

ANEXO No. 11. ANALISIS DE VARIANZA DEL EXPERIMENTO (3^k) PARA LAS CORRIENTES: 706B (ALIMENTO A LA DHC) Y 723 (ALIMENTO AL COOLING SCRUBBER)

ANALISIS DE VARIANZA PARA LA CORRIENTE 706B (ALIMENTO A LA DHC)

Análisis de la Corriente, 706B (Experimento para determinación de Curvatura)
CB_706B_SQ_03252006.sgp (CB_706B_SQ_03262006.sfx)
15/04/2006 3:39 p.m.

Analysis Summary

Dependent variable: Ol_y_Ona_706

Factors:

- Carga
- Vapor_E530
- Presión_C525
- Nivel_V540
- Vapor_E532

Number of complete cases: 243

The StatAdvisor

This procedure performs a multifactor analysis of variance for Ol y Ona 706. It constructs various tests and graphs to determine which factors have a statistically significant effect on Ol y Ona 706. It also tests for significant interactions amongst the factors, given sufficient data. The F-tests in the ANOVA table will allow you to identify the significant factors. For each significant factor, the Multiple Range Tests will tell you which means are significantly different from which others. The Means Plot and Interaction Plot will help you interpret the significant effects. The Residual Plots will help you judge whether the assumptions underlying the analysis of variance are violated by the data.

Análisis de la Corriente, 706B (Experimento para determinación de Curvatura)
 CB_706B_SQ_03252006.sgp (CB_706B_SQ_03262006.sfx)
 15/04/2006 3:39 p.m.

Analysis of Variance for Ol y Ona 706 - Type III Sums of Squares

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
MAIN EFFECTS					
A:Carga	19736,6	2	9868,28	1783,46	0,0000
B:Vapor E530	8319,5	2	4159,75	751,78	0,0000
C:Presión C525	4310,55	2	2155,27	389,52	0,0000
D:Nivel_V540	18333,3	2	9166,67	1656,66	0,0000
E:Vapor_E532	1580,65	2	790,326	142,83	0,0000
INTERACTIONS					
AB	1848,85	4	462,213	83,53	0,0000
AC	2024,05	4	506,011	91,45	0,0000
AD	6,30303	4	1,57576	0,28	0,8873
AE	111,097	4	27,7741	5,02	0,0009
BC	4881,77	4	1220,44	220,57	0,0000
BD	22,649	4	5,66225	1,02	0,3985
BE	345,493	4	86,3734	15,61	0,0000
CD	143,151	4	35,7878	6,47	0,0001
CE	1410,84	4	352,709	63,74	0,0000
DE	67,3644	4	16,8411	3,04	0,0201
ABC	714,493	8	89,3117	16,14	0,0000
ABD	22,1188	8	2,76485	0,50	0,8542
ABE	76,2675	8	9,53343	1,72	0,1006
ACD	27,897	8	3,48712	0,63	0,7509
ACE	296,514	8	37,0642	6,70	0,0000
ADE	89,0781	8	11,1348	2,01	0,0512
BCD	86,3858	8	10,7982	1,95	0,0591
BCE	104,57	8	13,0713	2,36	0,0218
BDE	34,6632	8	4,3329	0,78	0,6185
CDE	97,1746	8	12,1468	2,20	0,0329
RESIDUAL	619,72	112	5,53321		
TOTAL (CORRECTED)	65311,1	242			

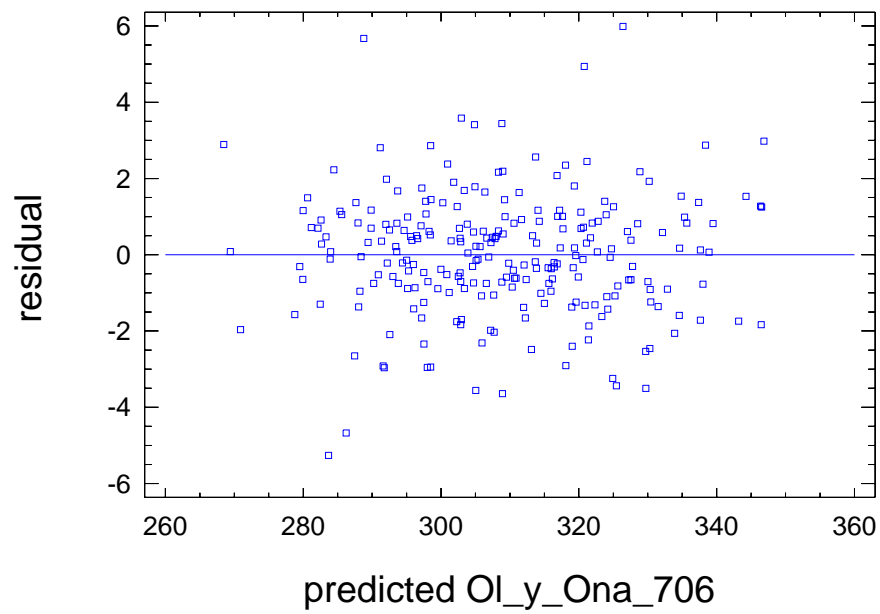
All F-ratios are based on the residual mean square error.

