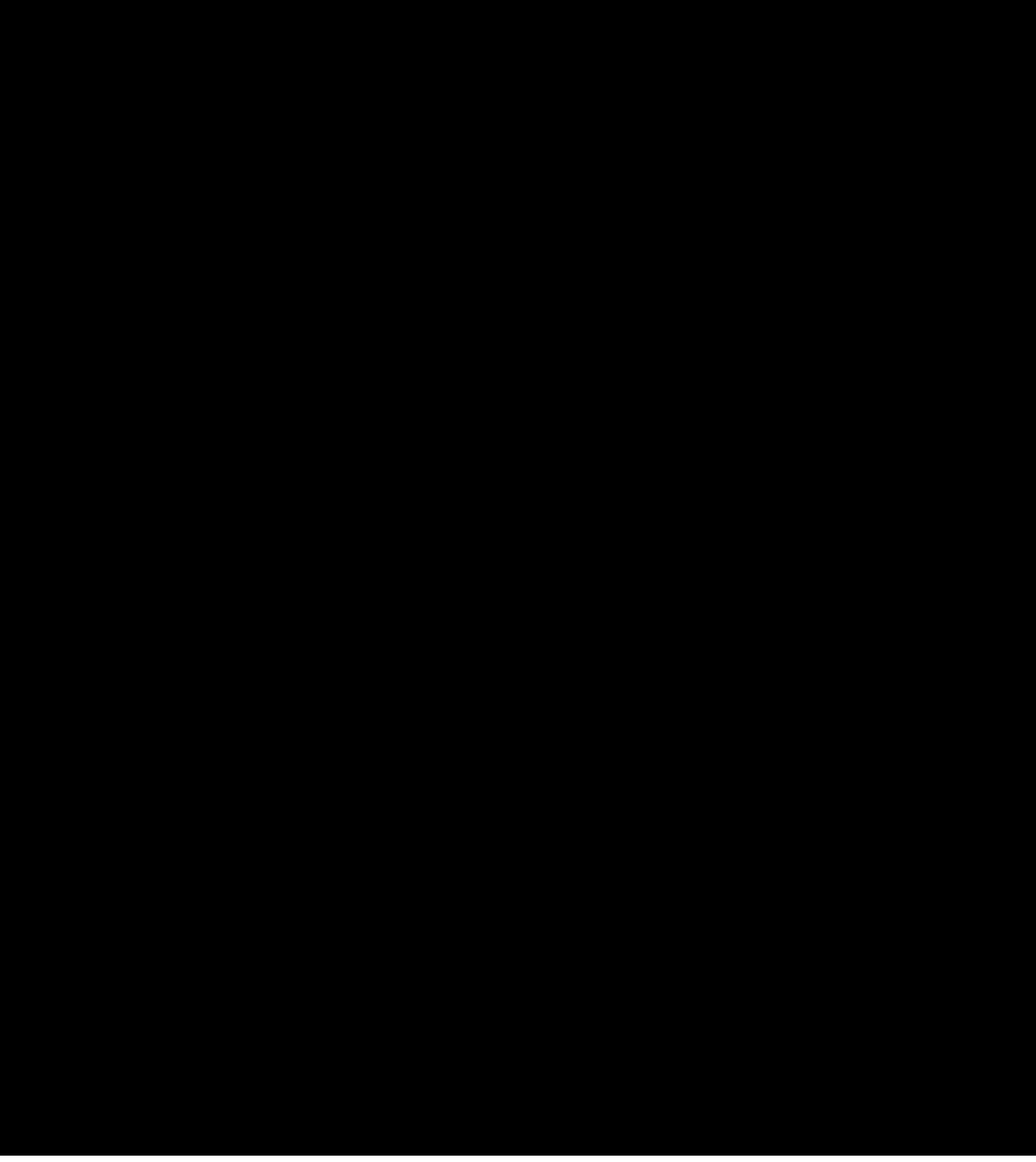




TWO YEAR

RAT LEAD FEEDING STUDY I

0, 10, 50, 100, 500 ppm

YEATMAN SNEE

DATE 130372 PAGE 10

XQT VARIAN

13 MAR 7

DUP050309678

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 *****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE/
 *****FACTOR3 NAME=TIME,NLEV=10,LNAME=1,2,3,6,9,12,15,18,21,24/
 *****RESPONSE HEMOGLOBIN/
 *****MEANS 2
 *****MEANS PLOT 2
 *****FORMAT(16X,8F8.2/10F8.2/10F8.2)
 *****DATA INOV=1

N36874.01

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28	1	1	3

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			16.10000
31	1	1	3
			16.80000
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			16.40000
33	1	1	3
			16.10000
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			16.90000
35	1	1	3
			17.10000
36	1	1	3
			17.20000
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			16.70000
38	1	1	4
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			15.60000
40	1	1	4
			17.20000
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			17.20000
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			16.40000
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			15.50000
45	1	1	4
			16.40000
46	1	1	4
			16.20000
47	1	1	4
			16.70000
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			16.80000
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			15.30000
52	1	1	5
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54	1	1	5
			16.60000
55	1	1	5
			16.50000
56	1	1	5
			14.50000
57	1	1	5
			16.10000

RAT LEAD FEEDING STUDY				STUDY 1	RESPONSE 1	PAGE	4
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59	1	1	5				
				14.70000			
60	1	1	5				
				15.90000			
61	1	1	6				
				17.00000			
62	1	1	6				
				18.10000			
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				17.00000			
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				14.00000			
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				15.90000			
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				14.70000			
75	1	1	7				
				16.40000			
76	1	1	7				
				16.60000			
77	1	1	7				
				16.10000			
78	1	1	7				
				16.40000			
79	1	1	7				
				15.80000			
80	1	1	7				
				18.80000			
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				15.50000			
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				15.80000			
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				16.20000			
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				14.20000			
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				16.10000			

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	14.70000		
88	1	1	8
	15.30000		
89	1	1	8
	16.80000		
90	1	1	8
	14.90000		
91	1	1	8
	15.50000		
92	1	1	8
	14.50000		
93	1	1	8
	16.20000		
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	13.10000		
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	15.50000		
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	14.70000		
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	15.30000		
98	1	1	9
	15.50000		
99	1	1	9
	14.60000		
100	1	1	9
	13.30000		
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	12.00000		
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	16.40000		
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	15.40000		
104	1	1	9
	13.70000		
105	1	1	9
	15.80000		
106	1	1	9
	16.10000		
107	1	1	9
	14.40000		
108	1	1	10
	15.70000		
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	16.00000		
110	1	1	10
	17.00000		
111	1	1	10
	12.70000		
112	1	1	10
	6.10000		
113	1	1	10
	12.10000		
114	1	1	10
	14.20000		
115	1	1	10
	14.80000		

RAT LEAD FEEDING STUDY STUDY I RESPONSE I

PAGE 6

6

116	1	1	10
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117	1	1	10
			13.30000
118	1	1	10
			16.30000
119	1	1	10
			7.00000
120	1	2	1
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			16.10000
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			15.90000
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141	1	2	2
			15.90000
142	1	2	2
			14.90000
143	1	2	2
			17.50000
144	1	2	3
			16.50000

RAT LEAD FEEDING STUDY				STUDY I	RESPONSE 1	PAGE	7	7
145	1	2	3					
146	1	2	3					
147	1	2	3					
148	1	2	3					
149	1	2	3					
150	1	2	3					
151	1	2	3					
152	1	2	3					
153	1	2	3					
154	1	2	3					
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169	1	2	5					
170	1	2	5					
171	1	2	5					
172	1	2	5					
173	1	2	5					

RAT LEAD FEEDING STUDY STUDY I RESPONSE 1

PAGE 8

174	1 2 5	15.90000
175	1 2 5	14.80000
176	1 2 5	15.80000
177	1 2 5	14.30000
178	1 2 5	14.70000
179	1 2 5	14.90000
180	1 2 6	15.80000
181	1 2 6	15.80000
182	1 2 6	15.80000
183	1 2 6	15.90000
184	1 2 6	16.10000
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197	1 2 7	14.00000
198	1 2 7	16.10000
199	1 2 7	15.10000
200	1 2 7	14.60000
201	1 2 7	15.70000
202	1 2 7	15.80000

RAT LEAD FEEDING STUDY				STUDY I	RESPONSE I	PAGE	9	9
203	1	2	8					
204	1	2	8					
205	1	2	8					
206	1	2	8					
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226	1	2	8					
227	1	2	8					
228	1	2	8					
229	1	2	8					
230	1	2	8					
231	1	2	8					

RAT LEAD FEEDING STUDY STUDY I RESPONSE 1

PAGE 10

232	1	2	10	14.20000
233	1	2	10	14.20000
234	1	2	10	11.50000
235	1	2	10	13.70000
236	1	2	10	15.10000
237	1	2	10	13.70000
238	2	1	1	15.10000
239	2	1	1	15.00000
240	2	1	1	16.10000
241	2	1	1	15.30000
242	2	1	1	14.40000
243	2	1	1	15.00000
244	2	1	2	15.60000
245	2	1	2	14.90000
246	2	1	2	16.20000
247	2	1	2	16.40000
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255	2	1	3	16.10000
256	2	1	4	16.90000
257	2	1	4	15.90000
258	2	1	4	15.00000
259	2	1	4	17.80000
260	2	1	4	16.10000

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	RAT LEAD FEEDING STUDY				STUDY I	RESPONSE 1	PAGE	11	11
261	2	1	4						
			17.40000						
262	2	1	5						
			14.60000						
263	2	1	5						
			16.40000						
264	2	1	5						
			15.70000						
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			15.50000						
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			15.30000						
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			15.60000						
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			15.30000						
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			16.10000						
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			15.50000						
287	2	1	9						
			6.30000						
288	2	1	9						
			15.40000						
289	2	1	9						
			14.40000						

	RAT LEAD FEEDING STUDY	STUDY I	RESPONSE 1	PAGE	12
290	2 1 9				
	14.00000				
291	2 1 9				
	15.30000				
292	2 1 10				
	12.10000				
293	2 1 10				
	16.10000				
294	2 1 10				
	14.40000				
295	2 1 10				
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	12.90000				
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	15.50000				
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	14.40000				
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	15.30000				
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	16.40000				
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	16.70000				
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	15.20000				
305	2 2 2				
	16.10000				
306	2 2 2				
	15.00000				
307	2 2 2				
	15.00000				
308	2 2 2				
	15.80000				
309	2 2 2				
	14.70000				
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	15.60000				
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	15.90000				
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	14.60000				
314	2 2 3				
	15.60000				
315	2 2 3				
	15.60000				
316	2 2 4				
	16.00000				
317	2 2 4				
	16.20000				
318	2 2 4				
	16.20000				

	HAT LEAD FEEDING STUDY	STUDY 1	RESPONSE 1	PAGE	13
319	2 2 4		16.10000		
320	2 2 4		15.10000		
321	2 2 4		15.90000		
322	2 2 5		14.90000		
323	2 2 5		15.40000		
324	2 2 5		16.20000		
325	2 2 5		14.60000		
326	2 2 5		14.00000		
327	2 2 6		14.80000		
328	2 2 6		16.30000		
329	2 2 6		15.20000		
330	2 2 6		14.70000		
331	2 2 6		15.80000		
332	2 2 6		16.10000		
333	2 2 7		14.10000		
334	2 2 7		18.50000		
335	2 2 7		15.50000		
336	2 2 7		13.60000		
337	2 2 7		14.70000		
338	2 2 7		15.40000		
339	2 2 8		16.50000		
340	2 2 8		13.90000		
341	2 2 8		17.20000		
342	2 2 8		15.30000		
343	2 2 8		14.90000		
344	2 2 8		16.10000		
345	2 2 9		15.40000		
346	2 2 9		14.40000		
347	2 2 9		14.10000		

	RAT LEAD FEEDING STUDY			STUDY 1	RESPONSE 1	PAGE	14	14
348	2	2	9					
			15.00000					
349	2	2	9					
			14.30000					
350	2	2	9					
			8.50000					
351	2	2	10					
			15.30000					
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			15.50000					
353	2	2	10					
			15.80000					
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			8.70000					
355	2	2	10					
			15.50000					
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			15.40000					
357	3	1	1					
			13.90000					
358	3	1	1					
			15.30000					
359	3	1	1					
			14.70000					
360	3	1	1					
			16.70000					
361	3	1	1					
			14.00000					
362	3	1	2					
			17.50000					
363	3	1	2					
			14.70000					
364	3	1	2					
			16.10000					
365	3	1	2					
			17.40000					
366	3	1	2					
			16.40000					
367	3	1	2					
			16.90000					
368	3	1	3					
			15.90000					
369	3	1	3					
			17.10000					
370	3	1	3					
			16.10000					
371	3	1	3					
			16.80000					
372	3	1	3					
			16.60000					
373	3	1	3					
			17.80000					
374	3	1	4					
			16.80000					
375	3	1	4					
			15.20000					
376	3	1	4					
			15.30000					

377	3	1	4	16.60000
378	3	1	4	16.90000
379	3	1	4	15.90000
380	3	1	5	16.60000
381	3	1	5	15.90000
382	3	1	5	14.70000
383	3	1	5	15.90000
384	3	1	5	15.80000
385	3	1	5	15.00000
386	3	1	6	14.80000
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389	3	1	6	16.30000
390	3	1	6	16.30000
391	3	1	6	13.90000
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393	3	1	7	16.90000
394	3	1	7	12.00000
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401	3	1	8	16.60000
402	3	1	8	12.80000
403	3	1	8	14.40000
404	3	1	9	14.80000
405	3	1	9	12.00000

406	3	1	9
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407	3	1	9
	11.20000		
408	3	1	9
	16.10000		
409	3	1	9
	15.40000		
410	3	1	10
	15.10000		
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	10.20000		
412	3	1	10
	17.00000		
413	3	1	10
	16.00000		
414	3	1	10
	14.50000		
415	3	1	10
	14.70000		
416	3	2	1
	16.80000		
419	3	2	1
	15.40000		
420	3	2	1
	15.70000		
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	14.80000		
422	3	2	2
	14.90000		
423	3	2	2
	15.90000		
424	3	2	2
	16.10000		
425	3	2	2
	15.90000		
426	3	2	2
	15.80000		
427	3	2	2
	17.50000		
428	3	2	3
	16.10000		
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	16.50000		
430	3	2	3
	15.60000		
431	3	2	3
	16.10000		
432	3	2	3
	16.50000		
433	3	2	3
	15.90000		
434	3	2	4
	15.90000		

435	3 2 4	17.10000
436	3 2 4	16.50000
437	3 2 4	16.70000
438	3 2 4	16.90000
439	3 2 4	15.60000
440	3 2 5	15.20000
441	3 2 5	15.80000
442	3 2 5	14.60000
443	3 2 5	12.90000
444	3 2 5	14.90000
445	3 2 5	14.70000
446	3 2 6	16.10000
447	3 2 6	16.30000
448	3 2 6	15.40000
449	3 2 6	17.80000
450	3 2 6	16.60000
451	3 2 6	16.00000
452	3 2 7	15.80000
453	3 2 7	15.80000
454	3 2 7	15.50000
455	3 2 7	15.50000
456	3 2 7	5.64000
457	3 2 8	15.50000
458	3 2 8	15.60000
459	3 2 8	15.90000
460	3 2 8	15.30000
461	3 2 8	14.60000
462	3 2 8	16.40000
463	3 2 9	15.40000

464	3 2 9	14.80000
465	3 2 9	14.00000
466	3 2 9	14.00000
467	3 2 9	14.00000
468	3 2 9	14.00000
469	3 2 10	14.60000
470	3 2 10	12.70000
471	3 2 10	10.70000
472	3 2 10	16.10000
473	3 2 10	15.20000
474	3 2 10	15.20000
475	4 1 1	17.00000
476	4 1 1	15.30000
477	4 1 1	15.10000
478	4 1 1	15.30000
479	4 1 1	14.60000
480	4 1 1	15.40000
481	4 1 2	14.30000
482	4 1 2	15.60000
483	4 1 2	15.50000
484	4 1 2	16.60000
485	4 1 2	16.60000
486	4 1 2	14.90000
487	4 1 3	17.70000
488	4 1 3	16.10000
489	4 1 3	17.70000
490	4 1 3	16.40000
491	4 1 3	15.30000
492	4 1 3	15.60000
		16.20000

RAT LEAD FEEDING STUDY				STUDY I	RESPONSE I	PAGE	19	19
493	4	1	4	16.50000				
494	4	1	4	16.60000				
495	4	1	4	15.70000				
496	4	1	4	16.90000				
497	4	1	4	17.10000				
498	4	1	4	16.10000				
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500	4	1	5	16.70000				
501	4	1	5	14.30000				
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505	4	1	6	14.70000				
506	4	1	6	14.90000				
507	4	1	6	16.70000				
508	4	1	6	15.20000				
509	4	1	6	16.10000				
510	4	1	6	14.80000				
511	4	1	7	16.10000				
512	4	1	7	16.10000				
513	4	1	7	14.60000				
514	4	1	7	17.00000				
515	4	1	7	15.80000				
516	4	1	7	15.90000				
517	4	1	8	14.40000				
518	4	1	8	16.40000				
519	4	1	8	15.90000				
520	4	1	8	16.10000				
521	4	1	8	13.90000				

	HAT LEAD FEEDING STUDY	STUDY 1	RESPONSE 1	PAGE	20	20
522	4 1 8					
	15.10000					
523	4 1 9					
	17.80000					
524	4 1 9					
	14.70000					
525	4 1 9					
	14.30000					
526	4 1 9					
	14.00000					
527	4 1 9					
	15.70000					
528	4 1 9					
	15.10000					
529	4 1 10					
	14.70000					
530	4 1 10					
	10.10000					
531	4 1 10					
	12.50000					
532	4 1 10					
	13.20000					
533	4 1 10					
	13.30000					
534	4 1 10					
	15.00000					
535	4 2 1					
	16.10000					
536	4 2 1					
	15.50000					
537	4 2 1					
	15.80000					
538	4 2 1					
	15.50000					
539	4 2 1					
	16.80000					
540	4 2 1					
	15.30000					
541	4 2 2					
	15.60000					
542	4 2 2					
	15.50000					
543	4 2 2					
	16.10000					
544	4 2 2					
	15.00000					
545	4 2 2					
	16.80000					
546	4 2 2					
	16.40000					
547	4 2 3					
	15.20000					
548	4 2 3					
	15.30000					
549	4 2 3					
	17.40000					
550	4 2 3					
	14.40000					

RAT LEAD FEEDING STUDY				STUDY 1	RESPONSE 1	PAGE	21	21
551	4	2	3	14.90000				
552	4	2	3	15.90000				
553	4	2	4	17.10000				
554	4	2	4	15.50000				
555	4	2	4	16.90000				
556	4	2	4	16.50000				
557	4	2	4	16.10000				
558	4	2	4	16.20000				
559	4	2	5	15.30000				
560	4	2	5	14.20000				
561	4	2	5	15.00000				
562	4	2	5	14.50000				
563	4	2	5	13.10000				
564	4	2	5	16.10000				
565	4	2	6	14.80000				
566	4	2	6	16.10000				
567	4	2	6	15.10000				
568	4	2	6	15.20000				
569	4	2	6	15.00000				
570	4	2	6	16.30000				
571	4	2	7	13.90000				
572	4	2	7	14.70000				
573	4	2	7	15.50000				
574	4	2	7	15.10000				
575	4	2	7	15.20000				
576	4	2	7	16.00000				
577	4	2	8	15.60000				
578	4	2	8	16.20000				
579	4	2	8	14.70000				

