The RSREG Procedure

Coding Coefficients for the Independent Variables		
Factor	Subtracted off	Divided by
temp	24.000000	10.092000
ph	3.800000	0.672800
inocsz	10.000000	8.410000

Response Surface for Variable ethanol	
Response Mean	7.755000
Root MSE	0.422003
R-Square	0.9714
Coefficient of Variation	5.4417

Regression	DF	Type I Sum of Squares	R-Square	F Value	Pr > F
Linear	3	13.137539	0.2106	24.59	<.0001
Quadratic	3	42.727344	0.6851	79.97	<.0001
Crossproduct	3	4.723750	0.0757	8.84	0.0037
Total Model	9	60.588632	0.9714	37.80	<.0001

Residual	DF	Sum of Squares	Mean Square
Total Error	10	1.780868	0.178087

Parameter	DF	Estimate	Standard Error	t Value	Pr > |t|	Parameter Estimate from Coded Data
Intercept	1	-88.088035	12.223256	-7.21	<.0001	9.971758
temp	1	1.012243	0.283907	3.57	0.0051	-0.881673
ph	1	45.821999	5.543945	8.27	<.0001	-0.259746
inocsz	1	-0.036288	0.320992	-0.11	0.9122	1.369836
temp*temp	1	-0.026619	0.003087	-8.62	<.0001	-2.711146
ph*temp	1	0.067708	0.062167	1.09	0.3016	0.459733
ph*ph	1	-6.762575	0.694648	-9.74	<.0001	-3.061146
inocsz*temp	1	-0.007917	0.004973	-1.59	0.1425	-0.671917
inocsz*ph	1	0.356250	0.074600	4.78	0.0008	2.015751
inocsz*inocsz	1	-0.048229	0.004446	-10.85	<.0001	-3.411146

The RSREG Procedure

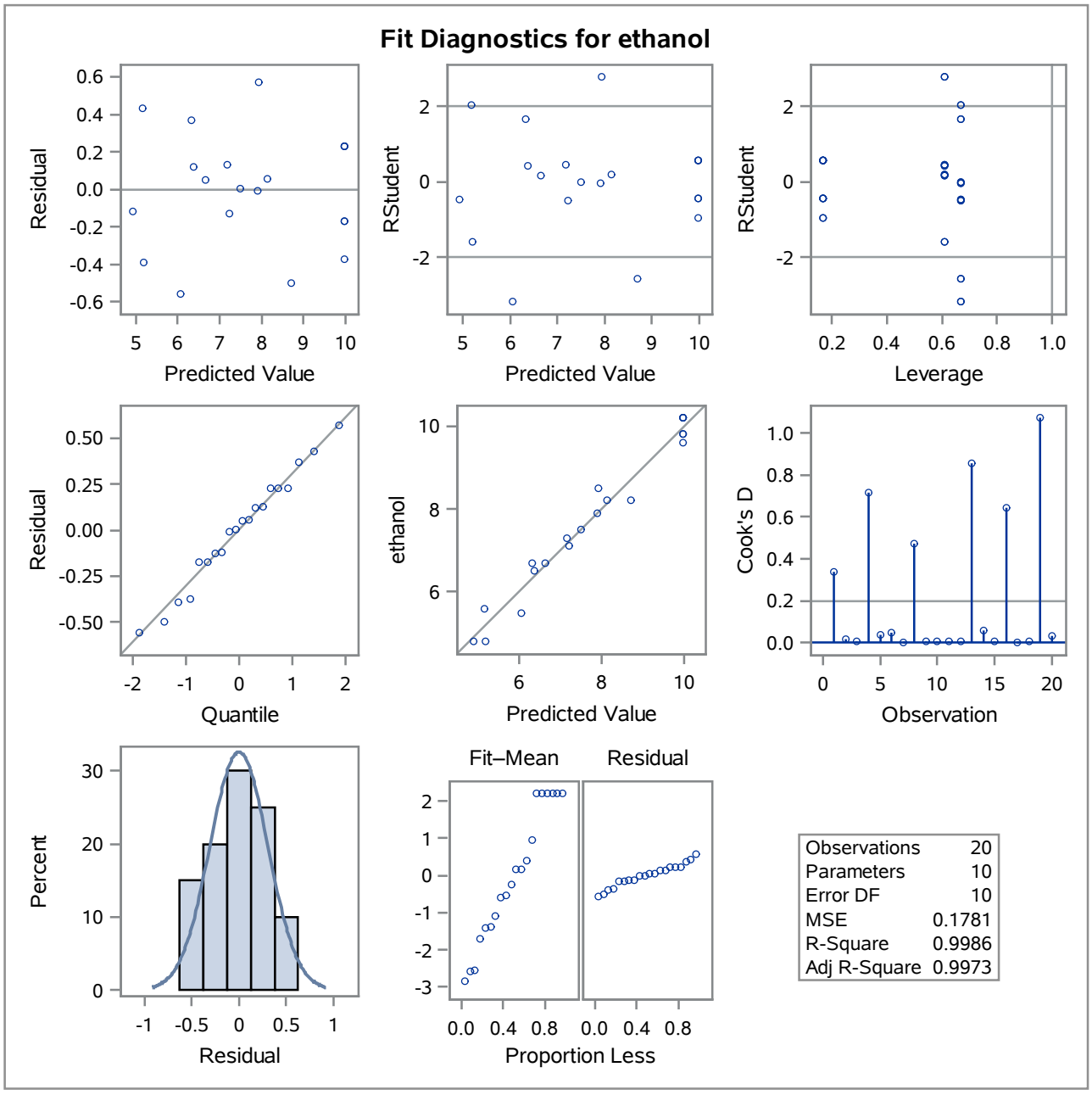
Factor	DF	Sum of Squares	Mean Square	F Value	Pr > F
temp	4	17.654610	4.413653	24.78	<.0001
ph	4	21.476444	5.369111	30.15	<.0001
inocsz	4	34.529957	8.632489	48.47	<.0001