The StatAdvisor

The ANOVA table decomposes the variability of Ol y Ona 706 into contributions due to various factors. Since Type III sums of squares (the default) have been chosen, the contribution of each factor is measured having removed the effects of all other factors. The P-values test the statistical significance of each of the factors. Since 17 P-values are less than 0,05, these factors have a statistically significant effect on Ol_y_Ona_706 at the 95,0% confidence level.

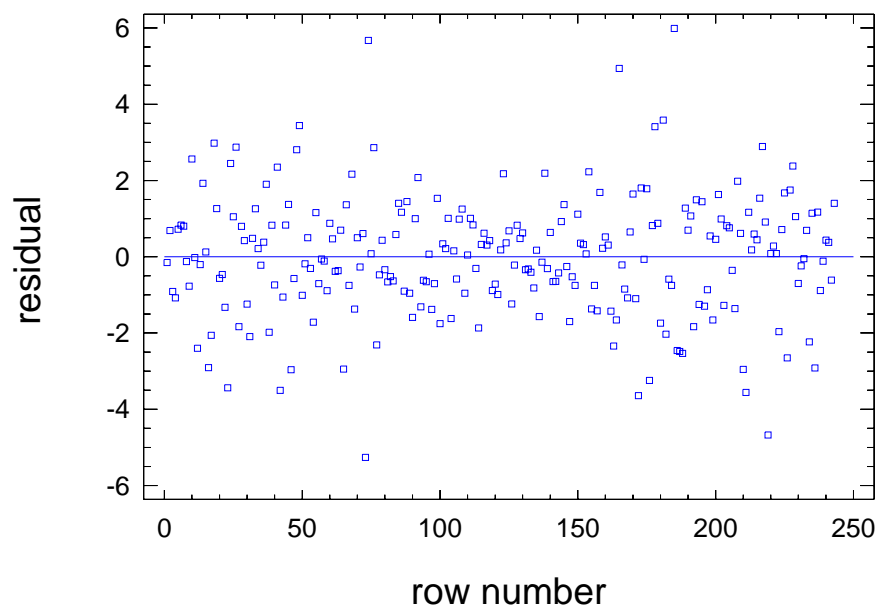
Análisis de la Corriente, 706B (Experimento para determinación de Curvatura)
CB_706B_SQ_03252006.sgp (CB_706B_SQ_03262006.sfx)
15/04/2006 3:39 p.m.

Residual Plot for OI_y_Ona_706



e, 706B (Experimento para determinación de Curvatura)
03252006.sgp (CB 706B SQ 03262006.sfx)
15/04/2006 3:39 p.m.

Residual Plot for Ol_y_Ona_706



ANALISIS DE VARIANZA PARA LA CORRIENTE 723 (ALIMENTO AL COOLING SRUBBER).

Análisis de la Corriente, 723 (Experimento para determinación de Curvatura)
CB_723_SQ_03252006.sgp (CB_723_SQ_03262006.sfx)
16/04/2006 3:46 p.m.

Analysis Summary

Dependent variable: Ol_y_Ona_723

Factors:

- Carga
- Vapor_E530
- P_C525
- Nivel_V540
- Vapor_E532

Number of complete cases: 243

The StatAdvisor

This procedure performs a multifactor analysis of variance for Ol y Ona 723. It constructs various tests and graphs to determine which factors have a statistically significant effect on Ol y Ona 723. It also tests for significant interactions amongst the factors, given sufficient data. The F-tests in the ANOVA table will allow you to identify the significant factors. For each significant factor, the Multiple Range Tests will tell you which means are significantly different from which others. The Means Plot and Interaction Plot will help you interpret the significant effects. The Residual Plots will help you judge whether the assumptions underlying the analysis of variance are violated by the data.

Análisis de la Corriente, 723 (Experimento para determinación de Curvatura)
 CB_723_SQ_03252006.sgp (CB_723_SQ_03262006.sfx)
 16/04/2006 3:46 p.m.