580	4	2	8	15.90000
581	4	2	8	16.10000
582	4	2	8	16.90000
583	4	2	9	15.40000
584	4	2	9	15.00000
585	4	2	9	15.80000
586	4	2	9	15.50000
587	4	2	9	14.70000
588	4	2	9	14.60000
589	4	2	10	14.40000
590	4	2	10	8.60000
591	4	2	10	7.20000
592	4	2	10	10.70000
593	4	2	10	13.40000
594	4	2	10	15.50000
595	5	1	1	14.70000
596	5	1	1	15.50000
597	5	1	1	14.40000
598	5	1	1	14.00000
599	5	1	1	15.70000
600	5	1	1	15.10000
601	5	1	2	15.80000
602	5	1	2	16.50000
603	5	1	2	15.20000
604	5	1	2	17.40000
605	5	1	2	17.50000
606	5	1	2	15.60000
607	5	1	3	17.40000
608	5	1	3	16.90000

	RAY LEAD FEEDING STUDY	STUDY I	RESPONSE 1	PAGE	23	23
609	5 1 3					
	15.90000					
610	5 1 3					
	15.30000					
611	5 1 3					
	16.60000					
612	5 1 3					
	16.80000					
613	5 1 4					
	14.50000					
614	5 1 4					
	15.00000					
615	5 1 4					
	16.10000					
616	5 1 4					
	15.60000					
617	5 1 4					
	17.60000					
618	5 1 4					
	15.70000					
619	5 1 5					
	13.90000					
620	5 1 5					
	16.80000					
621	5 1 5					
	14.40000					
622	5 1 5					
	15.30000					
623	5 1 5					
	15.20000					
624	5 1 5					
	16.80000					
625	5 1 6					
	15.10000					
626	5 1 6					
	16.60000					
627	5 1 6					
	14.60000					
628	5 1 6					
	15.00000					
629	5 1 6					
	16.70000					
630	5 1 6					
	16.90000					
631	5 1 7					
	15.10000					
632	5 1 7					
	16.90000					
633	5 1 7					
	16.40000					
634	5 1 7					
	14.00000					
635	5 1 7					
	15.80000					
636	5 1 7					
	17.50000					
637	5 1 8					
	10.70000					

638	5	1	8
	10.20000		
639	5	1	8
	15.60000		
640	5	1	8
	11.70000		
641	5	1	8
	16.20000		
642	5	1	8
	15.90000		
643	5	1	9
	14.30000		
644	5	1	9
	14.80000		
645	5	1	9
	17.60000		
646	5	1	9
	14.80000		
647	5	1	9
	5.10000		
648	5	1	9
	12.10000		
649	5	1	10
	12.60000		
650	5	1	10
	13.40000		
651	5	1	10
	15.40000		
652	5	1	10
	11.70000		
653	5	1	10
	7.20000		
654	5	1	10
	9.80000		
655	5	2	1
	16.50000		
656	5	2	1
	16.20000		
657	5	2	1
	17.40000		
658	5	2	1
	14.60000		
659	5	2	1
	17.60000		
660	5	2	1
	16.00000		
661	5	2	2
	17.40000		
662	5	2	2
	16.40000		
663	5	2	2
	15.50000		
664	5	2	2
	15.20000		
665	5	2	2
	16.80000		
666	5	2	2
	15.60000		

HAT LEAD FEEDING STUDY STUDY I RESPONSE I

PAGE 23 25

667	5	2	3	16.90000
668	5	2	3	14.70000
669	5	2	3	16.10000
670	5	2	3	16.10000
671	5	2	3	15.60000
672	5	2	3	14.50000
673	5	2	4	15.00000
674	5	2	4	15.90000
675	5	2	4	14.70000
676	5	2	4	16.20000
677	5	2	4	17.10000
678	5	2	4	15.30000
679	5	2	5	15.30000
680	5	2	5	14.30000
681	5	2	5	15.00000
682	5	2	5	15.20000
683	5	2	5	15.10000
684	5	2	5	14.00000
685	5	2	6	14.80000
686	5	2	6	16.10000
687	5	2	6	15.20000
688	5	2	6	16.30000
689	5	2	6	15.40000
690	5	2	6	16.00000
691	5	2	7	15.20000
692	5	2	7	16.00000
693	5	2	7	14.80000
694	5	2	7	15.10000
695	5	2	7	15.80000

696	5	2	7	16.60000
697	5	2	8	16.10000
698	5	2	8	16.60000
699	5	2	8	12.50000
700	5	2	8	16.50000
701	5	2	8	15.50000
702	5	2	8	15.00000
703	5	2	9	14.40000
704	5	2	9	13.40000
705	5	2	9	13.30000
706	5	2	9	15.70000
707	5	2	9	15.00000
708	5	2	9	15.00000
709	5	2	10	14.40000
710	5	2	10	13.50000
711	5	2	10	15.50000
712	5	2	10	11.90000
713	5	2	10	5.80000
714	5	2	10	11.50000

EXPANDED DATA MATRIX IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

HEMOGLOBIN

1	1	1	1
2	2	1	1
3	3	1	1
4	4	1	1
5	5	1	1

NO. OF INPUT DATA ROWS = 714
NO. OF ROWS DELETED BY LOGICAL TESTS = 0
NO. OF ROWS DELETED FOR MISSING DATA = 0
NO. OF EXPANDED DATA ROWS REMAINING = 714

*****ANOVA

RAT LEAD FEEDING STUDY STUDY I RESPONSE I

PAGE 28 28

RESPONSE NUMBER 1 HEMOGLOBIN

CELL IDENTIFICATION

CELL IDENTIFICATION	CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
1 1 1	15.1917	.4972	.7051	12
1 1 2	16.8917	.6136	.7833	12
1 1 3	16.5083	.4445	.6667 *	12
1 1 4	16.2833	.3579	.5982 *	12
1 1 5	15.8750	.6202	.7875	12
1 1 6	15.8818	1.8976	1.3775	11
1 1 7	16.2833	1.0142	1.0071	12
1 1 8	15.2500	1.0700	1.0344	12
1 1 9	14.7667	1.6224	1.2737	12
1 1 10	13.0667	12.2151	3.4950 *	12
1 2 1	14.9167	.4324	.6576 *	12
1 2 2	16.1250	.6530	.8081	12
1 2 3	15.6167	.4233	.6506 *	12
1 2 4	15.7083	.2772	.5265 *	12
1 2 5	15.1333	.3406	.5836 *	12
1 2 6	15.6636	.1305	.3613 *	11
1 2 7	14.9333	.7024	.8381	12
1 2 8	15.7364	.4305	.6562 *	12
1 2 9	13.9917	4.3808	2.0930 *	12
1 2 10	13.9250	4.3784	2.0925 *	12
2 1 1	15.1500	.3070	.5541 *	6
2 1 2	15.9167	.3577	.5980 *	6
2 1 3	16.4167	.3097	.5565 *	6
2 1 4	16.5167	1.0857	1.0420	6
2 1 5	15.6500	.3550	.5958 *	6
2 1 6	15.5833	.2537	.5037 *	6
2 1 7	15.7333	.3027	.5502 *	6
2 1 8	15.0000	2.5600	1.6000	6
2 1 9	13.4833	12.7497	3.5707 *	6
2 1 10	14.0000	2.5280	1.5900	6
2 2 1	15.8667	.7507	.8664	6
2 2 2	15.3000	.2880	.5367 *	6
2 2 3	15.9500	1.6390	1.2802	6
2 2 4	15.9167	.1737	.4167 *	6
2 2 5	15.0200	.6920	.8319	5
2 2 6	15.4833	.4617	.6795 *	6
2 2 7	15.3000	2.9960	1.7309 *	6
2 2 8	15.6500	1.4150	1.1895	6
2 2 9	13.6167	6.5177	2.5530 *	6
2 2 10	13.7600	9.0080	3.0013 *	5
3 1 1	15.0000	1.0880	1.0431	6
3 1 2	16.5000	1.0760	1.0373	6
3 1 3	16.7167	.4777	.6911 *	6
3 1 4	16.1167	.5737	.7574	6
3 1 5	15.6500	.4750	.6892 *	6
3 1 6	15.4667	1.7307	1.3155	6
3 1 7	15.3667	3.0227	1.7386 *	6
3 1 8	15.3000	2.2160	1.4886	6
3 1 9	14.1667	4.1867	2.0461 *	6
3 1 10	14.5833	5.4697	2.3387 *	6
3 2 1	15.6833	.4857	.6969 *	6
3 2 2	16.0167	.7057	.8400	6
3 2 3	16.1167	.1217	.3488 *	6

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 1

PAGE 29

29

3	2	4	16.4500	.3430	.5857 *	6
3	2	5	14.6833	.9497	.9745	6
3	2	6	16.3667	.6507	.8066	6
3	2	7	13.6480	20.0625	4.4791 *	5
3	2	8	15.5500	.3630	.6025 *	6
3	2	9	14.4667	.3307	.5750 *	6
3	2	10	14.4833	5.4937	2.3439 *	6
4	1	1	15.0000	.2000	.4472 *	6
4	1	2	16.1500	1.0190	1.0095	6
4	1	3	16.2167	.6937	.8329	6
4	1	4	16.4833	.2657	.5154 *	6
4	1	5	16.1000	1.4520	1.2050	6
4	1	6	15.4000	.6640	.8149	6
4	1	7	15.9167	.5977	.7731	6
4	1	8	15.3000	1.0040	1.0020	6
4	1	9	15.2667	1.8987	1.3779	6
4	2	1	13.1333	3.1147	1.7648 *	6
4	2	2	15.8333	.3027	.5501 *	6
4	2	3	15.9000	.4320	.6573 *	6
4	2	4	15.5167	1.0937	1.0458	6
4	2	5	16.3833	.3377	.5811 *	6
4	2	6	14.7000	1.0520	1.0257	6
4	2	7	15.4167	.3897	.6242 *	6
4	2	8	15.0667	.5147	.7174	6
4	2	9	15.9000	.5320	.7294	6
4	2	10	15.1667	.2267	.4761 *	6
5	1	1	11.6333	11.0907	3.3303 *	6
5	1	2	14.9000	.4280	.6542 *	6
5	1	3	16.3333	.9267	.9626	6
5	1	4	16.4833	.5737	.7574	6
5	1	5	15.7500	1.1390	1.0672	6
5	1	6	15.4000	1.4440	1.2017	6
5	1	7	15.8167	1.0457	1.0226	6
5	1	8	15.9500	1.6110	1.2693	6
5	1	9	13.3833	7.8697	2.8053 *	6
5	1	10	13.1167	18.4937	4.3004 *	6
5	2	1	11.6833	8.2497	2.8722 *	6
5	2	2	16.3833	1.1777	1.0852	6
5	2	3	16.1500	.7350	.8573	6
5	2	4	15.6500	.8390	.9160	6
5	2	5	15.7000	.7800	.8632	6
5	2	6	14.8167	.2857	.5345 *	6
5	2	7	15.6333	.3467	.5888 *	6
5	2	8	15.5833	.4497	.6706 *	6
5	2	9	15.3667	2.3427	1.5306	6
5	2	10	14.4667	.9187	.9585	6
5	2		12.1000	11.7800	3.4322 *	6

MEAN OF THE CELL MEANS = 15.28543

WITHIN CELL VARIANCE = 2.01914
 WITHIN CELL STANDARD DEVIATION = 1.42096
 HARMONIC MEAN OF CELL SIZE = 6.61257
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .09296
 VARIANCE OF A CELL MEAN = .30535
 STANDARD ERROR OF A CELL MEAN = .55258

CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 1.67090
 LOWER CONTROL LIMIT = .69894
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 78.44 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

1725



DUP050309709

HAT LEAD FEEDING STUDY			STUDY 1	RESPONSE 1	EXPECTED MEAN SQUARE TABLE	PAGE	32	32
SOURCE OF VARIATION			EXPECTED MEAN SQUARE					
A = PB LEVEL			REP + 20(A)					
B = SEX			REP + 50(B)					
AB			REP + 10(AB)					
C = TIME			REP + 10(C)					
AC			REP + 2(AC)					
BC			REP + 5(BC)					
ABC			REP + 1(ABC)					
REPLICATES			REP					

UNWEIGHTED ANALYSIS OF CELL MEANS

RESPONSE NUMBER 1 HEMOGLOBIN

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	99	110.17317		
A = PB LEVEL	4	1.86087	.46522	1.52
B = SEX	1	.58581	.58581	1.92
AB	4	1.59601	.39900	1.31
C = TIME	9	75.58383	8.39820	27.50 **
AC	36	17.57428	.48817	1.60 *
BC	9	8.24698	.91633	3.00 **
ABC	36	4.72541	.13126	.43
REPLICATES	614		.30535	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 HEMOGLOBIN MEANS TABLES

PB LEVEL	MEANS				
0	15.3874	10	15.2657	50	15.3242
				100	15.3242
				500	15.0333

STANDARD ERROR OF A MEAN = .1236
 95% CONFIDENCE LIMITS = .2427
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .1747
 LEAST SIGNIFICANT DIFFERENCE (LSD) = .3432

2.765

SEX MEANS

MALE 15.3620
 FEMALE 15.2089

STANDARD ERROR OF A MEAN = .0781
 95% CONFIDENCE LIMITS = .1535
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .1105
 LEAST SIGNIFICANT DIFFERENCE (LSD) = .2170

PB LEVEL * SEX INTERACTION

PB LEVEL SEX

PB LEVEL	FEMALE DIFFERENCES	
	MALE	FEMALE
0	15.5998	15.1750
10	15.3450	15.1863
50	15.4867	15.3465
100	15.4967	15.1517
500	14.6817	15.1850

STANDARD ERROR OF A MEAN = .1747
 95% CONFIDENCE LIMITS = .3432
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .2471
 LEAST SIGNIFICANT DIFFERENCE (LSD) = .4853

TIME MEANS

1 15.3925 2 16.1283 3 16.1192 6 16.1308 9 15.3028 12 15.6712 15 15.3781 18 15.2436 21 14.2508 24 13.2368

STANDARD ERROR OF A MEAN =

95% CONFIDENCE LIMITS =

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

LEAST SIGNIFICANT DIFFERENCE (LSD) =

.1747

.3432

.2471

.4853

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

1 15.0542 2 16.5083 3 16.0625 6 15.9958 9 15.5042 12 15.7727 15 15.6083 18 15.4932 21 14.3792 24 13.4958
 10 15.5083 15.6083 16.1833 16.2167 15.3350 15.5167 15.3250 13.5500 13.8800
 50 15.3417 16.2583 16.4167 16.2833 15.1667 14.5073 15.4250 14.3167 14.5333
 100 15.4167 16.0250 15.8667 16.4333 15.4000 15.4083 15.4917 15.6000 15.2167 12.3833
 500 15.6417 16.2417 16.0667 15.7250 15.1083 15.7250 15.7667 14.3750 13.7917 11.8917

STANDARD ERROR OF A MEAN =

95% CONFIDENCE LIMITS =

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

LEAST SIGNIFICANT DIFFERENCE (LSD) =

.3907

.7674

.5526

1.0852

SEX * TIME INTERACTION

SEX TIME

	1	2	3	6	9	12	15	18	21	24
MALE	15.0483	16.3583	16.4683	16.2300	15.7350	15.6297	15.8500	14.8467	14.1400	13.2933
FEMALE	15.7367	15.8983	15.7700	16.0317	14.8707	15.7127	14.9063	15.6406	14.3417	13.1803
DIFFERENCES	-.6883	.4600	.6983	.1983	.8643	-.0830	.9437	-.7939	-.1817	.1130

STANDARD ERROR OF A MEAN =

.2471

95% CONFIDENCE LIMITS =

.4853

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

.3495

LEAST SIGNIFICANT DIFFERENCE (LSD) =

.6863

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

11.70 12.55 13.40 14.25 15.10 15.95 16.80

PB LEVEL	SEX	TIME										MEANS	I
		1	2	1	2	1	2	1	2	1	2		
1	+	+	+	+	+	+	+	+	+	+	+	+	+
2	+	+	+	+	+	+	+	+	+	+	+	+	+
3	+	+	+	+	+	+	+	+	+	+	+	+	+
4	+	+	+	+	+	+	+	+	+	+	+	+	+
5	+	+	+	+	+	+	+	+	+	+	+	+	+
6	+	+	+	+	+	+	+	+	+	+	+	+	+
7	+	+	+	+	+	+	+	+	+	+	+	+	+
8	+	+	+	+	+	+	+	+	+	+	+	+	+
9	+	+	+	+	+	+	+	+	+	+	+	+	+
10	+	+	+	+	+	+	+	+	+	+	+	+	+
11.70 12.55 13.40 14.25 15.10 15.95 16.80													11.70 12.55 13.40 14.25 15.10 15.95 16.80

