

The SAS System

The RSREG Procedure

Coding Coefficients for the Independent Variables		
Factor	Subtracted off	Divided by
sugar	24.000000	4.000000
ph	5.500000	0.500000
temp	25.000000	5.000000

Response Surface for Variable overall	
Response Mean	3.177333
Root MSE	0.170978
R-Square	0.9024
Coefficient of Variation	5.3812

Regression	DF	Type I Sum of Squares	R-Square	F Value	Pr > F
Linear	3	0.669700	0.4470	7.64	0.0258
Quadratic	3	0.638127	0.4260	7.28	0.0284
Crossproduct	3	0.044100	0.0294	0.50	0.6968
Total Model	9	1.351927	0.9024	5.14	0.0431

Residual	DF	Sum of Squares	Mean Square
Total Error	5	0.146167	0.029233

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Parameter	DF	Estimate	Standard Error	t Value	Pr > t	Parameter Estimate from Coded Data
Intercept	1	-55.077500	14.164592	-3.89	0.0115	3.546667
sugar	1	0.791875	0.371717	2.13	0.0864	0.232500
ph	1	16.511667	4.138340	3.99	0.0104	-0.132500
temp	1	0.321667	0.278769	1.15	0.3007	-0.110000
sugar*sugar	1	-0.010365	0.005561	-1.86	0.1214	-0.165833
ph*sugar	1	-0.022500	0.042744	-0.53	0.6211	-0.045000
ph*ph	1	-1.503333	0.355918	-4.22	0.0083	-0.375833
temp*sugar	1	-0.004500	0.004274	-1.05	0.3406	-0.090000
temp*ph	1	0.012000	0.034196	0.35	0.7399	0.030000
temp*temp	1	-0.006033	0.003559	-1.70	0.1508	-0.150833

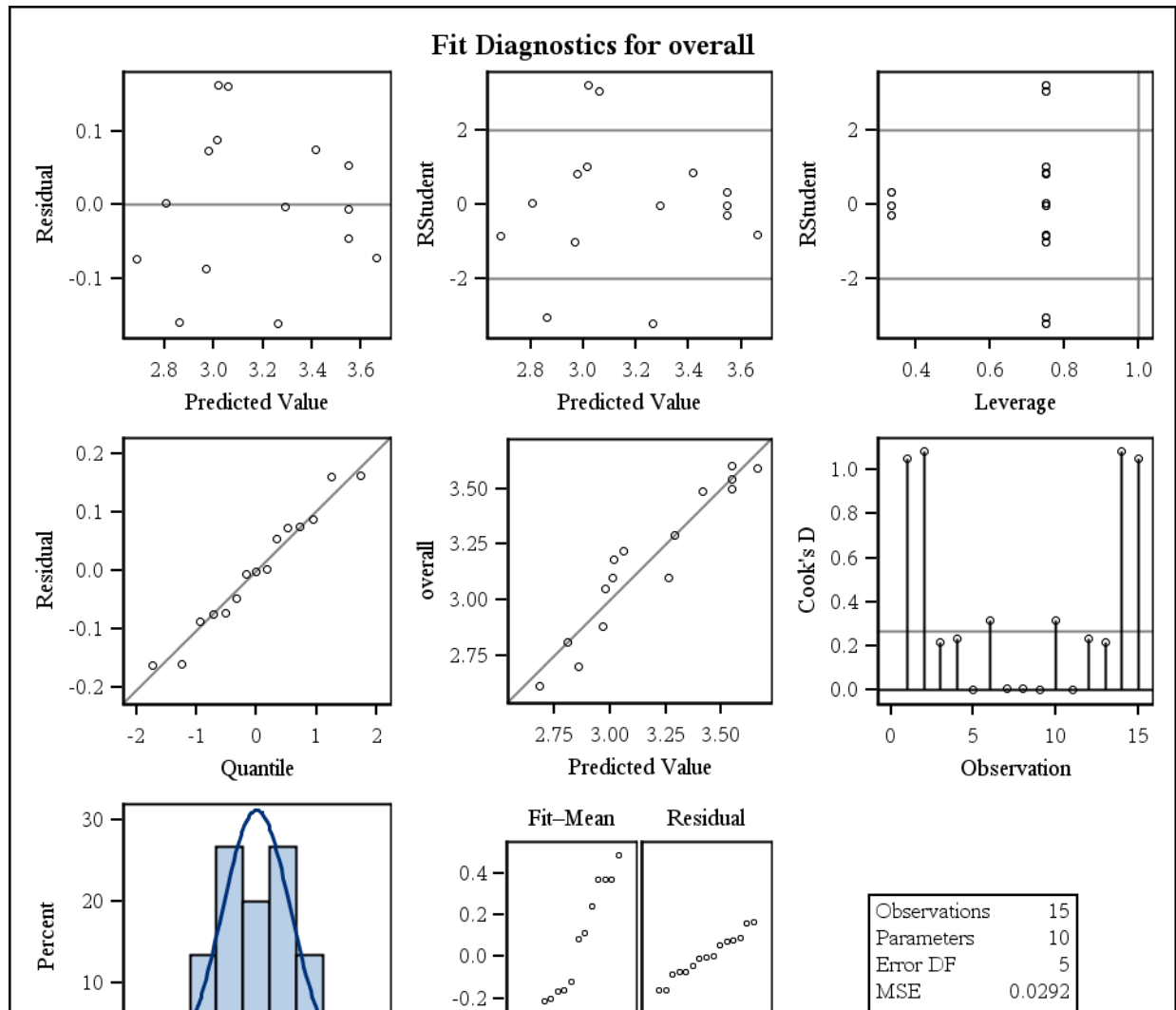
Factor	DF	Sum of Squares	Mean Square	F Value	Pr > F
sugar	4	0.574491	0.143623	4.91	0.0554
ph	4	0.673691	0.168423	5.76	0.0410
temp	4	0.216803	0.054201	1.85	0.2566