Analysis of Variance for Ol y Ona 723 - Type III Sums of Squares

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
MAIN EFFECTS					
A:Carga	16093,2	2	8046,6	1467,54	0,0000
B:Vapor E530	5926,88	2	2963,44	540,47	0,0000
C:P C525	25708,2	2	12854,1	2344,33	0,0000
D:Nivel_V540	14331,4	2	7165,68	1306,88	0,0000
E:Vapor_E532	1631,25	2	815,625	148,75	0,0000
INTERACTIONS					
AB	223,134	4	55,7834	10,17	0,0000
AC	128,697	4	32,1743	5,87	0,0003
AD	142,317	4	35,5793	6,49	0,0001
AE	26,4789	4	6,61972	1,21	0,3117
BC	654,745	4	163,686	29,85	0,0000
BD	53,3169	4	13,3292	2,43	0,0517
BE	201,52	4	50,38	9,19	0,0000
CD	663,962	4	165,99	30,27	0,0000
CE	3004,23	4	751,058	136,98	0,0000
DE	270,408	4	67,6021	12,33	0,0000
ABC	308,914	8	38,6142	7,04	0,0000
ABD	43,9439	8	5,49298	1,00	0,4388
ABE	60,2099	8	7,52623	1,37	0,2162
ACD	55,638	8	6,95475	1,27	0,2671
ACE	355,925	8	44,4906	8,11	0,0000
ADE	96,4978	8	12,0622	2,20	0,0325
BCD	55,481	8	6,93513	1,26	0,2690
BCE	216,225	8	27,0281	4,93	0,0000
BDE	55,2948	8	6,91184	1,26	0,2713
CDE	502,497	8	62,8122	11,46	0,0000
RESIDUAL	614,102	112	5,48306		
TOTAL (CORRECTED)	71424,4	242			

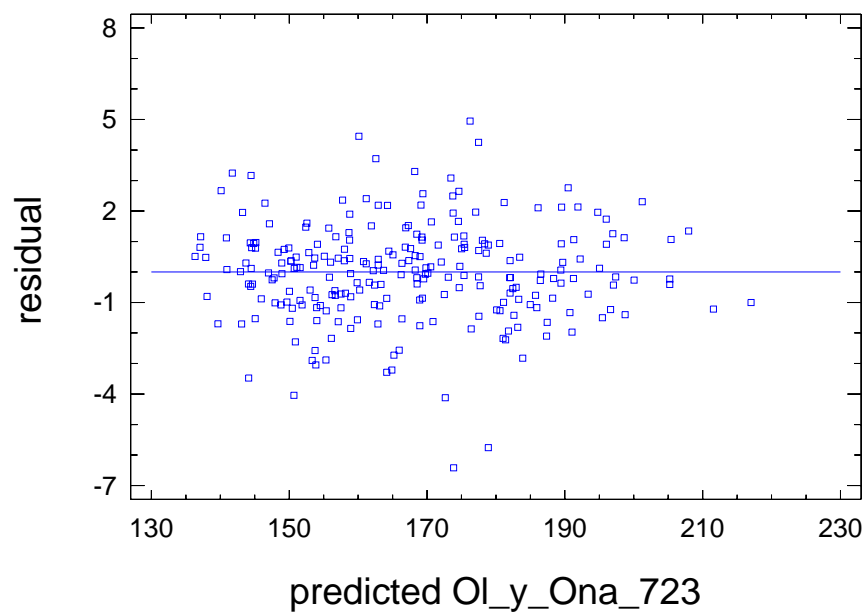
All F-ratios are based on the residual mean square error.

The StatAdvisor

The ANOVA table decomposes the variability of Ol y Ona 723 into contributions due to various factors. Since Type III sums of squares (the default) have been chosen, the contribution of each factor is measured having removed the effects of all other factors. The P-values test the statistical significance of each of the factors. Since 18 P-values are less than 0,05, these factors have a statistically significant effect on Ol_y_Ona_723 at the 95,0% confidence level.

Análisis de la Corriente, 723 (Experimento para determinación de Curvatura)
CB_723_SQ_03252006.sgp (CB_723_SQ_03262006.sfx)
16/04/2006 3:46 p.m.

Residual Plot for OI_y_Ona_723



e, 723 (Experimento para determinación de Curvatura)
03252006.sgp (CB 723 SQ 03262006.sfx)
16/04/2006 3:46 p.m.

Residual Plot for Ol_y_Ona_723