STOP

DUP050309720

```

*****MODEL NFAC=3,NOD=1,RFC=7,DESIGN=C,NREP=28,EQUAL=F./
*****FACTOR1 NAME=PB LEVEL,NLEV=5,LNAME=0,10,50,100,500/
*****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE/
*****FACTOR3 NAME=TIME,NLEV=10,LNAME=1,2,3,6,9,12,15,18,21,24/
*****RESPONSE HEMATOCRIT/
*****MEANS 2
*****MEANS PLOT 2
*****FORMAT(16X,8F8.2/10F6.2/10F5.2)
*****DATA INOV=1

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N36874.02

1	1	1	1
2	1	1	1
3	1	1	1
4	1	1	1
5	1	1	1
6	1	1	1
7	1	1	1
8	1	1	1
9	1	1	1
10	1	1	1
11	1	1	1
12	1	1	1
13	1	1	2
14	1	1	2
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RAT LEAD FEEDING STUDY STUDY I RESPONSE 2

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613	5	1	3	44.00000
614	5	1	3	43.00000
615	5	1	4	41.00000
616	5	1	4	43.00000
617	5	1	4	48.00000
618	5	1	4	44.00000
619	5	1	4	48.00000
620	5	1	4	47.00000
621	5	1	5	44.00000
622	5	1	5	49.00000
623	5	1	5	45.00000
624	5	1	5	47.00000
625	5	1	5	46.00000
626	5	1	5	49.00000
627	5	1	6	40.00000
628	5	1	6	45.00000
629	5	1	6	45.00000
630	5	1	6	43.00000
631	5	1	6	45.00000
632	5	1	6	47.00000
633	5	1	7	44.00000
634	5	1	7	47.00000
635	5	1	7	50.00000
636	5	1	7	43.00000
637	5	1	7	49.00000

638	5	1	7	50.00000
639	5	1	8	33.00000
640	5	1	8	29.00000
641	5	1	8	43.00000
642	5	1	8	39.00000
643	5	1	8	44.00000
644	5	1	8	40.00000
645	5	1	9	42.00000
646	5	1	9	46.00000
647	5	1	9	50.00000
648	5	1	9	43.00000
649	5	1	9	11.00000
650	5	1	9	36.00000
651	5	1	10	37.00000
652	5	1	10	40.00000
653	5	1	10	46.00000
654	5	1	10	37.00000
655	5	1	10	20.00000
656	5	1	10	47.00000
657	5	2	1	39.00000
658	5	2	1	37.00000
659	5	2	1	40.00000
660	5	2	1	36.00000
661	5	2	1	41.00000
662	5	2	1	42.00000
663	5	2	2	47.00000
664	5	2	2	42.00000
665	5	2	2	41.00000
666	5	2	2	39.00000

667	5	2	2	46.00000
668	5	2	2	44.00000
669	5	2	3	43.00000
670	5	2	3	38.00000
671	5	2	3	42.00000
672	5	2	3	43.00000
673	5	2	3	41.00000
674	5	2	3	39.00000
675	5	2	4	43.00000
676	5	2	4	46.00000
677	5	2	4	43.00000
678	5	2	4	47.00000
679	5	2	4	49.00000
680	5	2	4	46.00000
681	5	2	5	43.00000
682	5	2	5	41.00000
683	5	2	5	45.00000
684	5	2	5	45.00000
685	5	2	5	43.00000
686	5	2	5	41.00000
687	5	2	6	40.00000
688	5	2	6	45.00000
689	5	2	6	44.00000
690	5	2	6	44.00000
691	5	2	6	42.00000
692	5	2	6	45.00000
693	5	2	7	41.00000
694	5	2	7	47.00000
695	5	2	7	42.00000

	RAT LEAD FEEDING STUDY	STUDY I	RESPONSE 2	PAGE	26	26
696	5 2 7					
	42.00000					
697	5 2 7					
	46.00000					
698	5 2 7					
	46.00000					
699	5 2 8					
	48.00000					
700	5 2 8					
	47.00000					
701	5 2 8					
	35.00000					
702	5 2 8					
	45.00000					
703	5 2 8					
	45.00000					
704	5 2 8					
	45.00000					
705	5 2 9					
	43.00000					
706	5 2 9					
	37.00000					
707	5 2 9					
	37.00000					
708	5 2 9					
	44.00000					
709	5 2 9					
	42.00000					
710	5 2 9					
	41.00000					
711	5 2 10					
	40.00000					
712	5 2 10					
	39.00000					
713	5 2 10					
	45.00000					
714	5 2 10					
	35.00000					
715	5 2 10					
	19.00000					
716	5 2 10					
	34.00000					

EXPANDED DATA MATRIX (IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVEL(S))

HEMATOCRIT				
1	1	1	1	1
2	42.00000	1	1	1
3	41.00000	1	1	1
4	43.00000	1	1	1
5	43.00000	1	1	1
	41.00000	1	1	1

NO. OF INPUT DATA ROWS = 716
 NO. OF ROWS DELETED BY LOGICAL TESTS = 0
 NO. OF ROWS DELETED FOR MISSING DATA = 0
 NO. OF EXPANDED DATA ROWS REMAINING = 716

*****ANOVA

RESPONSE NUMBER 1 HEMATOCRIT

CELL IDENTIFICATION

CELL IDENTIFICATION		CELL MEAN		CELL VARIANCE		STANDARD DEVIATION		CELL		NUMBER OF	
1	1	1	40.9167	3.1742	1.7816 *	12	12	12	12	12	12
1	1	2	46.2500	8.5682	2.9271 *	12	12	12	12	12	12
1	1	3	44.8333	1.7879	1.5371 *	12	12	12	12	12	12
1	1	4	47.0833	2.0833	1.4434 *	12	12	12	12	12	12
1	1	5	46.0833	10.4470	3.2322 *	12	12	12	12	12	12
1	1	6	44.4545	10.0727	3.1738 *	11	11	11	11	11	11
1	1	7	46.9167	5.7197	2.3916 *	12	12	12	12	12	12
1	1	8	42.0000	8.1818	2.8604 *	12	12	12	12	12	12
1	1	9	41.5833	12.6288	3.5537 *	12	12	12	12	12	12
1	1	10	37.4167	97.3561	9.8669 *	12	12	12	12	12	12
1	1	2	38.7500	6.0227	2.4541 *	12	12	12	12	12	12
1	1	2	44.4167	6.6288	2.5746 *	12	12	12	12	12	12
1	1	2	41.7500	4.2045	2.0505 *	12	12	12	12	12	12
1	1	2	44.1667	3.6061	1.8990 *	12	12	12	12	12	12
1	1	2	43.6667	3.3334	1.8257 *	12	12	12	12	12	12
1	1	2	43.2727	3.8182	1.9540 *	11	11	11	11	11	11
1	1	2	42.5833	1.5379	1.2401 *	12	12	12	12	12	12
1	1	2	43.7500	4.5682	2.1373 *	12	12	12	12	12	12
1	1	2	38.0833	39.1742	6.2589 *	12	12	12	12	12	12
1	1	2	39.4167	25.9015	5.0894 *	12	12	12	12	12	12
1	1	2	41.0000	.0000	.8944 *	6	6	6	6	6	6
1	1	2	43.1667	2.5667	2.4495 *	6	6	6	6	6	6
1	1	2	46.5000	5.1000	1.6021 *	6	6	6	6	6	6
1	1	2	46.8333	1.7667	2.2583 *	6	6	6	6	6	6
1	1	2	44.8333	5.7667	1.3292 *	6	6	6	6	6	6
1	1	2	45.6667	3.0667	2.4014 *	6	6	6	6	6	6
1	1	2	41.1667	24.9667	1.7512 *	6	6	6	6	6	6
1	1	2	36.5000	144.7000	4.9967 *	6	6	6	6	6	6
1	1	2	38.5000	7.1000	12.0291 *	6	6	6	6	6	6
1	1	2	39.8333	10.1667	2.6646 *	6	6	6	6	6	6
1	1	2	40.5000	10.3000	3.1885 *	6	6	6	6	6	6
1	1	2	41.0000	.4000	3.2094 *	6	6	6	6	6	6
1	1	2	45.1667	.5667	.6325 *	6	6	6	6	6	6
1	1	2	44.5000	5.9000	.7528 *	6	6	6	6	6	6
1	1	2	44.3333	2.2667	2.4290 *	6	6	6	6	6	6
1	1	2	40.5000	16.3000	1.5055 *	6	6	6	6	6	6
1	1	2	44.3333	10.2667	4.0373 *	6	6	6	6	6	6
1	1	2	37.3333	37.8667	3.2042 *	6	6	6	6	6	6
1	1	2	39.0000	62.0000	6.1536 *	6	6	6	6	6	6
1	1	2	38.0000	4.4000	7.8740 *	5	5	5	5	5	5
1	1	2	43.8333	7.7667	2.0976 *	6	6	6	6	6	6
1	1	2	44.0000	4.8000	2.7859 *	6	6	6	6	6	6
1	1	2	45.6667	7.0667	2.1909 *	6	6	6	6	6	6
1	1	2	47.3333	5.4667	2.5583 *	6	6	6	6	6	6
1	1	2	43.1667	10.1667	1.8619 *	6	6	6	6	6	6
1	1	2	43.8333	13.3667	3.1885 *	6	6	6	6	6	6
1	1	2	43.0000	15.6000	3.6560 *	6	6	6	6	6	6
1	1	2	41.3333	25.8667	3.9497 *	6	6	6	6	6	6
1	1	2	40.5000	52.7000	5.0859 *	6	6	6	6	6	6
1	1	2	38.8333	9.3667	7.2595 *	6	6	6	6	6	6
1	1	2	39.6667	7.8667	3.0605 *	6	6	6	6	6	6
1	1	2	40.6667	4.2667	2.8048 *	6	6	6	6	6	6
1	1	2			2.0656 *	6	6	6	6	6	6

HAT LEAD FEEDING STUDY STUDY 1 RESPONSE 2

PAGE 29 29

29

3	4	46.0000	4.0000	2.0000	6
3	5	43.8333	4.9667	2.2286	6
3	6	44.5000	5.1000	2.2500	6
3	7	42.0000	2.5000	1.5811 *	5
3	8	42.5000	2.3000	1.5166 *	5
3	9	37.8333	8.9667	2.9269	6
3	10	40.3333	33.8667	5.8195 *	6
4	1	39.0000	6.4000	2.5298	6
4	2	42.5000	5.1000	2.2583	6
4	3	41.8333	2.1667	1.4720 *	6
4	4	46.3333	2.2667	1.5055 *	6
4	5	48.0000	4.0000	2.0000	6
4	6	42.6667	1.8667	1.3663 *	6
4	7	43.8333	3.7667	1.9408	6
4	8	43.1667	6.1667	2.4833	6
4	9	44.5000	54.7000	7.3959 *	6
4	10	35.8333	20.9667	4.5789 *	6
4	1	37.6667	19.4667	4.4121	6
4	2	40.8333	2.1667	1.4720 *	6
4	3	41.3333	2.2667	1.5055 *	6
4	4	45.1667	2.1667	1.4720 *	6
4	5	43.6667	8.2667	2.8752	6
4	6	43.1667	2.5667	1.6021 *	6
4	7	42.3333	7.0667	2.6583	6
4	8	44.6667	12.6667	3.5590	6
4	9	40.6667	3.0667	1.7512 *	6
4	10	34.0000	72.8000	8.5323 *	6
5	1	38.3333	1.4667	1.2111 *	6
5	2	44.6667	11.0667	3.3267	6
5	3	42.6667	3.4667	1.8619 *	6
5	4	45.1667	8.5667	2.9269	6
5	5	46.8667	4.2667	2.0656	6
5	6	44.1667	5.7667	2.4014	6
5	7	47.1667	9.3667	3.0605	6
5	8	38.0000	34.4000	5.8652 *	6
5	9	38.0000	196.4000	14.0143 *	6
5	10	37.8333	94.9667	9.7451 *	6
5	1	39.1667	5.3667	2.3166	6
5	2	43.1667	9.3667	3.0605	6
5	3	41.0000	4.4000	2.0976	6
5	4	45.6667	5.4667	2.3381	6
5	5	43.0000	3.2000	1.7889 *	6
5	6	43.3333	3.8667	1.9664	6
5	7	44.0000	6.8000	2.6077	6
5	8	43.8333	21.7667	4.6655 *	6
5	9	40.6667	9.0667	3.0111	6
5	10	35.3333	79.4667	8.9144 *	6

MEAN OF THE CELL MEANS = 42.31893

WITHIN CELL VARIANCE =
 WITHIN CELL STANDARD DEVIATION =
 HARMONIC MEAN OF CELL SIZE =
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) =
 VARIANCE OF A CELL MEAN =
 STANDARD ERROR OF A CELL MEAN =

15.40570
 3.92501
 6.63050
 .09275
 2.32346
 1.52429

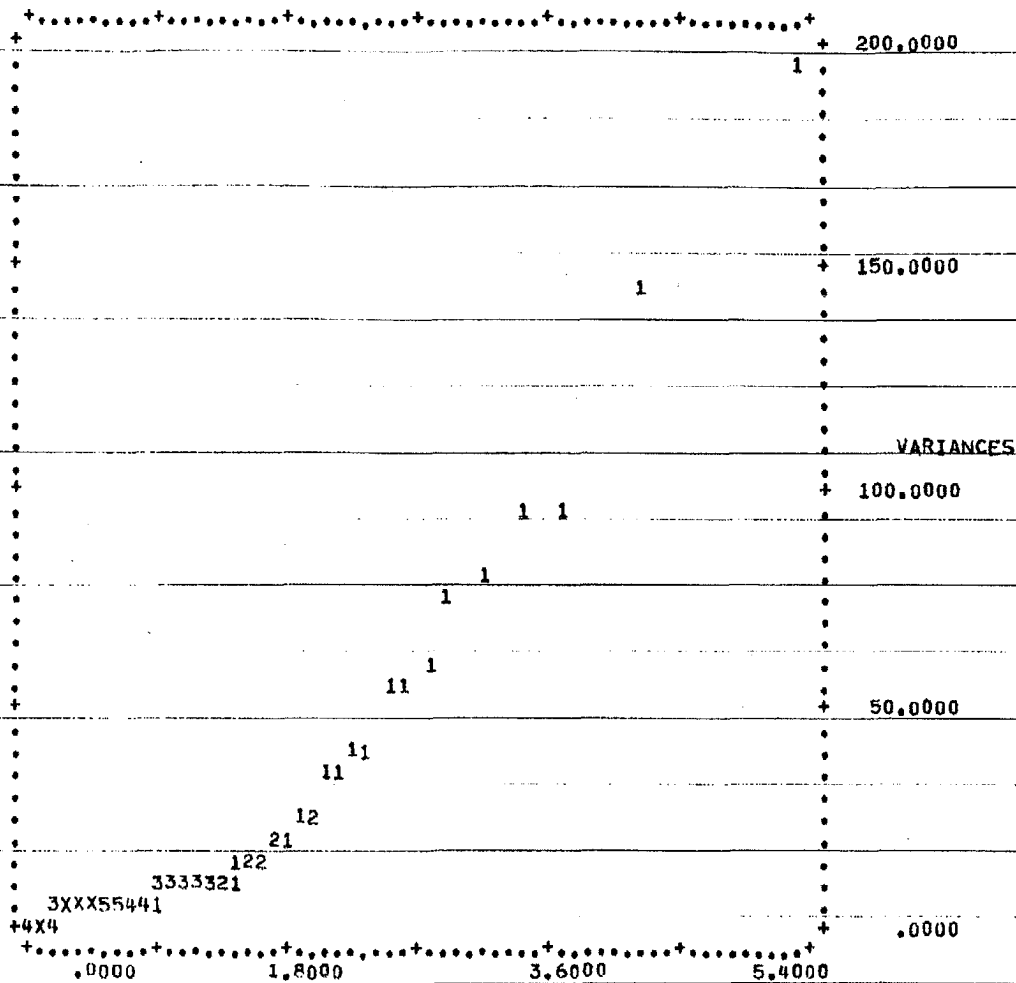
CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 4.55514
 LOWER CONTROL LIMIT = 1.90541
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 78.97 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

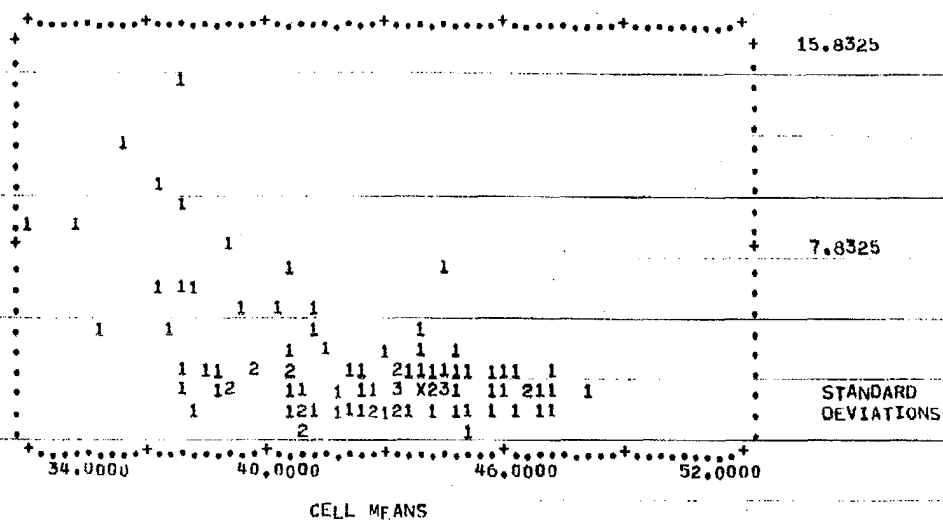
THE GAMMA PLOT



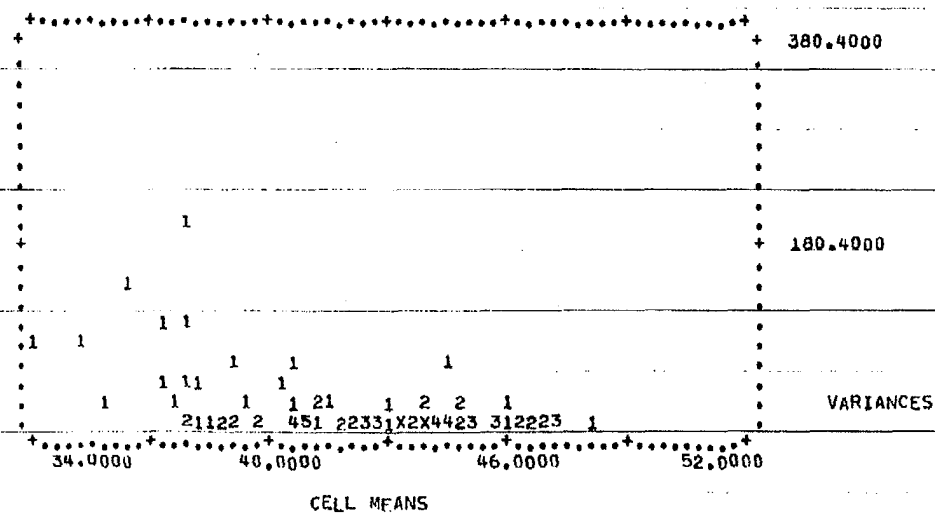
X TILDA

E(100)	=	5.7443	RESIDUAL FOR HIGHEST VALUE OF X TILDA
T FOR SLOPE	=	20.9398	STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T CRITICAL	=	1.9843	T FOR ALPHA=.05, N=1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



EXPECTED MEAN SQUARE TABLE

SOURCE OF VARIATION

EXPECTED MEAN SQUARE

A = P/B LEVEL	REP + 20(A)
B = SEX	REP + 50(B)
AB	REP + 10(AB)
C = TIME	REP + 10(C)
AC	REP + 2(AC)
BC	REP + 5(BC)
ABC	REP + 1(ABC)
REPLICATES	REP

UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	99	916.65274		
A = PB LEVEL	4	8.61494	2.15373	.93
B = SEX	1	37.84115	37.84115	16.29 **
AB	4	5.75647	1.43912	.62
C = TIME	9	632.13036	70.23671	30.23 **
AC	36	116.25091	3.22919	1.39
BC	9	64.39700	7.15522	3.08 **
ABC	36	51.66204	1.43506	.62
REPLICATES	616		2.32346	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 HEMATOCRIT

MEANS TABLES

PB LEVEL	MEANS
0	42.8697
10	42.2333
50	42.3417
100	42.0583
500	42.0917

STANDARD ERROR OF A MEAN = .3408
 95% CONFIDENCE LIMITS = .6694
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .4820
 LEAST SIGNIFICANT DIFFERENCE (LSD) = .9466

SEX	MEANS
MALE	42.9341
FEMALE	41.7038

STANDARD ERROR OF A MEAN = .2156
 95% CONFIDENCE LIMITS = .4213
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .3069
 LEAST SIGNIFICANT DIFFERENCE (LSD) = .5987

INTERACTION

* SEX

PB LEVEL

SEX

PB LEVEL	MALE	FEMALE	DIFFERENCES
0	43.7530	41.9856	1.7682
10	42.8167	41.6500	1.1667
50	43.0667	41.6167	1.4500
100	42.7667	41.3500	1.4167
500	42.2667	41.9167	.3500

STANDARD ERROR OF A MEAN = .4820
 95% CONFIDENCE LIMITS = .9466
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .6817
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 1.3387

TIME MEANS

1 39.1500 2 42.9833 3 42.2250 6 45.6917 9 45.3583 12 43.7894 15 43.8833 18 42.6417 21 39.6500 24 37.1167

STANDARD ERROR OF A MEAN = .4820
 95% CONFIDENCE LIMITS = .9466
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .6817
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 1.3387

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

PB LEVEL	1	2	3	6	9	12	15	18	21	24
0	39.8333	45.3333	43.2917	45.6250	44.8750	43.8636	44.7500	42.8750	39.8333	38.4167
10	40.4167	42.2500	42.0833	45.8333	45.6667	44.5833	43.0833	42.7500	36.9167	38.7500
50	38.4167	41.7500	42.3333	45.8333	45.5833	43.8333	42.9167	42.7500	39.5833	40.4167
100	38.3333	41.6667	41.5833	45.7500	45.8333	42.9167	43.0833	43.9167	42.5833	34.9167
500	38.7500	43.9167	41.8333	45.4167	44.8333	43.7500	45.5833	40.9167	39.3333	36.5833

STANDARD ERROR OF A MEAN = 1.0778
 95% CONFIDENCE LIMITS = 2.1167
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 1.5243
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 2.9935

SEX * TIME INTERACTION

SEX TIME

	1	2	3	6	9	12	15	18	21	24
MALE	39.4500	44.2500	43.3000	46.1500	46.9833	43.8576	45.4833	41.4667	40.3833	38.0167
FEMALE	38.8500	41.7167	41.1500	45.2333	43.7333	43.7212	42.2833	43.8167	38.9167	37.6167