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The RSREG Procedure Canonical Analysis of Response Surface Based on Coded Data

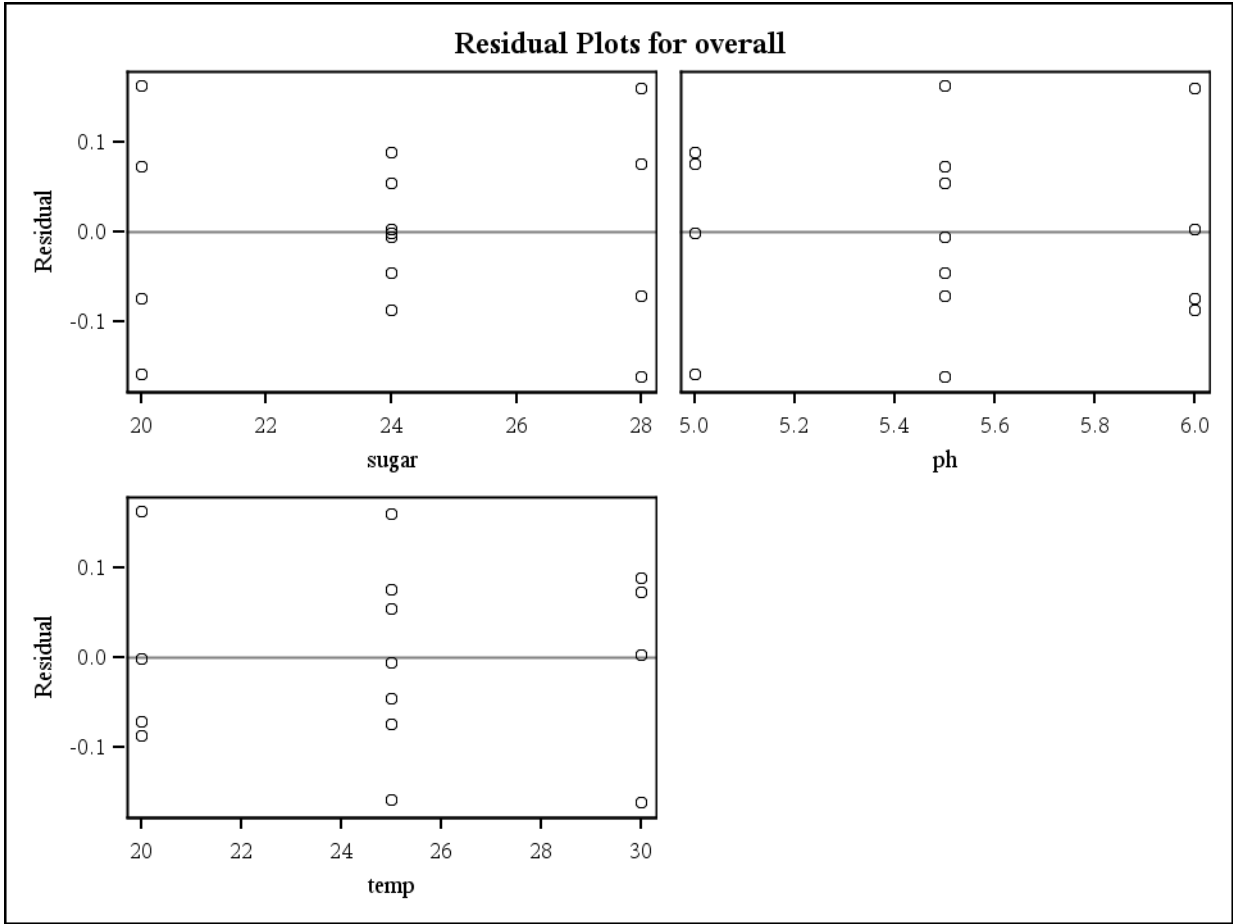
Factor	Critical Value	
	Coded	Uncoded
sugar	0.916012	27.664050
ph	-0.257597	5.371202
temp	-0.663544	21.682281
Predicted value at stationary point: 3.706714		

Eigenvalues	Eigenvectors		
	sugar	ph	temp
-0.110165	-0.649203	0.097573	0.754331
-0.203643	0.754629	-0.041562	0.654835
-0.378692	0.095246	0.994360	-0.046649
Stationary point is a maximum.			



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