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

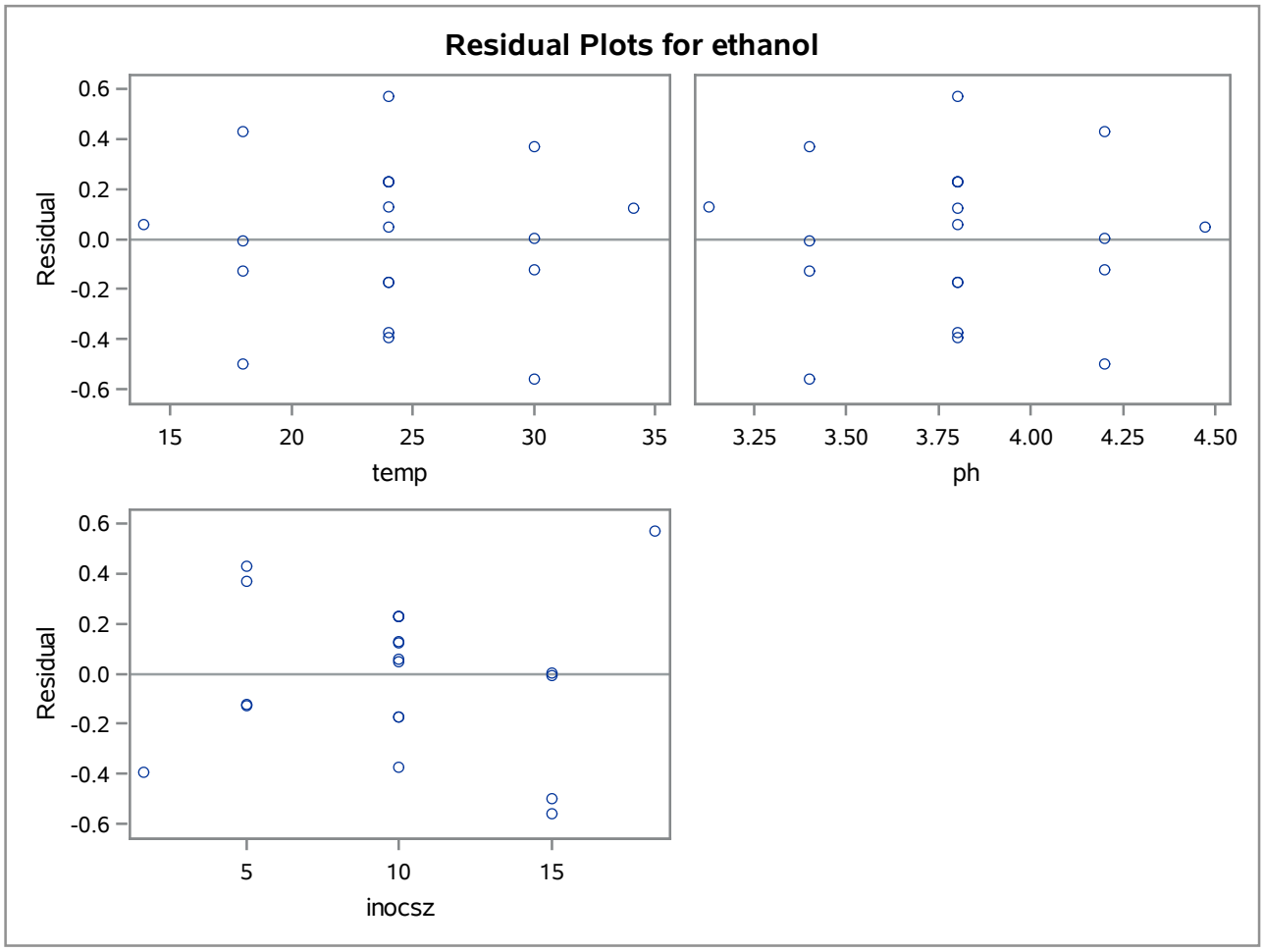
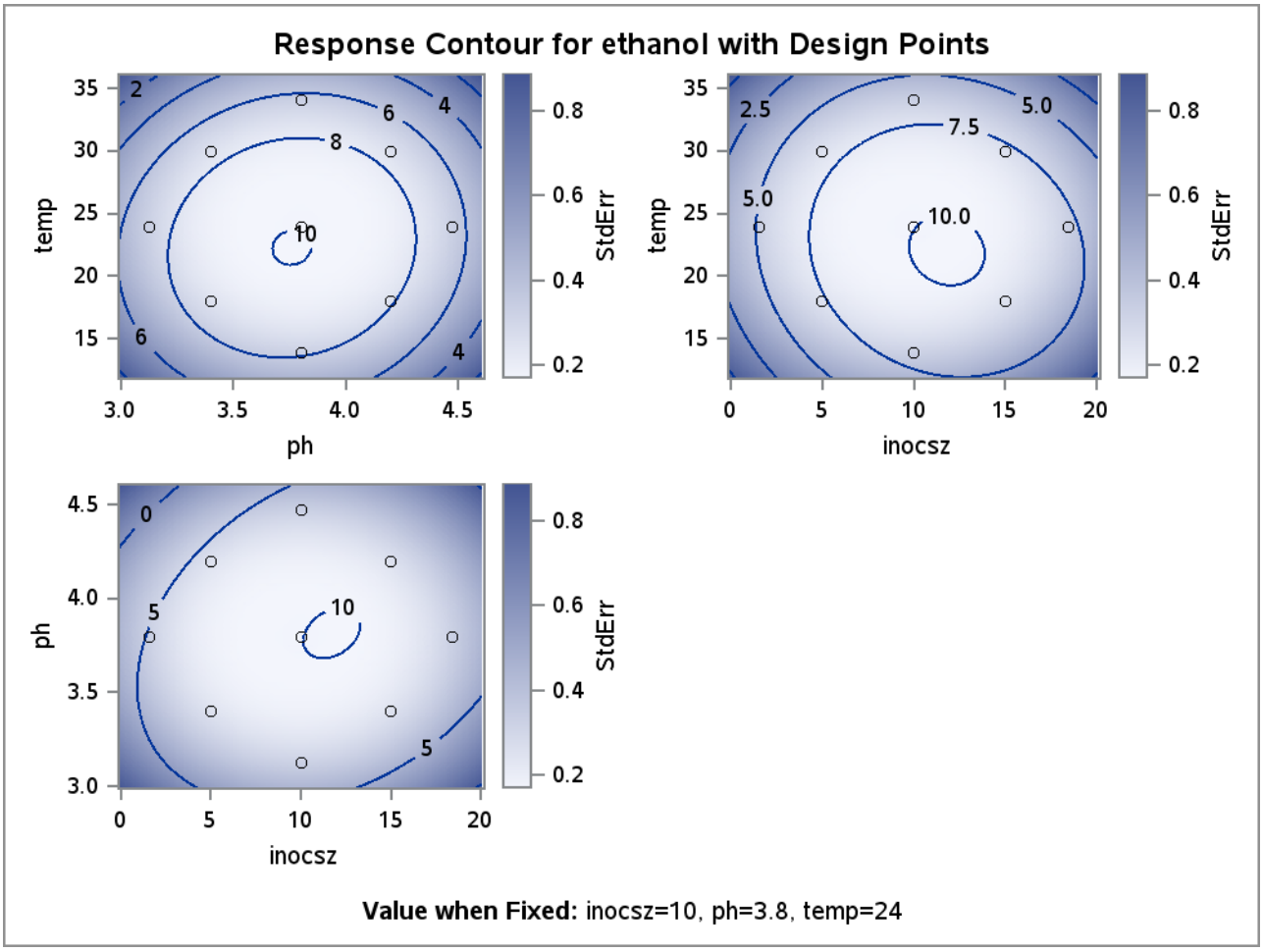
Factor	Critical Value	
	Coded	Uncoded
temp	-0.188955	22.093064
ph	0.017305	3.811642
inocsz	0.224511	11.888138
Predicted value at stationary point: 10.206581		

Eigenvalues	Eigenvectors		
	temp	ph	inocsz
-2.209322	-0.095312	0.749458	0.655155
-2.615383	0.966369	0.227577	-0.119747
-4.358732	0.238844	-0.621708	0.745944
Stationary point is a maximum.			

The RSREG Procedure



The RSREG Procedure



The RSREG Procedure