DIFFERENCES	.6000	2.5333	2.1500	.9167	3.2500	.1364	3.2000	-2.3500	1.4667	.4000

STANDARD ERROR OF A MEAN =

.6817

95% CONFIDENCE LIMITS =

1.3387

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

.9640

LEAST SIGNIFICANT DIFFERENCE (LSD) =

1.8932

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

00

00

00

PB LEVEL * SEX

TIME

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*** * PB LEVEL**

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DUP050309763

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XGT VARIAN

08 MAR

DUP050309764

*****MODEL NFAC=3,NOD=2,RF=7,DESIGN=C,NREP=28,EQUAL=.F./

*****FACTOR1 NAME=PB LEVEL,NLEV=5,LNAME=0,10,50,100,500/

*****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE/

*****FACTOR3 NAME=TIME,NLTV=10,LNAME=1,2,3,6,9,12,15,18,21,24/

*****RESPONSE STIPLED CELLS,ARCS STIPLED CELLS/

*****MEANS 2

*****MEANS PLOT 2

*****CONST 50.

*****OPCODES

OPCODES

MOV 1,1,801

DVD 801,901,101

SET 101,101

ASN 101,802

OUT

9	1	1	801	0	1
4	801	901	101	0	2
6	101	101	0	0	3
31	101	802	0	0	4
999	0	0	0	0	5

*****FORMAT(16X,8F8.2/10F8.2)

*****DATA INOV=1

N36874.03

INPUT DATA MATRIX (DOES NOT INCLUDE TRANSFORMATIONS)

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6	1	1	1	1
7	1	1	1	1
8	1	1	1	1
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86	1	1	8	
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RAT LEAD FEEDING STUDY				STUDY I	RESPONSE 3	PAGE	5	5
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88	1	1	8					
89	1	1	8					
90	1	1	8					
91	1	1	8					
92	1	1	8					
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109	1	1	10					
110	1	1	10					
111	1	1	10					
112	1	1	10					
113	1	1	10					
114	1	1	10					
115	1	1	10					

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231	1	2	10	.00000

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HAT LEAD FEEDING STUDY				STUDY 1	RESPONSE 3	PAGE	13	13	13
319	2	2	4						
320	2	2	4						
321	2	2	4						
322	2	2	4						
323	2	2	4						
324	2	2	4						
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368	3	1	2	
			.00000	
369	3	1	2	
			.00000	
370	3	1	2	
			.00000	
371	3	1	2	
			.00000	
372	3	1	2	
			.00000	
373	3	1	3	
			.00000	
374	3	1	3	
			.00000	
375	3	1	3	
			.00000	
376	3	1	3	
			1.00000	

377	3	1	3	.00000
378	3	1	3	.00000
379	3	1	4	.00000
380	3	1	4	.00000
381	3	1	4	.00000
382	3	1	4	.00000
383	3	1	4	.00000
384	3	1	4	.00000
385	3	1	5	.00000
386	3	1	5	.00000
387	3	1	5	.00000
388	3	1	5	.00000
389	3	1	5	.00000
390	3	1	5	.00000
391	3	1	6	.00000
392	3	1	6	.00000
393	3	1	6	.00000
394	3	1	6	2.00000
395	3	1	6	2.00000
396	3	1	6	.00000
397	3	1	7	.00000
398	3	1	7	.00000
399	3	1	7	1.00000
400	3	1	7	.00000
401	3	1	7	1.00000
402	3	1	7	1.00000
403	3	1	8	.00000
404	3	1	8	1.00000
405	3	1	8	.00000

406	3	1	8	1.00000
407	3	1	8	.00000
408	3	1	8	1.00000
409	3	1	9	.00000
410	3	1	9	.00000
411	3	1	9	.00000
412	3	1	9	.00000
413	3	1	9	.00000
414	3	1	9	.00000
415	3	1	10	.00000
416	3	1	10	.00000
417	3	1	10	.00000
418	3	1	10	.00000
419	3	1	10	.00000
420	3	1	10	.00000
421	3	2	1	.00000
422	3	2	1	.00000
423	3	2	1	2.00000
424	3	2	1	.00000
425	3	2	1	1.00000
426	3	2	1	.00000
427	3	2	2	.00000
428	3	2	2	.00000
429	3	2	2	.00000
430	3	2	2	.00000
431	3	2	2	.00000
432	3	2	2	.00000
433	3	2	3	.00000
434	3	2	3	.00000

RAT LEAD FEEDING STUDY				STUDY 1	RESPONSE 3	PAGE	17	17	nn
435	3	2	3						
					.00000				
436	3	2	3						
					.00000				
437	3	2	3						
					.00000				
438	3	2	3						
					.00000				
439	3	2	4						
					.00000				
440	3	2	4						
					.00000				
441	3	2	4						
					.00000				
442	3	2	4						
					.00000				
443	3	2	4						
					.00000				
444	3	2	4						
					.00000				
445	3	2	5						
					.00000				
446	3	2	5						
					.00000				
447	3	2	5						
					.00000				
448	3	2	5						
					.00000				
449	3	2	5						
					.00000				
450	3	2	5						
					.00000				
451	3	2	6						
					.00000				
452	3	2	6						
					.00000				
453	3	2	6						
					.00000				
454	3	2	6						
					.00000				
455	3	2	6						
					.00000				
456	3	2	6						
					.00000				
457	3	2	7						
					.00000				
458	3	2	7						
					.00000				
459	3	2	7						
					.00000				
460	3	2	7						
					.00000				
461	3	2	7						
					.00000				
462	3	2	7						
					.00000				
463	3	2	8						
					.00000				

464	3	2	8	1.00000
465	3	2	8	.00000
466	3	2	8	.00000
467	3	2	8	1.00000
468	3	2	8	.00000
469	3	2	9	.00000
470	3	2	9	.00000
471	3	2	9	.00000
472	3	2	9	.00000
473	3	2	9	.00000
474	3	2	9	2.00000
475	3	2	10	.00000
476	3	2	10	1.00000
477	3	2	10	.00000
478	3	2	10	1.00000
479	3	2	10	.00000
480	3	2	10	.00000
481	4	1	1	.00000
482	4	1	1	1.00000
483	4	1	1	.00000
484	4	1	1	.00000
485	4	1	1	1.00000
486	4	1	1	.00000
487	4	1	2	.00000
488	4	1	2	.00000
489	4	1	2	.00000
490	4	1	2	1.00000
491	4	1	2	.00000
492	4	1	2	.00000

RAT LEAD FEEDING STUDY STUDY I RESPONSE 3				PAGE	19	19
493	4	1	3			
			.00000			
494	4	1	3			
			1.00000			
495	4	1	3			
			1.00000			
496	4	1	3			
			1.00000			
497	4	1	3			
			3.00000			
498	4	1	3			
			3.00000			
499	4	1	4			
			.00000			
500	4	1	4			
			.00000			
501	4	1	4			
			.00000			
502	4	1	4			
			1.00000			
503	4	1	4			
			.00000			
504	4	1	4			
			.00000			
505	4	1	5			
			.00000			
506	4	1	5			
			.00000			
507	4	1	5			
			2.00000			
508	4	1	5			
			2.00000			
509	4	1	5			
			.00000			
510	4	1	5			
			.00000			
511	4	1	6			
			.00000			
512	4	1	6			
			1.00000			
513	4	1	6			
			1.00000			
514	4	1	6			
			1.00000			
515	4	1	6			
			2.00000			
516	4	1	6			
			3.00000			
517	4	1	7			
			1.00000			
518	4	1	7			
			.00000			
519	4	1	7			
			2.00000			
520	4	1	7			
			.00000			
521	4	1	7			
			.00000			

522	4	1	7	.00000
523	4	1	8	.00000
524	4	1	8	.00000
525	4	1	8	1.00000
526	4	1	8	1.00000
527	4	1	8	.00000
528	4	1	8	.00000
529	4	1	9	.00000
530	4	1	9	.00000
531	4	1	9	.00000
532	4	1	9	.00000
533	4	1	9	.00000
534	4	1	9	2.00000
535	4	1	10	1.00000
536	4	1	10	1.00000
537	4	1	10	.00000
538	4	1	10	.00000
539	4	1	10	.00000
540	4	1	10	.00000
541	4	2	1	3.00000
542	4	2	1	2.00000
543	4	2	1	.00000
544	4	2	1	.00000
545	4	2	1	1.00000
546	4	2	1	.00000
547	4	2	2	1.00000
548	4	2	2	.00000
549	4	2	2	.00000
550	4	2	2	1.00000

HAT LEAD FEEDING STUDY				STUDY 1	RESPONSE 3	PAGE	21	21
551	4	2	2					MM
552	4	2	2					
553	4	2	3					
554	4	2	3					
555	4	2	3					
556	4	2	3					
557	4	2	3					MM
558	4	2	3					
559	4	2	4					
560	4	2	4					
561	4	2	4					
562	4	2	4					
563	4	2	4					MM
564	4	2	4					
565	4	2	5					
566	4	2	5					
567	4	2	5					
568	4	2	5					
569	4	2	5					
570	4	2	5					
571	4	2	6					
572	4	2	6					
573	4	2	6					
574	4	2	6					
575	4	2	6					MM
576	4	2	6					
577	4	2	7					
578	4	2	7					
579	4	2	7					

580	4	2	7	
				.00000
581	4	2	7	
				.00000
582	4	2	7	
				1.00000
583	4	2	8	
				.00000
584	4	2	8	
				.00000
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				.00000
586	4	2	8	
				.00000
587	4	2	8	
				.00000
588	4	2	8	
				.00000
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				.00000
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				.00000
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				.00000
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				.00000
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				1.00000
594	4	2	9	
				.00000
595	4	2	10	
				.00000
596	4	2	10	
				.00000
597	4	2	10	
				1.00000
598	4	2	10	
				.00000
599	4	2	10	
				.00000
600	4	2	10	
				.00000
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				2.00000
602	5	1	1	
				1.00000
603	5	1	1	
				6.00000
604	5	1	1	
				3.00000
605	5	1	1	
				2.00000
606	5	1	1	
				4.00000
607	5	1	2	
				1.00000
608	5	1	2	
				3.00000

609	5	1	2	4.00000
610	5	1	2	.00000
611	5	1	2	1.00000
612	5	1	2	1.00000
613	5	1	3	3.00000
614	5	1	3	2.00000
615	5	1	3	3.00000
616	5	1	3	1.00000
617	5	1	3	4.00000
618	5	1	3	4.00000
619	5	1	4	.00000
620	5	1	4	1.00000
621	5	1	4	1.00000
622	5	1	4	1.00000
623	5	1	4	1.00000
624	5	1	4	.00000
625	5	1	5	2.00000
626	5	1	5	.00000
627	5	1	5	2.00000
628	5	1	5	1.00000
629	5	1	5	2.00000
630	5	1	5	1.00000
631	5	1	6	.00000
632	5	1	6	5.00000
633	5	1	6	2.00000
634	5	1	6	.00000
635	5	1	6	1.00000
636	5	1	6	1.00000
637	5	1	7	.00000

638	5	1	7	.00000
639	5	1	7	1.00000
640	5	1	7	2.00000
641	5	1	7	.00000
642	5	1	7	4.00000
643	5	1	8	.00000
644	5	1	8	1.00000
645	5	1	8	1.00000
646	5	1	8	3.00000
647	5	1	8	.00000
648	5	1	8	3.00000
649	5	1	9	1.00000
650	5	1	9	1.00000
651	5	1	9	1.00000
652	5	1	9	1.00000
653	5	1	9	2.00000
654	5	1	9	1.00000
655	5	1	10	1.00000
656	5	1	10	1.00000
657	5	1	10	.00000
658	5	1	10	3.00000
659	5	1	10	2.00000
660	5	1	10	3.00000
661	5	2	1	2.00000
662	5	2	1	4.00000
663	5	2	1	4.00000
664	5	2	1	8.00000
665	5	2	1	3.00000
666	5	2	1	3.00000

667	5	2	2	2.00000
668	5	2	2	5.00000
669	5	2	2	2.00000
670	5	2	2	.00000
671	5	2	2	.00000
672	5	2	2	.00000
673	5	2	3	1.00000
674	5	2	3	1.00000
675	5	2	3	2.00000
676	5	2	3	2.00000
677	5	2	3	3.00000
678	5	2	3	4.00000
679	5	2	4	1.00000
680	5	2	4	.00000
681	5	2	4	4.00000
682	5	2	4	7.00000
683	5	2	4	3.00000
684	5	2	4	2.00000
685	5	2	5	2.00000
686	5	2	5	6.00000
687	5	2	5	1.00000
688	5	2	5	4.00000
689	5	2	5	8.00000
690	5	2	5	4.00000
691	5	2	6	3.00000
692	5	2	6	6.00000
693	5	2	6	1.00000
694	5	2	6	2.00000
695	5	2	6	5.00000

RAT LEAD FEEDING STUDY STUDY I RESPONSE 3

PAGE 26

696	5	2	6	1.00000
697	5	2	7	1.00000
698	5	2	7	4.00000
699	5	2	7	2.00000
700	5	2	7	2.00000
701	5	2	7	.00000
702	5	2	7	2.00000
703	5	2	8	1.00000
704	5	2	8	4.00000
705	5	2	8	1.00000
706	5	2	8	4.00000
707	5	2	8	3.00000
708	5	2	8	1.00000
709	5	2	9	.00000
710	5	2	9	.00000
711	5	2	9	1.00000
712	5	2	9	1.00000
713	5	2	9	1.00000
714	5	2	9	1.00000
715	5	2	10	1.00000
716	5	2	10	3.00000
717	5	2	10	.00000
718	5	2	10	3.00000
719	5	2	10	10.00000
720	5	2	10	3.00000

DUP050309790

EXPANDED DATA MATRIX (IDENTIFICATION; INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

STIPLED CELL	ARCS STIPLED
1	1 1 1
2	1 1 1
3	1 1 1
4	1 1 1
5	1 1 1

NO. OF INPUT DATA ROWS = 720
 NO. OF ROWS DELETED BY LOGICAL TESTS = 0
 NO. OF ROWS DELETED FOR MISSING DATA = 0
 NO. OF EXPANDED DATA ROWS REMAINING = 720

*****ANOVA*****

HAT LEAD FEEDING STUDY STUDY I RESPONSE 3

PAGE 29 29

3	2	4	1.0000	1.6000	1.2649 *	6
3	2	5	.3333	.6667	.8165	6
3	2	6	1.0000	1.2000	1.0954 *	6
3	2	7	.3333	.6667	.8165	6
3	2	8	.3333	.6667	.5164	6
3	2	9	.3333	.6667	.8165	6
3	2	10	.3333	.6667	.5164	6
4	1	1	.3333	.6667	.5164	6
4	1	2	.3333	.6667	.5164	6
4	1	3	.1667	.1667	.4082	6
4	1	4	1.5000	1.5000	1.2247 *	6
4	1	5	.1667	.1667	.4082	6
4	1	6	.6667	1.0667	1.0328 *	6
4	1	7	1.3333	1.0667	1.0328 *	6
4	1	8	.5000	.7000	.8367	6
4	1	9	.3333	.2667	.5164	6
4	1	10	.3333	.6667	.8165	6
4	2	1	.3333	.2667	.5164	6
4	2	2	1.0000	1.6000	1.2649 *	6
4	2	3	.3333	.2667	.5164	6
4	2	4	.3333	.2667	.5164	6
4	2	5	.3333	1.3667	1.1690 *	6
4	2	6	.3333	.6667	.8165	6
4	2	7	.8333	1.3667	1.1690 *	6
4	2	8	.3333	.2667	.5164	6
4	2	9	.0000	.0000	.0000 *	6
4	2	10	.1667	.1667	.4082	6
5	1	1	.1667	.1667	.4082	6
