test of homogene

transformation	X1	X2	value.statistic	value.parameter	value.p.value	value.method
logy	CN	data.name	5.49108	c(df = 10)	0.85606	Fligner-Killeen test of homogene
logy	CT	data.name	7.46756	c(df = 10)	0.68069	Fligner-Killeen test of homogene
logy	pH	data.name	10.26625	c(df = 10)	0.41745	Fligner-Killeen test of homogene