5	1	2	3.0000	3.2000	1.7889 *	6
5	1	3	1.6667	2.2667	1.5055 *	6
5	1	4	2.8333	1.3667	1.1690 *	6
5	1	5	.6667	.2667	.5164	6
5	1	6	1.3333	.6667	.8165	6
5	1	7	1.5000	3.5000	1.8708 *	6
5	1	8	1.1667	2.5667	1.6021 *	6
5	1	9	1.3333	1.8667	1.3663 *	6
5	1	10	1.1667	.1667	.4082	6
5	2	1	1.6667	1.4667	1.2111 *	6
5	2	2	4.0000	4.4000	2.0976 *	6
5	2	3	1.5000	3.9000	1.9748 *	6
5	2	4	2.1667	1.3667	1.1690 *	6
5	2	5	2.8333	6.1667	2.4833 *	6
5	2	6	4.1667	6.5667	2.5626 *	6
5	2	7	3.0000	4.4000	2.0976 *	6
5	2	8	1.8333	1.7667	1.3292 *	6
5	2	9	2.3333	2.2667	1.5055 *	6
5	2	10	.6667	.2667	.5164	6
5	2		3.3333	12.2667	3.5024 *	6

MEAN OF THE CELL MEANS = .63250

WITHIN CELL VARIANCE = .71089
 WITHIN CELL STANDARD DEVIATION = .84314
 HARMONIC MEAN OF CELL SIZE = 6.86667
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = 1.33303
 VARIANCE OF A CELL MEAN = .10663
 STANDARD ERROR OF A CELL MEAN = .32655

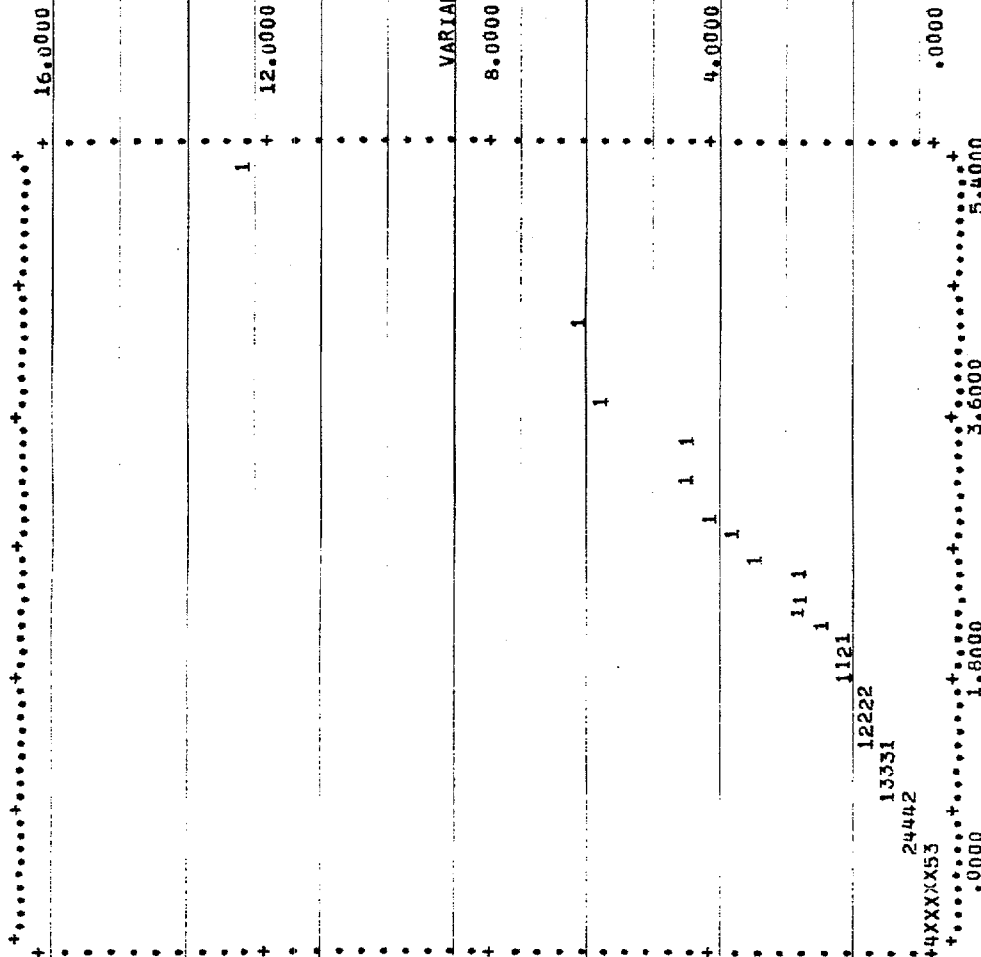
CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = .91342
 LOWER CONTROL LIMIT = .38208
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 80.00 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE

THE GAMMA PLOT



X TILDA

E(100) = 7.0408 RESIDUAL FOR HIGHEST VALUE OF X TILDA
 T FOR SLOPE = 20.8759 STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
 T CRITICAL = 1.9843 T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

EXPECTED MEAN SQUARE TABLE

SOURCE OF VARIATION EXPECTED MEAN SQUARE

A = PB LEVEL REP + 20(A)
 B = SEX REP + 50(B)
 AB REP + 10(AB)
 C = TIME REP + 10(C)
 AC REP + 2(AC)
 BC REP + 5(BC)
 ABC REP + 1(ABC)
 REPLICATES

ANOVA TABLE

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	99	83.23742		
A = PB LEVEL	4	56.72249	14.18062	135.99 **
B = SEX	1	1.01674	1.01674	9.53 **
AB	4	3.76139	.94035	8.82 **
C = TIME	9	3.83812	.42646	4.00 **
AC	36	9.37472	.26041	2.44 **
BC	9	2.38257	.26473	2.48 **
ABC	36	6.14139	.17059	1.60 *
REPLICATES	620		.10663	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 STIPLED CELLS

MEANS TABLES

PB LEVEL MEANS

0	.0458	10	.1833	50	.3250	100	.5000	500	2.1083
---	-------	----	-------	----	-------	-----	-------	-----	--------

STANDARD ERROR OF A MEAN =

95% CONFIDENCE LIMITS =

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

LEAST SIGNIFICANT DIFFERENCE (LSD) =

.0730

.1434

.1033

.2028

SEX

MEANS

MALE	.5317	FEMALE	.7333
------	-------	--------	-------

STANDARD ERROR OF A MEAN =

95% CONFIDENCE LIMITS =

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

LEAST SIGNIFICANT DIFFERENCE (LSD) =

.0462

.0907

.0653

.1283

PB LEVEL

* SFX

INTERACTION

SEX

MALE FEMALE DIFFERENCES

0	.0503	.0333	.0250
10	.1667	.2000	-.0333
50	.2333	.4167	-.1833
100	.5667	.4333	.1333
500	1.6333	2.5833	-.9500

STANDARD ERROR OF A MEAN =

95% CONFIDENCE LIMITS =

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

LEAST SIGNIFICANT DIFFERENCE (LSD) =

.1033

.2028

.1460

.2868

TIME MEANS

TIME	1	2	3	6	9	12	15	18	21	24
MEANS	.9833	.4083	.7000	.6000	.7667	.8500	.5333	.5917	.2750	.6167

STANDARD ERROR OF A MEAN = .1033

95% CONFIDENCE LIMITS = .2028

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .1460

LEAST SIGNIFICANT DIFFERENCE (LSD) = .2868

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

PB LEVEL	1	2	3	6	9	12	15	18	21	24
0	.0833	.1250	.0000	.0000	.0000	.0000	.0000	.0833	.0417	.0833
10	.2500	.0833	.0000	.0000	.2500	.4167	.0833	.2500	.4167	.0833
50	.4167	.0000	.0833	.0833	.5000	.1667	.8333	.4167	.5000	.1667
100	.6667	.2500	.5000	.9167	.5000	.5000	1.0833	.4167	.1667	.2500
500	3.5000	1.5833	2.5000	2.5000	1.7500	2.7500	2.2500	1.5000	1.8333	2.5000

STANDARD ERROR OF A MEAN = .2309

95% CONFIDENCE LIMITS = .4535

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .3265

LEAST SIGNIFICANT DIFFERENCE (LSD) = .6413

SEX * TIME INTERACTION

SEX TIME

	1	2	3	6	9	12	15	18	21	24
MALE	.8500	.4500	.9000	.2333	.5000	.7000	.4833	.4667	.3000	.4333
FEMALE	1.1167	.3667	.5000	.9667	1.0333	1.0000	.5833	.7167	.2500	.8000
DIFFERENCES		-.2667	.0833	.4000	-.7333	-.5333	-.3000	-.1000	-.2500	-.3667

STANDARD ERROR OF A MEAN =

.1460

95% CONFIDENCE LIMITS =

.2868

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

.2065

LEAST SIGNIFICANT DIFFERENCE (LSD) =

.4056

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

[illegible]

MEAN OF THE CELL MEANS = .06074

WITHIN CELL VARIANCE =
WITHIN CELL STANDARD DEVIATION =
HARMONIC MEAN OF CELL SIZE =
COEFFICIENT OF VARIATION (STANDARD
DEVIATION OF A CELL MEAN =
STANDARD ERROR OF A CELL MEAN =

00410
06402
5.66667
1.05406
00061
02479

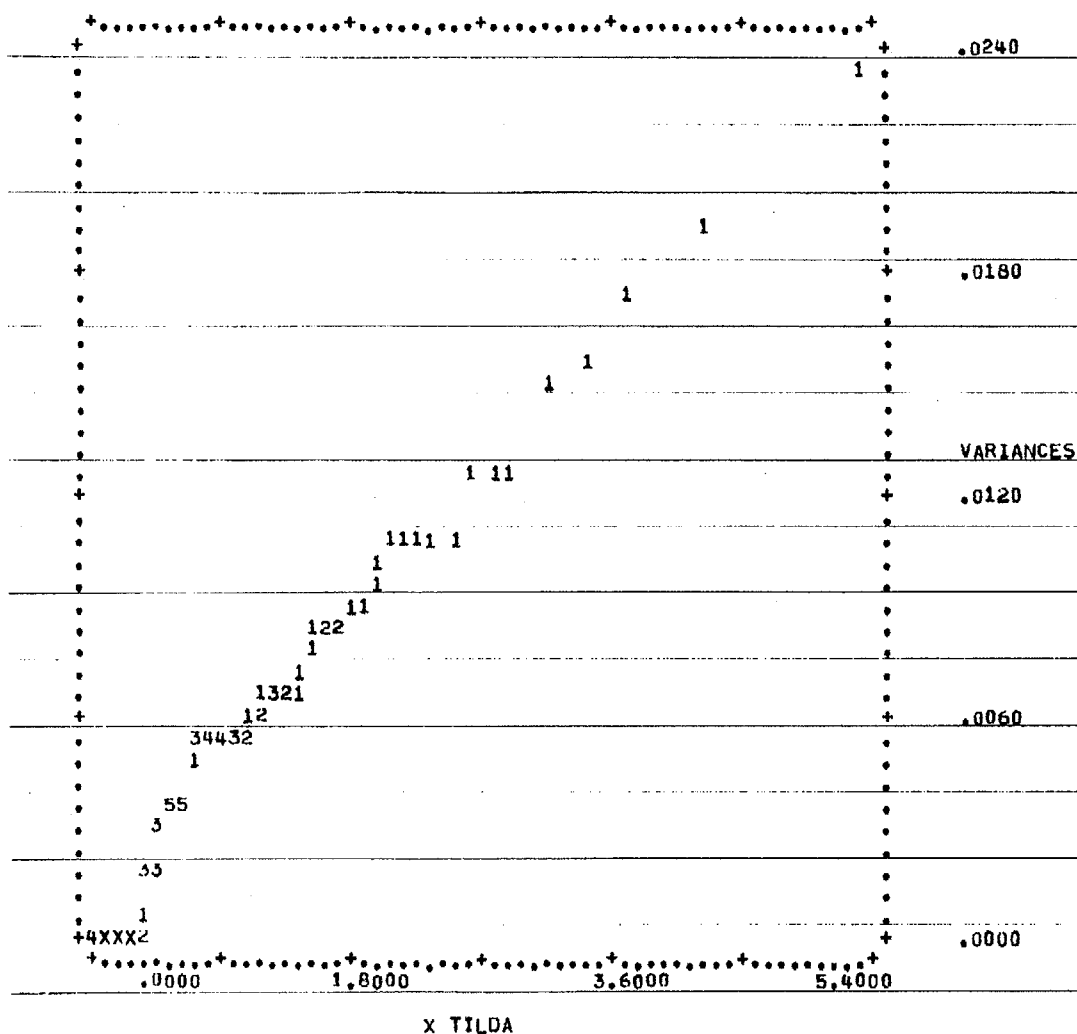
CONTROL LIMITS FOR THE STANDARD DEVIATION
UPPER CONTROL LIMIT = .07917
LOWER CONTROL LIMIT = .03312
* DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 80.00 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE

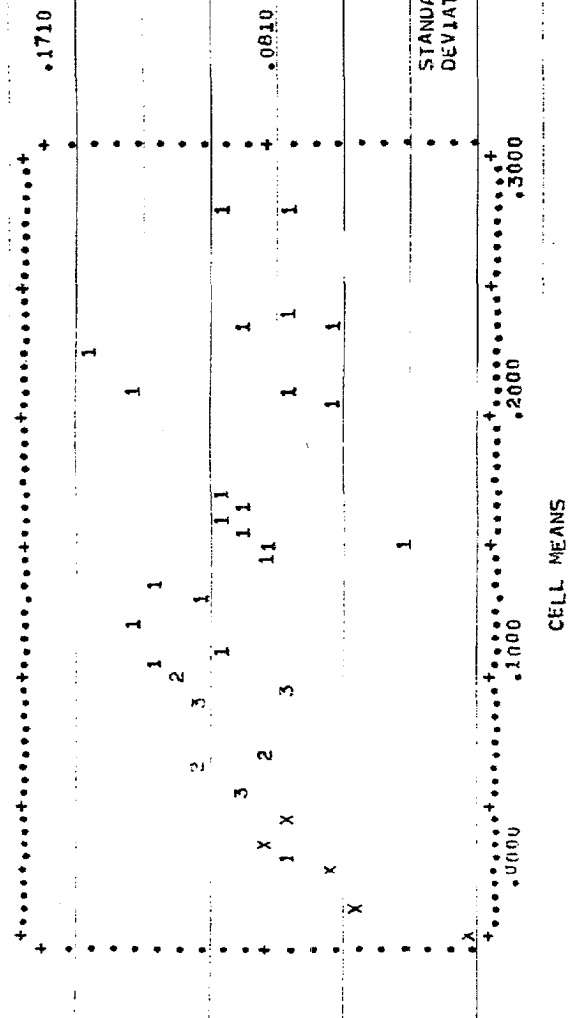
THE GAMMA PLOT



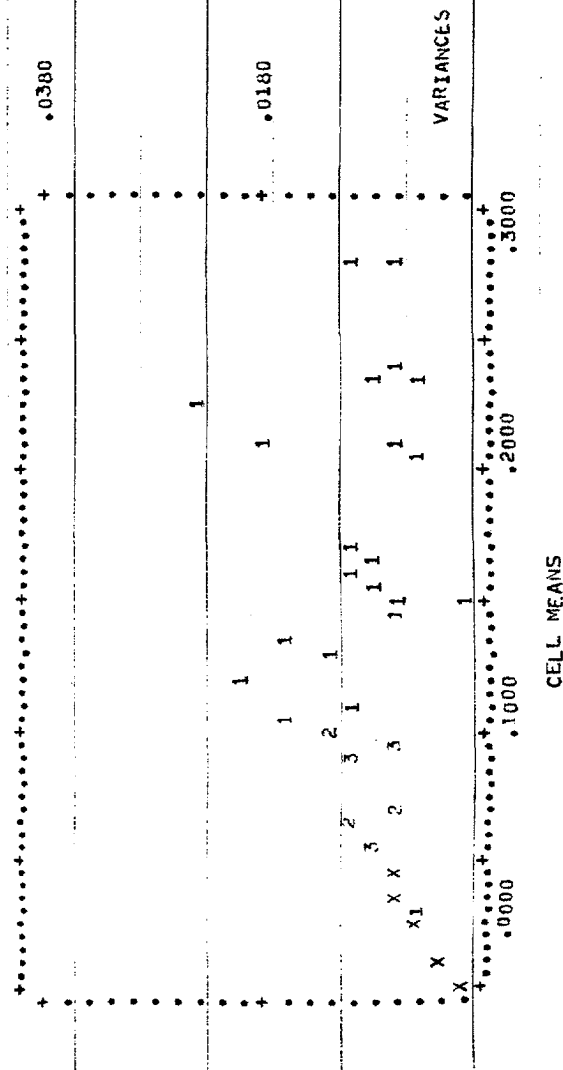
E(100) = -2.5989
T FOR SLOPE = 77.0945
T CRITICAL = 1.9843

RESIDUAL FOR HIGHEST VALUE OF X TILDA
STUDENTIZED SLOPE, $Y=BX$, (INTERCEPT=0)
T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



RESPONSE NUMBER 2 ARCS STIPLED CELLS UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	99	.51633		
A = PH LEVEL	4	.38077	.09519	154.84 **
B = SEX	1	.00260	.00260	4.22 *
AB	4	.01108	.00277	4.51 **
C = TIME	9	.02139	.00238	3.87 **
AC	36	.05143	.00143	2.32 **
BC	9	.01215	.00135	2.20 *
ABC	36	.03691	.00103	1.67 **
REPLICATES	620		.00061	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 2 ARCS STIPLED CELLS

MEANS TABLES

PB LEVEL	MEANS
0	.0062
10	.0232
50	.0377
100	.0572
500	.1795

STANDARD ERROR OF A MEAN = .0055
 95% CONFIDENCE LIMITS = .0109
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .0078
 LEAST SIGNIFICANT DIFFERENCE (LSD) = .0154 (one-tail)
 .0202 (one-tail)
 .0254 (one-tail)

SEX	MEANS
MALE	.0556
FEMALE	.0658

STANDARD ERROR OF A MEAN = .0035
 95% CONFIDENCE LIMITS = .0069
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .0050
 LEAST SIGNIFICANT DIFFERENCE (LSD) = .0097

PB LEVEL * SEX INTERACTION

PB LEVEL	SEX	MEANS	DIFFERENCES
0	MALE	.0076	.0047
10	MALE	.0209	.0254
50	MALE	.0290	.0463
100	MALE	.0646	.0498
500	MALE	.1561	.2029
	FEMALE		
	FEMALE		.0029
	FEMALE		-.0045
	FEMALE		-.0173
	FEMALE		.0148
	FEMALE		-.0468

STANDARD ERROR OF A MEAN = .0078
 95% CONFIDENCE LIMITS = .0154
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .0111
 LEAST SIGNIFICANT DIFFERENCE (LSD) = .0218

TIME MEANS

1	2	3	6	9	12	15	18	21	24
	.0836	.0404	.0663	.0573	.0681	.0806	.0581	.0627	.0349
									.0554

STANDARD ERROR OF A MEAN = .0078
 95% CONFIDENCE LIMITS = .0154
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .0111
 LEAST SIGNIFICANT DIFFERENCE (LSD) = .0218

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

0	1	2	3	6	9	12	15	18	21	24
	.0118	.0143	.0000	.0000	.0000	.0000	.0000	.0118	.0059	.0059
10	.0286	.0118	.0000	.0000	.0286	.0591	.0118	.0355	.0443	.0118
50	.0454	.0000	.0118	.0000	.0492	.0168	.0897	.0523	.0709	.0236
100	.0729	.0355	.0004	.0561	.0503	.1171	.0523	.0523	.0236	.0355
500	.2595	.1404	.2194	.1524	.2142	.1846	.1386	.1698	.1232	.1940

STANDARD ERROR OF A MEAN = .0175
 95% CONFIDENCE LIMITS = .0344
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .0248
 LEAST SIGNIFICANT DIFFERENCE (LSD) = .0487

SEX	* TIME	INTERACTION											
SEX	TIME	1	2	3	6	9	12	15	18	21	24		
MALE		.0777	.0472	.0825	.0304	.0572	.0537	.0695	.0543	.0371	.0469		
FEMALE		.0895	.0336	.0502	.0842	.0790	.0624	.0918	.0711	.0327	.0639		
DIFFERENCES		-.0118	.0136	.0323	-.0538	-.0217	-.0087	-.0223	-.0168	.0043	-.0170		
STANDARD ERROR OF A MEAN =		.0111											
95% CONFIDENCE LIMITS =		.0218											
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =		.0157											
LEAST SIGNIFICANT DIFFERENCE (LSD) =		.0308											

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

STOP

DUP050309819

ADU, * BASE 4

08 MAR 72

10:11:48.587

DUP050309820

*****MODEL NFAC=3,NOE=2,91 C=7,DESIGNEC,NREP=20,EQUAL=F,7

*****FACTOR1 NAME=PA LEVEL,NLEV=5,LNAME=0,10,50,100,500/

*****FACTOR2 NAME=SEX,NLEV=2,LNAME=F,M,F,FEMALE/

*****FACTOR3 NAME=TIME,NLEV=3,LNAME=12,15,21/

*****RESPONSE ALA-DEHYDRASE,LOG ALA-DEHYDRASE/

*****MEANS 2

*****FEATS PLOT 2

*****CONST 100.

*****OPCODES

OPCODES

MOV 1,1,801

LOG 801,802,10

MPY 802,901,802

OUT

*****FORMAT(16X,8F8.2/10F8.2/10F8.2)

*****DATA INOVL

9	1	1	801	0	1
8	801	802	10	0	2
3	802	901	802	0	3
999	0	0	0	0	4

N36874.04

INPUT DATA MATRIX (DOES NOT INCLUDE TRANSFORMATIONS)

1	1	1	1	1
2	1	1	1	1
3	1	1	1	1
4	1	1	1	1
5	1	1	1	1
6	1	1	1	1
7	1	1	1	1
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9	1	1	1	1
10	1	1	1	1
11	1	1	1	1
12	1	1	1	1
13	1	1	1	2
14	1	1	1	2
15	1	1	1	2
16	1	1	1	2
17	1	1	1	2
18	1	1	1	2
19	1	1	1	2
20	1	1	1	2
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23	1	1	1	2
24	1	1	1	2
25	1	1	1	3
26	1	1	1	3
27	1	1	1	3
28	1	1	1	3

29	1	1	3	35.00000
30	1	1	3	27.00000
31	1	1	3	11.00000
32	1	1	3	21.00000
33	1	1	3	33.00000
34	1	1	3	20.00000
35	1	1	3	15.00000
36	1	1	3	18.00000
37	1	2	1	25.00000
38	1	2	1	23.00000
39	1	2	1	18.00000
40	1	2	1	25.00000
41	1	2	1	23.00000
42	1	2	1	17.00000
43	1	2	1	15.00000
44	1	2	1	18.00000
45	1	2	1	21.00000
46	1	2	1	28.00000
47	1	2	1	24.00000
48	1	2	1	19.00000
49	1	2	2	18.00000
50	1	2	2	29.00000
51	1	2	2	30.00000
52	1	2	2	21.00000
53	1	2	2	36.00000
54	1	2	2	19.00000
55	1	2	2	21.00000
56	1	2	2	25.00000
57	1	2	2	27.00000

RAT LEAD FEEDING STUDY				STUDY 1	RESPONSE 4	PAGE	4
58	1	2	2				
	26.00000						
59	1	2	2				
	19.00000						
60	1	2	2				
	25.00000						
61	1	2	3				
	22.00000						
62	1	2	3				
	20.00000						
63	1	2	3				
	20.00000						
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	23.00000						
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	19.00000						
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	20.00000						
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	13.00000						
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	23.00000						
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	43.00000						
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	15.00000						
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	17.00000						
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	17.00000						
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	20.00000						
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	17.00000						
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	20.00000						
81	2	1	2				
	15.00000						
82	2	1	2				
	11.00000						
83	2	1	2				
	21.00000						
84	2	1	2				
	17.00000						
85	2	1	3				
	19.00000						
86	2	1	3				
	33.00000						

87	2	1	3	24.00000
88	2	1	3	21.00000
89	2	1	3	18.00000
90	2	1	3	20.00000
91	2	2	1	21.00000
92	2	2	1	24.00000
93	2	2	1	26.00000
94	2	2	1	20.00000
95	2	2	1	17.00000
96	2	2	1	21.00000
97	2	2	2	23.00000
98	2	2	2	21.00000
99	2	2	2	24.00000
100	2	2	2	31.00000
101	2	2	2	30.00000
102	2	2	2	19.00000
103	2	2	3	19.00000
104	2	2	3	18.00000
105	2	2	3	23.00000
106	2	2	3	21.00000
107	2	2	3	60.00000
108	2	2	3	18.00000
109	3	1	1	24.00000
110	3	1	1	14.00000
111	3	1	1	11.00000
112	3	1	1	21.00000
113	3	1	1	16.00000
114	3	1	1	15.00000
115	3	1	2	17.00000

116	3 1 2	17.00000
117	3 1 2	14.00000
118	3 1 2	18.00000
119	3 1 2	11.00000
120	3 1 2	11.00000
121	3 1 3	13.00000
122	3 1 3	5.00000
123	3 1 3	9.00000
124	3 1 3	15.00000
125	3 1 3	9.00000
126	3 1 3	9.00000
127	3 2 1	13.00000
128	3 2 1	12.00000
129	3 2 1	11.00000
130	3 2 1	18.00000
131	3 2 1	8.00000
132	3 2 1	12.00000
133	3 2 2	17.00000
134	3 2 2	15.00000
135	3 2 2	17.00000
136	3 2 2	16.00000
137	3 2 2	23.00000
138	3 2 3	12.00000
139	3 2 3	15.00000
140	3 2 3	16.00000
141	3 2 3	14.00000
142	3 2 3	17.00000
143	3 2 3	14.00000
144	4 1 1	9.00000

145	4	1	1	5.00000
146	4	1	1	7.00000
147	4	1	1	6.00000
148	4	1	1	5.00000
149	4	1	1	16.00000
150	4	1	2	10.00000
151	4	1	2	7.00000
152	4	1	2	12.00000
153	4	1	2	11.00000
154	4	1	2	7.00000
155	4	1	2	10.00000
156	4	1	3	2.00000
157	4	1	3	12.00000
158	4	1	3	13.00000
159	4	1	3	14.00000
160	4	1	3	9.00000
161	4	1	3	5.00000
162	4	2	1	7.00000
163	4	2	1	11.00000
164	4	2	1	11.00000
165	4	2	1	8.00000
166	4	2	1	10.00000
167	4	2	1	4.00000
168	4	2	2	7.00000
169	4	2	2	13.00000
170	4	2	2	9.00000
171	4	2	2	15.00000
172	4	2	2	13.00000
173	4	2	2	12.00000

RAT LEAD FEEDING STUDY				STUDY I	RESPONSE 4	PAGE	8	8
174	4	2	3	7.00000				
175	4	2	3	10.00000				
176	4	2	3	13.00000				
177	4	2	3	8.00000				
178	4	2	3	7.00000				
179	4	2	3	10.00000				
180	5	1	1	2.00000				
181	5	1	1	3.00000				
182	5	1	1	8.00000				
183	5	1	1	4.00000				
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185	5	1	1	2.00000				
186	5	1	2	3.00000				
187	5	1	2	2.00000				
188	5	1	2	3.00000				
189	5	1	2	2.00000				
190	5	1	2	3.00000				
191	5	1	2	3.00000				
192	5	1	3	2.00000				
193	5	1	3	2.00000				
194	5	1	3	4.00000				
195	5	1	3	5.00000				
196	5	1	3	16.00000				
197	5	1	3	3.00000				
198	5	2	1	5.00000				
199	5	2	1	3.00000				
200	5	2	1	2.00000				
201	5	2	1	5.00000				
202	5	2	1	5.00000				

RAT LEAD FEEDING STUDY				STUDY I	RESPONSE 4	PAGE	9	9
203	5	2	1					
	5	2	2					
204	5	2	2					
	3.00000							
205	5	2	2					
	2.00000							
206	5	2	2					
	5.00000							
207	5	2	2					
	2.00000							
208	5	2	2					
	4.00000							
209	5	2	2					
	3.00000							
210	5	2	3					
	3.00000							
211	5	2	3					
	3.00000							
212	5	2	3					
	3.00000							
213	5	2	3					
	2.00000							
214	5	2	3					
	2.00000							
215	5	2	3					
	3.00000							

EXPANDED DATA MATRIX (IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

ALA-DEHYDRAS	LOG ALA-DEHY
1	1
2	1
3	1
4	1
5	1
16,00000	114,61280
17,00000	123,04489
13,00000	111,39434
16,00000	120,41200

NO. OF INPUT DATA ROWS = 215
 NO. OF ROWS DELETED BY LOGICAL TESTS = 0
 NO. OF ROWS DELETED FOR MISSING DATA = 0
 NO. OF EXPANDED DATA ROWS REMAINING = 215

*****ANOVA

RESPONSE NUMBER 1 ALA-DEHYDROASE

CELL IDENTIFICATION

CELL MEAN CELL VARIANCE CELL STANDARD DEVIATION NUMBER OF OBSERVATIONS

1	1	1	18.3333	20.6061	4.9394	12
1	1	2	18.4167	42.8106	6.5430	12
1	1	3	21.0000	61.2727	7.8277 *	12
1	2	1	21.3333	15.5152	3.9389	12
1	2	2	24.6667	28.9697	5.3824	12
1	2	3	28.0000	353.6364	18.8052 *	12
2	1	1	21.5000	113.5000	10.6536 *	6
2	1	2	16.8333	12.9667	3.6009	6
2	1	3	22.5000	30.7000	5.5408	6
2	2	1	21.5000	9.9000	3.1464	6
2	2	2	24.6667	23.4667	4.8442	6
2	2	3	26.5000	273.1000	16.5257 *	6
3	1	1	16.8333	22.9667	4.7924	6
3	1	2	14.6667	9.8667	3.1411	6
3	1	3	10.0000	12.4000	3.5214	6
3	2	1	12.3333	10.6667	3.2660	6
3	2	2	17.6000	9.8000	3.1305	5
3	2	3	14.6667	3.0667	1.7512 *	6
4	1	1	8.0000	17.6000	4.1952	6
4	1	2	9.5000	4.3000	2.0736 *	6
4	1	3	9.1667	22.9667	4.7924	6
4	2	1	8.5000	7.5000	2.7386 *	6
4	2	2	11.5000	8.7000	2.9496	6
4	2	3	9.1667	5.3667	2.3166 *	6
5	1	1	3.5000	5.5000	2.3452 *	6
5	1	2	2.6667	.2667	.5164 *	6
5	1	3	5.6667	37.8667	6.1536	6
5	2	1	4.1667	1.7667	1.3292 *	6
5	2	2	3.1667	1.3667	1.1690 *	6
5	2	3	2.6667	.2667	.5164 *	6

MEAN OF THE CELL MEANS = 14.30055

WITHIN CELL VARIANCE =

48.48891

WITHIN CELL STANDARD DEVIATION =

6.96340

HARMONIC MEAN OF CELL SIZE =

6.61765

COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) =

.48693

VARIANCE OF A CELL MEAN =

7.32721

STANDARD ERROR OF A CELL MEAN =

2.70688

CONTROL LIMITS FOR THE STANDARD DEVIATION

UPPER CONTROL LIMIT = 6.67685

LOWER CONTROL LIMIT = 2.79292

* DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 24.58 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

19.5164

[illegible]

PLOT OF CELL MEANS VRS VARIANCES

[illegible]

CELL MEANS

SOURCE OF VARIATION EXPECTED MEAN SQUARE

A = PB LEVEL
 B = SEX
 AB
 C = TIME
 AC
 BC
 ABC
 REPLICATES

REP + 6(A)
 REP + 15(B)
 REP + 3(AB)
 REP + 10(C)
 REP + 2(AC)
 REP + 5(BC)
 REP + 1(ABC)
 REP

RESPONSE NUMBER 1 ALA-DEHYDRASE UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	29	1741.70125		
A = PR LEVEL	4	1562.75291	390.68823	53.32 **
B = SEX	1	33.81407	33.81407	4.61 *
AB	4	36.73781	9.18445	1.25
C = TIME	2	8.93779	4.47890	.61
AC	8	50.49044	6.31131	.86
BC	2	20.33150	10.16575	1.39
ABC	8	28.61674	3.57709	.49
REPLICATES	185		7.32721	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 ALA-DEHYDRASE

MEANS TABLES

PB LEVEL MEANS

PB LEVEL	0	21.9583	10	22.2500	50	14.3500	100	9.3056	500	3.6389
MEANS										

STANDARD ERROR OF A MEAN =

1.1051

95% CONFIDENCE LIMITS =

2.1802

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

1.5628

LEAST SIGNIFICANT DIFFERENCE (LSD) =

3.0833

SEX

MEANS

MALE

13.2389

FEMALE

15.3622

STANDARD ERROR OF A MEAN =

.6989

95% CONFIDENCE LIMITS =

1.3789

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

.9884

LEAST SIGNIFICANT DIFFERENCE (LSD) =

1.9500

PB LEVEL

* SEX

INTERACTION

PB LEVEL

SEX

MALE

19.2500

FEMALE

24.6667

DIFFERENCES

-5.4167

10

20.2778

24.2222

-3.9444

50

13.8333

14.8667

-1.0333

100

8.8889

9.7222

-.8333

500

3.9444

3.3333

.6111

STANDARD ERROR OF A MEAN =

1.5628

95% CONFIDENCE LIMITS =

3.0833

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

2.2102

LEAST SIGNIFICANT DIFFERENCE (LSD) =

4.3604

TIME

MEANS

12	15	21
13.6000	14.3683	14.9333

STANDARD ERROR OF A MEAN = .8560
 95% CONFIDENCE LIMITS = 1.6888
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 1.2106
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 2.3883

PB LEVEL

* TIME

INTERACTION

PB LEVEL

TIME

0	12	15	21
19.8333	21.5417	24.5000	
21.5000	20.7500	24.5000	
14.5833	16.1333	12.3333	
8.2500	10.5000	9.1667	
3.8333	2.9167	4.1667	

STANDARD ERROR OF A MEAN = 1.9141
 95% CONFIDENCE LIMITS = 3.7762
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 2.7069
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 5.3404

INTERACTION

SEX

* TIME

TIME

SEX

	12	15	21
MALE	13.6333	12.4167	13.6667
FEMALE	13.5667	16.3200	16.2000

	DIFFERENCES	.0667	-3.9033	-2.5333
--	-------------	-------	---------	---------

STANDARD ERROR OF A MEAN =

1.2106

95% CONFIDENCE LIMITS =

2.3883

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

1.7120

LEAST SIGNIFICANT DIFFERENCE (LSD) =

3.3776

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- * - REPEATED SYMBOLS

MM

MM

MM

MM

PB LEVEL	KAT LEAD FEEDING STUDY		STUDY I	RESPONSE 4	SEX	PAGE		20
	MEANS					MEANS		
1	+	+				1		20
2	+	+				2		
3	+	+						
4	+	+						
5	+	+						

RAT

[illegible]

RESPONSE NUMBER 2 LOG ALA-DEHYDRASE

CELL IDENTIFICATION

	CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
1 1 1	125.1465	109.9485	10.4856	12
1 1 2	120.8552	883.4950	29.7236 *	12
1 1 3	129.2241	302.6195	17.3960	12
1 2 1	132.2064	67.4453	8.2125 *	12
1 2 2	138.2938	85.8564	9.2659	12
1 2 3	138.4435	509.0494	22.5621 *	12
2 1 1	130.0323	282.1340	16.7968	6
2 1 2	121.6938	102.0109	10.1000	6
2 1 3	134.2667	92.4127	9.6132	6
2 2 1	132.8517	41.1988	6.4186 *	6
2 2 2	138.5232	71.1863	8.4372 *	6
2 2 3	137.5233	406.8504	20.1705	6
3 1 1	121.1694	150.4805	12.2670	6
3 1 2	115.7514	94.5875	9.7256	6
3 1 3	97.5289	274.4553	16.5667	6
3 2 1	107.8677	129.3025	11.3711	6
3 2 2	124.0567	50.9253	7.1362 *	5
3 2 3	116.3683	28.0076	5.2922 *	6
4 1 1	86.3259	372.0383	19.2883	6
4 1 2	96.8462	100.0086	10.0004	6
4 1 3	88.2249	1077.3730	32.8234 *	6
4 2 1	90.5506	283.1879	16.8282	6
4 2 2	104.7083	152.0627	12.3314	6
4 2 3	95.1205	112.1564	10.5904	6
5 1 1	48.0894	579.9359	24.0831 *	6
5 1 2	41.8424	82.6885	9.0933	6
5 1 3	60.5914	1265.6738	35.5763 *	6
5 2 1	59.5672	287.1002	16.9440	6
5 2 2	47.6222	253.6760	15.9272	6
5 2 3	41.8424	82.6885	9.0933	6

MEAN OF THE CELL MEANS = 104.10446

WITHIN CELL VARIANCE =

WITHIN CELL STANDARD DEVIATION =

HARMONIC MEAN OF CELL SIZE =

COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) =

VARIANCE OF A CELL MEAN =

STANDARD ERROR OF A CELL MEAN =

CONTROL LIMITS FOR THE STANDARD DEVIATION

UPPER CONTROL LIMIT = 20.87572

LOWER CONTROL LIMIT = 8.73231

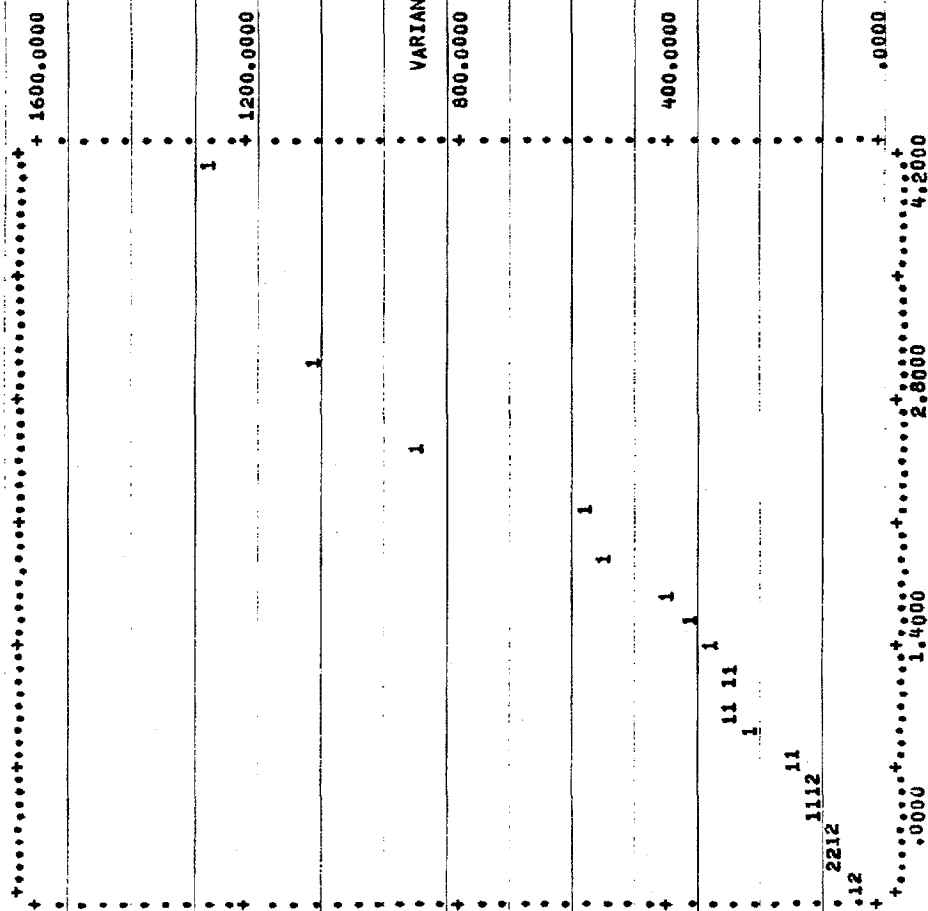
* DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 24.58 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

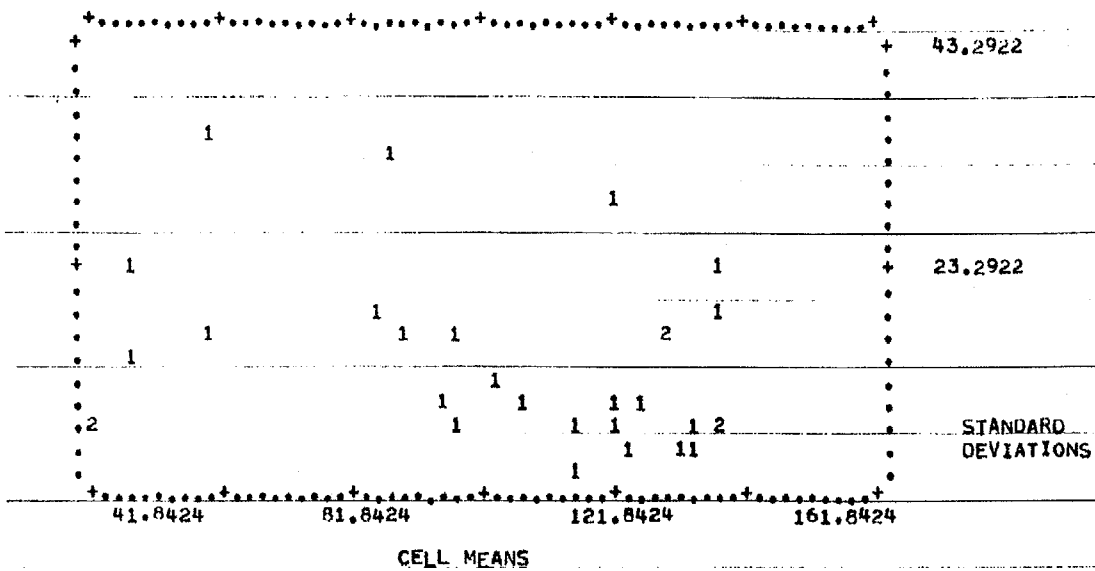
THE GAMMA PLOT



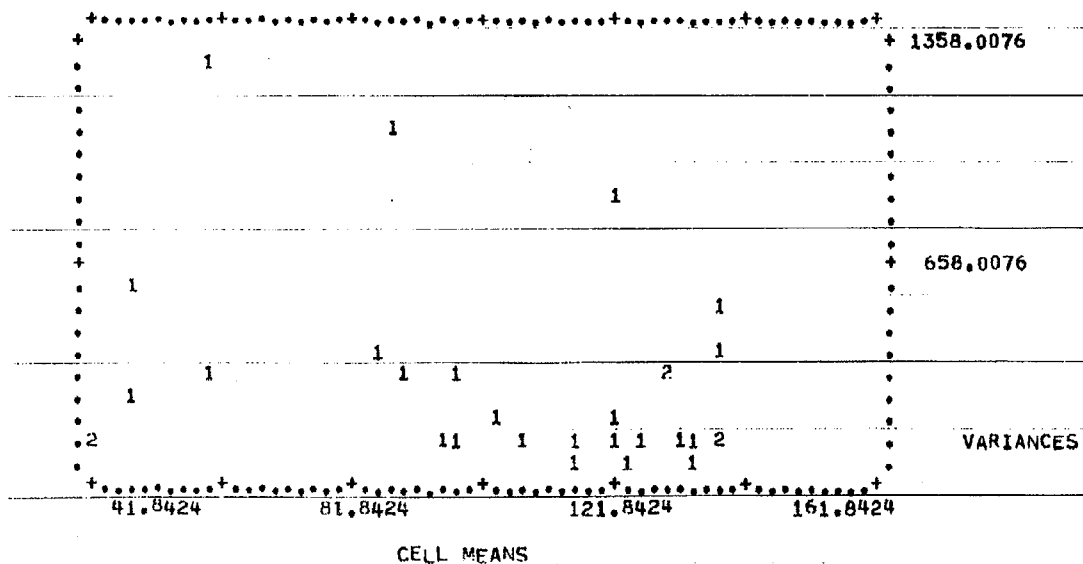
X TILDA

E(30) = .6386 RESIDUAL FOR HIGHEST VALUE OF X TILDA
 T FOR SLOPE = 32.5057 STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
 T CRITICAL = 2.0454 T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



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RESPONSE NUMBER 2 LOG ALA-DEHYDRASE UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	29	.29388+05		
A = PB LEVEL	4	.27907+05	6976.79340	160.09 **
B = SEX	1	.25788+03	257.88340	5.92 *
AB	4	.11141+03	27.85153	.64
C = TIME	2	.13973+02	6.98674	.16
AC	8	.47403+03	59.25343	1.36
BC	2	.11109+03	55.54487	1.27
ABC	8	.51234+03	64.04294	1.47
REPLICATES	185		43.57932	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 2 LOG ALA-DEHYDRASE

MEANS TABLES

PB LEVEL	MEANS				
0	130.6949	132.4818	50	100	500
			113.7904	93.6294	49.9258

STANDARD ERROR OF A MEAN = 2.6950
 95% CONFIDENCE LIMITS = 5.3170
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 3.8114
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 7.8194

SEX	MEANS	
	MALE	FEMALE
	101.1726	107.0364
STANDARD ERROR OF A MEAN =	1.7045	
95% CONFIDENCE LIMITS =	3.3628	
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =	2.4105	
LEAST SIGNIFICANT DIFFERENCE (LSD) =	4.7557	

PB LEVEL	* SEX	INTERACTION	
PB LEVEL	SEX		
0	MALE	FEMALE	DIFFERENCES
10	125.0753	136.3145	-11.2393
50	128.6643	136.2994	-7.6351
100	111.4832	116.0976	-4.6144
500	90.4656	96.7931	-6.3275
	50.1744	49.6773	.4971
STANDARD ERROR OF A MEAN =	3.8114		
95% CONFIDENCE LIMITS =	7.5194		
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =	5.3901		
LEAST SIGNIFICANT DIFFERENCE (LSD) =	10.6340		

TIME MEANS

12 103.3807 15 105.0193 21 103.9134

STANDARD ERROR OF A MEAN = 2.0876
 95% CONFIDENCE LIMITS = 4.1185
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 2.9523
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 5.8245

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

0 12 128.6764 15 129.5745 21 133.8338
 10 131.4420 130.1085 135.8950
 50 114.5185 119.9041 106.9486
 100 88.4382 100.7772 91.6727
 500 53.8283 44.7323 51.2169

STANDARD ERROR OF A MEAN = 4.6679
 95% CONFIDENCE LIMITS = 9.2093
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 6.5015
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 13.0240

SEX * TIME INTERACTION

SEX TIME

	12	15	21
MALE	102.1527	99.3978	101.9672
FEMALE	104.6087	110.6409	105.8596

DIFFERENCES -2.4560 -11.2431 -3.8924

STANDARD ERROR OF A MEAN =

2.9523

95% CONFIDENCE LIMITS =

5.8245

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

4.1751

LEAST SIGNIFICANT DIFFERENCE (LSD) =

8.2371

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- * - REPEATED SYMBOLS

100

PB LEVEL	* TIME	TIME	* SEX
1	+	1	+
2	+	3	+
3	+	1	+
4	+	13	2
5	+	42	31
		42.00	58.20 74.40 90.60106.80123.00139.20

*****ENDRUN

*****MODEL NFA=3,NOD=2,RFC=7,DESIGN=C,IREP=28,EQUAL=F, /

*****FACTOR1 NAME=PB LEVEL,NLEV=5,LNAME=0,10,50,100,500 /

*****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE /

*****FACTOR3 NAME=TIME,NLEV=10,LNAME=1,2,3,6,9,12,15,18,21,24 /

*****RESPONSE DALAY LOG DALA /

*****MEANS 2

*****MEANS PLOT 2

*****CONST 100...04

*****OPCODES

OPCODES

ALR 1,902,1

MOV 1,902,1

MPY 1,901,801

LOG 801,802,10

MPY 802,901,802

OUT

*****FORMAT(16X,8F8.2/10F8.2)

*****DATA INOV=1

40	1	902	1	0	0	1
9	1	902	1	0	0	2
3	1	901	801	0	0	3
8	801	802	10	0	0	4
3	802	901	802	0	0	5
999	0	0	0	0	0	6

N36874.05

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1	1	1	1	1
2	1	1	1	1
3	1	1	1	1
4	1	1	1	1
5	1	1	1	1
6	1	1	1	1
7	1	1	1	1
8	1	1	1	1
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13	1	1	1	1
14	1	1	1	1
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22	1	1	1	1
23	1	1	1	1
24	1	1	1	1
25	1	1	1	1
26	1	1	1	1
27	1	1	1	1
28	1	1	1	1

RAT LEAD FEEDING STUDY				STUDY I	RESPONSE 5	PAGE	3
29	1	1	3				3
30	1	1	3				
31	1	1	3				
32	1	1	3				
33	1	1	3				
34	1	1	3				
35	1	1	3				
36	1	1	3				
37	1	1	4				
38	1	1	4				
39	1	1	4				
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51	1	1	5				
52	1	1	5				
53	1	1	5				
54	1	1	5				
55	1	1	5				
56	1	1	5				
57	1	1	5				

RAT LEAD FEEDING STUDY STUDY I RESPONSE 5					PAGE	4
58	1	1	5	.38000		001
59	1	1	5	.40000		
60	1	1	6	.34000		
61	1	1	6	.76000		001
62	1	1	6	.50000		
63	1	1	6	.73000		
64	1	1	6	.85000		001
65	1	1	6	.41000		
66	1	1	6	.68000		
67	1	1	6	.66000		
68	1	1	6	.41000		
69	1	1	6	.55000		001
70	1	1	6	.33000		
71	1	1	6	.72000		
72	1	1	7	.66000		
73	1	1	7	1.14000		001
74	1	1	7	.28000		
75	1	1	7	1.33000		
76	1	1	7	1.26000		001
77	1	1	7	.35000		
78	1	1	7	.33000		
79	1	1	7	.20000		001
80	1	1	7	1.90000		
81	1	1	7	.23000		
82	1	1	7	.63000		001
83	1	1	7	.57000		
84	1	1	8	1.28000		
85	1	1	8	.44000		001
86	1	1	8	.32000		

RAT LEAD FEEDING STUDY STUDY I RESPONSE 5

PAGE 5

5

87	1	1	8	.64000
88	1	1	8	.25000
89	1	1	8	.55000
90	1	1	8	.60000
91	1	1	8	.20000
92	1	1	8	.29000
93	1	1	8	.42000
94	1	1	8	.50000
95	1	1	8	.42000
96	1	1	9	.60000
97	1	1	9	.30000
98	1	1	9	.45000
99	1	1	9	.08000
100	1	1	9	.12000
101	1	1	9	.09000
102	1	1	9	.42000
103	1	1	9	.38000
104	1	1	9	.13000
105	1	1	9	.26000
106	1	1	9	.94000
107	1	1	9	.45000
108	1	1	10	.15000
109	1	1	10	.13000
110	1	1	10	.18000
111	1	1	10	.03000
112	1	1	10	.11000
113	1	1	10	.42000
114	1	1	10	.25000
115	1	1	10	.12000

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RAT LEAD FEEDING STUDY				STUDY 1	RESPONSE 5	PAGE	6	6
116	1	1	10					01
117	1	1	10					
118	1	1	10					
119	1	1	10					
120	1	2	1					
121	1	2	1					
122	1	2	1					01
123	1	2	1					
124	1	2	1					
125	1	2	1					
126	1	2	1					
127	1	2	1					
128	1	2	1					01
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132	1	2	2					
133	1	2	2					
134	1	2	2					01
135	1	2	2					
136	1	2	2					
137	1	2	2					
138	1	2	2					
139	1	2	2					
140	1	2	2					01
141	1	2	2					
142	1	2	2					
143	1	2	2					
144	1	2	3					

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RAT LEAD FEEDING STUDY				STUDY I	RESPONSE 5	PAGE	7
145	1	2	3				
			.2200				
146	1	2	3				
			.72000				
147	1	2	3				
			.57000				
148	1	2	3				
			.93000				
149	1	2	3				
			.20000				
150	1	2	3				
			.63000				
151	1	2	3				
			.53000				
152	1	2	3				
			.30000				
153	1	2	3				
			.57000				
154	1	2	3				
			.80000				
155	1	2	3				
			.33000				
156	1	2	4				
			.33000				
157	1	2	4				
			.17000				
158	1	2	4				
			.33000				
159	1	2	4				
			.11000				
160	1	2	4				
			.16000				
161	1	2	4				
			.50000				
162	1	2	4				
			.55000				
163	1	2	4				
			.23000				
164	1	2	4				
			.23000				
165	1	2	4				
			1.00000				
166	1	2	5				
			.27000				
167	1	2	5				
			.26000				
168	1	2	5				
			.45000				
169	1	2	5				
			.53000				
170	1	2	5				
			.35000				
171	1	2	5				
			.31000				
172	1	2	5				
			.60000				
173	1	2	5				
			.41000				

RAT LEAD FEEDING STUDY					STUDY 1	RESPONSE 5	PAGE	8
174	1	2	5	.42000				8
175	1	2	5	.52000				
176	1	2	5	.25000				
177	1	2	5	.21000				
178	1	2	6	.66000				
179	1	2	6	.25000				
180	1	2	6	.61000				
181	1	2	6	.16000				
182	1	2	6	.05000				
183	1	2	6	.15000				
184	1	2	6	.40000				
185	1	2	6	.10000				
186	1	2	6	.07000				
187	1	2	6	.33000				
188	1	2	6	.03000				
189	1	2	6	.25000				
190	1	2	7	.14000				
191	1	2	7	.04000				
192	1	2	7	.03000				
193	1	2	7	.06000				
194	1	2	7	.03000				
195	1	2	7	.10000				
196	1	2	7	.48000				
197	1	2	7	.80000				
198	1	2	7	.20000				
199	1	2	7	.33000				
200	1	2	7	.60000				
201	1	2	7	.35000				
202	1	2	8	.15000				

RAT LEAD FEEDING STUDY STUDY I RESPONSE 5

PAGE

9

9

203	1	2	8	.30000
204	1	2	8	.12000
205	1	2	8	.27000
206	1	2	8	.28000
207	1	2	8	.20000
208	1	2	8	.08000
209	1	2	8	.25000
210	1	2	8	.21000
211	1	2	8	.20000
212	1	2	8	.22000
213	1	2	8	.33000
214	1	2	9	.25000
215	1	2	9	.18000
216	1	2	9	.28000
217	1	2	9	.14000
218	1	2	9	.40000
219	1	2	9	.10000
220	1	2	9	.09000
221	1	2	9	.12000
222	1	2	9	.18000
223	1	2	9	.24000
224	1	2	9	.13000
225	1	2	9	.11000
226	1	2	10	.33000
227	1	2	10	.08000
228	1	2	10	.18000
229	1	2	10	.07000
230	1	2	10	.12000
231	1	2	10	.16000

DUP050309862

RAT LEAD FEEDING STUDY STUDY I RESPONSE 5

PAGE

10

RAT LEAD FEEDING STUDY				STUDY I	RESPONSE 5	PAGE	10	10
232	1	2	10					00
233	1	2	10					
234	1	2	10					
235	1	2	10					
236	1	2	10					
237	1	2	10					
238	2	1	1					00
239	2	1	1					
240	2	1	1					
241	2	1	1					
242	2	1	1					
243	2	1	1					
244	2	1	2					00
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254	2	1	3					
255	2	1	3					
256	2	1	4					00
257	2	1	4					
258	2	1	4					
259	2	1	4					
260	2	1	4					

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261	2	1	4	.30000
262	2	1	5	.38000
263	2	1	5	1.12000
264	2	1	5	.33000
265	2	1	5	.52000
266	2	1	5	.57000
267	2	1	5	.84000
268	2	1	6	.58000
269	2	1	6	.50000
270	2	1	6	1.20000
271	2	1	6	.42000
272	2	1	6	.52000
273	2	1	6	.61000
274	2	1	7	.66000
275	2	1	7	.52000
276	2	1	7	.80000
277	2	1	7	.52000
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279	2	1	7	.83000
280	2	1	8	.16000
281	2	1	8	.38000
282	2	1	8	.73000
283	2	1	8	.26000
284	2	1	8	.41000
285	2	1	8	.75000
286	2	1	9	.62000
287	2	1	9	.05000
288	2	1	9	.30000
289	2	1	9	.28000

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RAT LEAD FEEDING STUDY		STUDY I	RESPONSE 5	PAGE	12	12
290	2	1	9			00
291	2	1	9			00
292	2	1	10			00
293	2	1	10			00
294	2	1	10			00
295	2	1	10			00
296	2	1	10			00
297	2	1	10			00
298	2	2	1			00
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310	2	2	3			00
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312	2	2	3			00
313	2	2	3			00
314	2	2	3			00
315	2	2	3			00
316	2	2	4			00
317	2	2	4			00
318	2	2	4			00

	RAT LEAD FEEDING STUDY		STUDY I	RESPONSE 5	PAGE	13
319	2	2	4			13
320	2	2	4	.25000		
321	2	2	5	1.00000		
322	2	2	5	.25000		
323	2	2	5	.66000		
324	2	2	5	.46000		
325	2	2	5	.27000		
326	2	2	5	.56000		
327	2	2	6	.41000		
328	2	2	6	.26000		
329	2	2	6	.05000		
330	2	2	6	.22000		
331	2	2	6	.05000		
332	2	2	6	.54000		
333	2	2	7	.35000		
334	2	2	7	.29000		
335	2	2	7	.28000		
336	2	2	7	.76000		
337	2	2	7	.46000		
338	2	2	7	.31000		
339	2	2	8	.15000		
340	2	2	8	.40000		
341	2	2	8	.16000		
342	2	2	8	.42000		
343	2	2	8	.22000		
344	2	2	8	.20000		
345	2	2	9	.30000		
346	2	2	9	.13000		
347	2	2	9	.40000		
				.27000		

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348	2	2	9	.17000	11
349	2	2	9	.44000	
350	2	2	9	.11000	
351	2	2	10	.63000	
352	2	2	10	.13000	
353	2	2	10	.25000	
354	2	2	10	.33000	
355	2	2	10	.16000	
356	2	2	10	.25000	
357	3	1	1	.33000	
358	3	1	1	.42000	
359	3	1	1	.58000	
360	3	1	1	.90000	
361	3	1	1	.71000	
362	3	1	1	.73000	
363	3	1	2	1.20000	
364	3	1	2	1.06000	
365	3	1	2	.64000	
366	3	1	2	.38000	
367	3	1	2	1.00000	
368	3	1	2	.28000	
369	3	1	3	.17000	
370	3	1	3	.55000	
371	3	1	3	.50000	
372	3	1	3	.29000	
373	3	1	3	.15000	
374	3	1	3	.26000	
375	3	1	4	.91000	
376	3	1	4	.36000	

	RAT LEAD FEEDING STUDY			STUDY I	RESPONSE 5	PAGE	15	15
377	3	1	4					
378	3	1	4					
379	3	1	4					
380	3	1	4					
381	3	1	5					
382	3	1	5					
383	3	1	5					
384	3	1	5					
385	3	1	5					
386	3	1	5					
387	3	1	6					
388	3	1	6					
389	3	1	6					
390	3	1	6					
391	3	1	6					
392	3	1	6					
393	3	1	7					
394	3	1	7					
395	3	1	7					
396	3	1	7					
397	3	1	7					
398	3	1	7					
399	3	1	8					
400	3	1	8					
401	3	1	8					
402	3	1	8					
403	3	1	8					
404	3	1	8					
405	3	1	9					

RAT LEAD FEEDING STUDY				STUDY I	RESPONSE 5	PAGE	16	16
406	3	1	9					
407	3	1	9					
408	3	1	9					
409	3	1	9					
410	3	1	9					
411	3	1	10					
412	3	1	10					
413	3	1	10					
414	3	1	10					
415	3	1	10					
416	3	1	10					
417	3	2	1					
418	3	2	1					
419	3	2	1					
420	3	2	1					
421	3	2	1					
422	3	2	1					
423	3	2	2					
424	3	2	2					
425	3	2	2					
426	3	2	2					
427	3	2	2					
428	3	2	2					
429	3	2	3					
430	3	2	3					
431	3	2	3					
432	3	2	3					
433	3	2	3					
434	3	2	3					

DUP050309869

	RAT LEAD FEEDING STUDY			STUDY I	RESPONSE 5	PAGE	17
435	3	2	4				17
436	3	2	4				
437	3	2	4				
438	3	2	4				
439	3	2	4				
440	3	2	5				
441	3	2	5				
442	3	2	5				
443	3	2	5				
444	3	2	5				
445	3	2	5				
446	3	2	6				
447	3	2	6				
448	3	2	6				
449	3	2	6				
450	3	2	6				
451	3	2	6				
452	3	2	7				
453	3	2	7				
454	3	2	7				
455	3	2	7				
456	3	2	7				
457	3	2	7				
458	3	2	8				
459	3	2	8				
460	3	2	8				
461	3	2	8				
462	3	2	8				
463	3	2	8				

464

3 2 9

.60000

465

3 2 9

.07000

466

3 2 9

.09000

467

3 2 9

.18000

468

3 2 9

.20000

469

3 2 9

.10000

470

3 2 10

.27000

471

3 2 10

.16000

472

3 2 10

.16000

473

3 2 10

.75000

474

3 2 10

.33000

475

3 2 10

.12000

476

4 1 1

.23000

477

4 1 1

.44000

478

4 1 1

.58000

479

4 1 1

.76000

480

4 1 1

.57000

481

4 1 1

.50000

482

4 1 2

.93000

483

4 1 2

1.00000

484

4 1 2

.52000

485

4 1 2

1.26000

486

4 1 2

.18000

487

4 1 2

.24000

488

4 1 3

.58000

489

4 1 3

.43000

490

4 1 3

.65000

491

4 1 3

.25000

492

4 1 3

.52000

493

4 1 1

.00000

RAT LEAD FEEDING STUDY				STUDY 1	RESPONSE 5	PAGE	19
493	4	1	4				19
494	4	1	4		.71000		
495	4	1	4		.70000		
496	4	1	4		.31000		
497	4	1	4		.50000		
498	4	1	4		.13000		
499	4	1	5		1.00000		
500	4	1	5		.47000		
501	4	1	5		.20000		
502	4	1	5		.58000		
503	4	1	5		.17000		
504	4	1	5		.33000		
505	4	1	6		.25000		
506	4	1	6		.64000		
507	4	1	6		.31000		
508	4	1	6		.57000		
509	4	1	6		.20000		
510	4	1	6		.75000		
511	4	1	7		.27000		
512	4	1	7		1.18000		
513	4	1	7		.37000		
514	4	1	7		.53000		
515	4	1	7		.95000		
516	4	1	7		.57000		
517	4	1	8		.43000		
518	4	1	8		.80000		
519	4	1	8		.28000		
520	4	1	8		.31000		
521	4	1	8		.73000		
					.19000		

RAT LEAD FEEDING STUDY				STUDY I	RESPONSE 5	PAGE	20	20
522	4	1	8					00
523	4	1	9		.57000			
524	4	1	9		1.14000			
525	4	1	9		.22000			
526	4	1	9		.10000			
527	4	1	9		.32000			
528	4	1	9		.57000			00
529	4	1	10		.23000			
530	4	1	10		.35000			
531	4	1	10		.09000			
532	4	1	10		.45000			
533	4	1	10		.29000			
534	4	1	10		.40000			00
535	4	2	1		.08000			
536	4	2	1		.66000			
537	4	2	1		.08000			
538	4	2	1		.55000			
539	4	2	1		1.62000			
540	4	2	1		.33000			00
541	4	2	2		1.10000			
542	4	2	2		.40000			
543	4	2	2		.50000			
544	4	2	2		.33000			
545	4	2	2		.36000			
546	4	2	2		.62000			00
547	4	2	3		.82000			
548	4	2	3		.60000			
549	4	2	3		.55000			
550	4	2	3		.18000			
					.55000			

551	4	2	3	.84000	
552	4	2	3	1.18000	
553	4	2	4	.14000	
554	4	2	4	.21000	
555	4	2	4	.40000	
556	4	2	4	.21000	
557	4	2	4	.20000	
558	4	2	4	.33000	
559	4	2	5	.53000	
560	4	2	5	.22000	
561	4	2	5	.33000	
562	4	2	5	.33000	
563	4	2	5	.14000	
564	4	2	5	.31000	
565	4	2	6	.46000	
566	4	2	6	.13000	
567	4	2	6	.28000	
568	4	2	6	.50000	
569	4	2	6	.21000	
570	4	2	6	.17000	
571	4	2	7	.26000	
572	4	2	7	.10000	
573	4	2	7	.04000	
574	4	2	7	.23000	
575	4	2	7	.17000	
576	4	2	7	.22000	
577	4	2	8	.50000	
578	4	2	8	.20000	
579	4	2	8	.50000	

RAT LEAD FEEDING STUDY					STUDY 1	RESPONSE 5	PAGE	22
580	4	2	8	.12000				22
581	4	2	8	.25000				
582	4	2	8	.27000				
583	4	2	9	.31000				
584	4	2	9	.29000				
585	4	2	9	.29000				
586	4	2	9	.32000				
587	4	2	9	.14000				
588	4	2	9	.18000				
589	4	2	10	.33000				
590	4	2	10	.87000				
591	4	2	10	.16000				
592	4	2	10	.31000				
593	4	2	10	.50000				
594	4	2	10	.15000				
595	5	1	1	1.00000				
596	5	1	1	1.30000				
597	5	1	1	2.60000				
598	5	1	1	1.09000				
599	5	1	1	.76000				
600	5	1	1	.92000				
601	5	1	2	1.20000				
602	5	1	2	1.42000				
603	5	1	2	1.50000				
604	5	1	2	1.21000				
605	5	1	2	2.07000				
606	5	1	2	.89000				
607	5	1	3	1.86000				
608	5	1	3	1.00000				

KAT LEAD FEEDING STUDY				STUDY I	RESPONSE 5	PAGE	24	24
638	5	1	8					01
					.26000			
639	5	1	8					
					.94000			
640	5	1	8					
					1.10000			
641	5	1	8					
					.89000			
642	5	1	8					
					.90000			
643	5	1	9					
					.45000			
644	5	1	9					01
					.28000			
645	5	1	9					
					.28000			
646	5	1	9					
					.11000			
647	5	1	9					
					.25000			
648	5	1	10					
					.22000			
649	5	1	10					
					1.13000			
650	5	1	10					01
					.06000			
651	5	1	10					
					.31000			
652	5	1	10					
					.39000			
653	5	1	10					
					.14000			
654	5	2	1					
					2.50000			
655	5	2	1					
					3.66000			
656	5	2	1					01
					2.28000			
657	5	2	1					
					1.46000			
658	5	2	1					
					2.88000			
659	5	2	1					
					1.26000			
660	5	2	2					
					.64000			
661	5	2	2					
					.92000			
662	5	2	2					01
					1.63000			
663	5	2	2					
					.76000			
664	5	2	2					
					.84000			
665	5	2	2					
					.70000			
666	5	2	3					
					1.66000			01

EXPANDED DATA MATRIX (IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

DATA	LOG DATA	
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
12,00000	151.85139	
18,00000	125.52725	
26,00000	141.49734	
94,00000	197.31279	
107,91812		

NO. OF INPUT DATA ROWS = 712
 NO. OF ROWS DELETED BY LOGICAL TESTS = 0
 NO. OF ROWS DELETED FOR MISSING DATA = 0
 NO. OF EXPANDED DATA ROWS REMAINING = 712

*****ANOVA

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 5

PAGE 29 29

3	2	4	37.8000	226.2000	15.0399 *	5
3	2	5	36.3333	553.8667	23.5344	6
3	2	6	19.6667	128.2667	11.3255 *	6
3	2	7	26.5000	554.7000	18.8335	6
3	2	8	22.8333	79.7667	8.9312 *	6
3	2	9	20.6667	398.2667	19.9566	6
3	2	10	29.8333	551.7667	23.4897	6
4	1	1	51.3333	308.6667	17.5689	6
4	1	2	68.8333	1940.1668	44.0473 *	6
4	1	3	48.6000	239.3000	15.4693	3
4	1	4	55.8333	973.3668	31.1988	6
4	1	5	33.3333	261.8667	16.1823	6
4	1	6	45.6667	509.4667	22.5714	6
4	1	7	67.1667	1031.3667	32.1149	6
4	1	8	48.0000	652.0001	25.5343	6
4	1	9	43.0000	1457.6000	38.1785 *	6
4	1	10	27.6667	248.6667	15.7692	6
4	2	1	72.3333	3097.0669	55.6513 *	6
4	2	2	50.5000	350.3001	18.7163	6
4	2	3	65.0000	1120.8001	33.4784	6
4	2	4	24.8333	93.3667	9.6626 *	6
4	2	5	31.0000	172.4000	13.1301 *	6
4	2	6	29.1667	238.9667	15.4585 *	6
4	2	7	17.0000	72.0000	8.4853 *	6
4	2	8	30.6667	251.0667	13.8451	6
4	2	9	25.5000	57.1000	7.5565 *	6
4	2	10	38.6667	725.8667	26.9419	6
5	1	1	127.8333	4514.5674	67.1905 *	6
5	1	2	138.1667	1586.9673	39.8368 *	6
5	1	3	157.0000	1488.4008	38.5798 *	6
5	1	4	101.0000	1919.6005	43.8132 *	6
5	1	5	116.3333	1319.0668	36.3190	6
5	1	6	100.0000	2082.8003	45.6377 *	6
5	1	7	173.0000	25313.2014	159.1012 *	6
5	1	8	79.6667	882.6668	29.3712	6
5	1	9	27.4000	146.3000	12.0955 *	5
5	1	10	37.5000	1505.9000	38.8059 *	6
5	2	1	234.0000	8008.0024	89.4874 *	6
5	2	2	91.5000	1325.5002	36.4074	6
5	2	3	138.8333	1318.1673	36.3066	6
5	2	4	63.8000	1383.2001	37.1914 *	5
5	2	5	72.8333	776.5668	27.8669	6
5	2	6	56.0000	461.6001	21.4849	6
5	2	7	38.8333	60.5667	7.7825 *	6
5	2	8	50.6667	531.4667	23.0536	6
5	2	9	73.0000	239.2002	15.4661	6
5	2	10	59.3333	937.8667	30.6246	6

MEAN OF THE CELL MEANS = 53.63700

WITHIN CELL VARIANCE = 954.85964
 WITHIN CELL STANDARD DEVIATION = 30.90080
 HARMONIC MEAN OF CELL SIZE = 6.58269
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .57611
 VARIANCE OF A CELL MEAN = 145.05103
 STANDARD ERROR OF A CELL MEAN = 12.04375

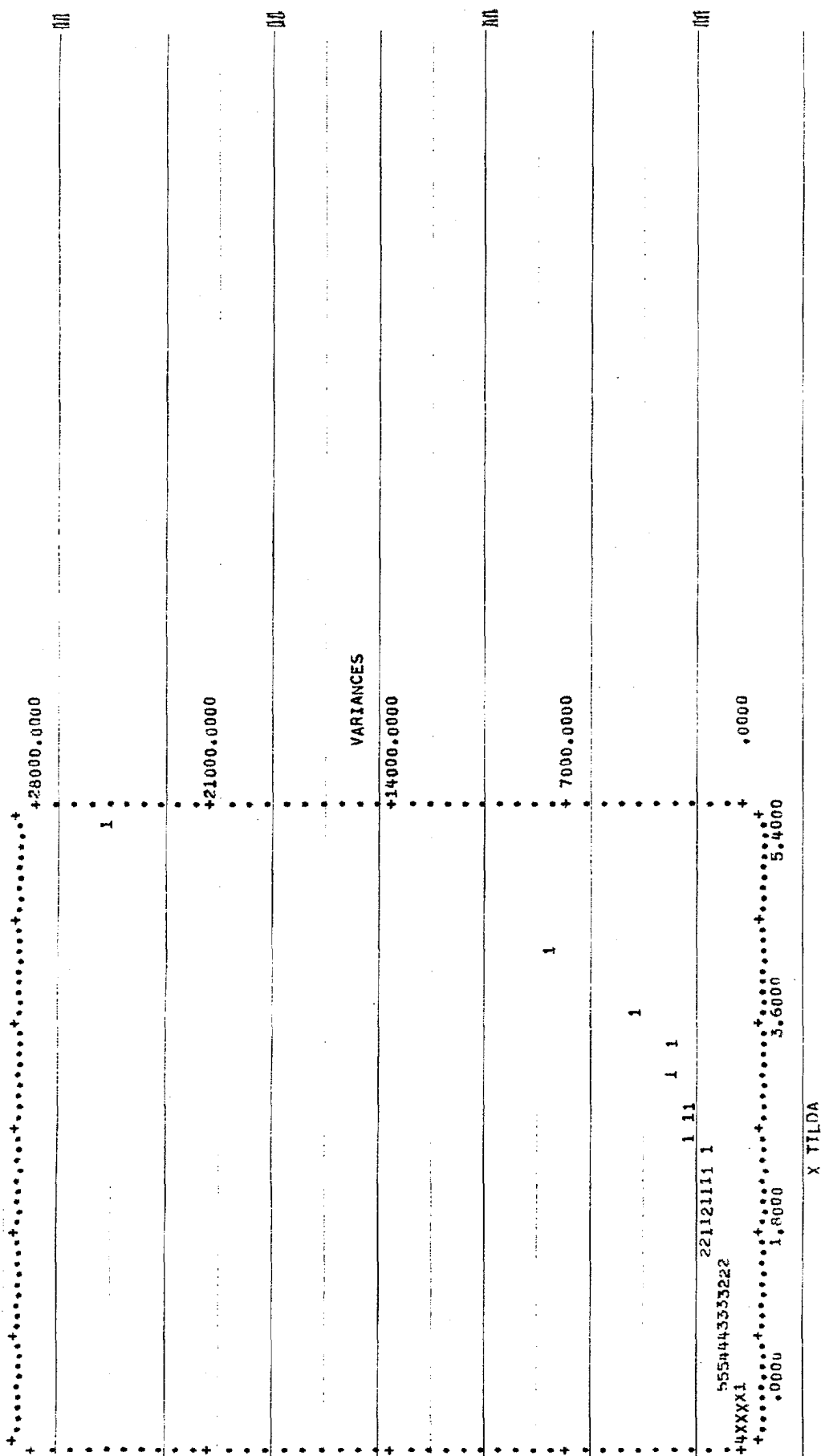
CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 36.96771
 LOWER CONTROL LIMIT = 15.46358
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 79.85 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

THE GAMMA FLOI



X TILDA

E(100)	=	8.9258	RESIDUAL FOR HIGHEST VALUE OF X TILDA
T FOR SLOPE	=	10.2880	STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T CRITICAL	=	1.9843	T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS

[illegible]

PLOT OF CELL MEANS VRS VARIANCES

[illegible]

EXPECTED MEAN SQUARE TABLE

SOURCE OF VARIATION EXPECTED MEAN SQUARE

A = PB LEVEL REP + 20(A)
 B = SEX REP + 50(B)
 AB REP + 10(AB)
 C = TIME REP + 10(C)
 AC REP + 2(AC)
 BC REP + 5(BC)
 ABC REP + 1(ABC)
 REPLICATES REP

UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RAT.0
TOTAL	99	.11958+06		
A = PH LEVEL	4	.46700+05	.11675+05	8n.49 **
B = SEX	1	.30390+04	.30390+04	20.95 **
AB	4	.53538+03	.13384+03	.92
C = TIME	9	.23739+03	.26377+04	18.18 **
AC	36	.18415+05	.51154+03	3.53 **
BC	9	.15881+05	.17645+04	12.16 **
ABC	36	.11267+05	.31297+03	2.16 **
REPLICATES	612		.14505+03	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 DATA

MEANS TABLES

PB LEVEL	MEANS				
0	41.7584	10	43.4217	50	42.4650
				100	43.7050
				500	96.8350
STANDARD ERROR OF A MEAN =					
95% CONFIDENCE LIMITS =					
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =					
LEAST SIGNIFICANT DIFFERENCE (LSD) =					
					2.6931
					5.2809
					3.8086
					7.4796

SEX	MEANS	
MALE	59.1497	48.1243
FEMALE		
STANDARD ERROR OF A MEAN =		
95% CONFIDENCE LIMITS =		
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =		
LEAST SIGNIFICANT DIFFERENCE (LSD) =		
		1.7032
		3.3450
		2.4087
		4.7305

PB LEVEL	* SEX	INTERACTION	
PB LEVEL	SEX		
0	MALE	FEMALE	DIFFERENCES
	46.3485	37.1683	9.1802
10	45.4167	41.4267	3.9900
50	49.2500	35.6800	13.5700
100	48.9433	38.4667	10.4767
500	105.7900	87.8800	17.9100
STANDARD ERROR OF A MEAN =			
95% CONFIDENCE LIMITS =			
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =			
LEAST SIGNIFICANT DIFFERENCE (LSD) =			
			3.8086
			7.4796
			5.3861
			10.5777

TIME MEANS

1 81.9833 2 69.9667 3 68.9350 6 49.4618 9 51.8917 12 47.5417 15 57.9500 18 43.6333 21 32.7567 24 32.2500

STANDARD ERROR OF A MEAN =

3.8086

95% CONFIDENCE LIMITS =

7.4796

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

5.3861

LEAST SIGNIFICANT DIFFERENCE (LSD) =

10.5777

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

PB LEVEL	1	2	3	6	9	12	15	18	21	24
0	60.9167	57.5833	44.6250	41.4591	40.9583	41.7083	50.2500	35.5000	26.8133	18.2500
10	45.8333	52.8333	55.0000	37.5500	53.0833	44.1667	49.0833	36.5833	30.9167	29.1667
50	60.9167	64.9167	40.3333	45.5667	38.6667	36.4167	42.9167	41.5833	21.5833	32.2500
100	61.8333	59.6667	56.8000	40.3333	32.1667	37.4167	42.0833	39.3333	34.2500	33.1667
500	180.9167	114.8333	147.9167	82.4000	94.5833	78.0000	105.9167	65.1667	50.2000	48.4167

STANDARD ERROR OF A MEAN =

8.5162

95% CONFIDENCE LIMITS =

16.7248

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

12.0437

LEAST SIGNIFICANT DIFFERENCE (LSD) =

23.6525

SEX * TIME INTERACTION

SEX TIME

	1	2	3	6	9	12	15	18	21	24
MALE	62.8167	70.3833	62.7367	57.8970	59.4167	64.1000	86.6333	56.4167	32.9133	29.1833
FEMALE	101.1500	60.5500	75.1333	41.0267	44.3667	30.9833	29.2667	30.8500	32.6000	35.3167

	1	2	3	6	9	12	15	18	21	24
DIFFERENCES	-38.3333	10.8333	-12.3967	16.4703	15.0500	33.1167	57.3667	25.5667	.3133	-6.1333

STANDARD ERROR OF A MEAN =

5.3861

95% CONFIDENCE LIMITS =

10.5777

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

7.6171

LEAST SIGNIFICANT DIFFERENCE (LSD) =

14.9591

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

DUP050309891

RESPONSE NUMBER 2 LOG DATA

CELL IDENTIFICATION

CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
-----------	---------------	-------------------------	------------------------

1	1	1	148.8065	1208.0426	34.7569 *	12
1	1	2	174.3613	457.0465	21.3786	12
1	1	3	147.0399	1023.2269	31.9879	12
1	1	4	163.1618	367.1697	19.1617	11
1	1	5	158.0576	596.1076	24.4153	12
1	1	6	174.1486	205.5735	14.3378	12
1	1	7	175.8928	1075.1848	32.7897	12
1	1	8	164.0612	456.6602	21.3696	12
1	1	9	143.3607	1186.2358	34.4418 *	12
1	1	10	113.9828	898.7837	29.9797	12
1	2	1	187.1746	303.9123	17.4331	12
1	2	2	168.6600	367.7628	19.1771	12
1	2	3	167.2849	465.8675	21.5840	12
1	2	4	146.7578	829.2205	28.7962	10
1	2	5	155.9133	217.9347	14.7626	12
1	2	6	125.3972	1543.6914	40.5425 *	12
1	2	7	120.4713	2348.5611	48.4620 *	12
1	2	8	130.8097	318.8952	17.8576	12
1	2	9	122.2733	404.3288	20.1079	12
1	2	10	120.7898	785.6712	28.0298	12
2	1	1	141.1198	1049.2426	32.3920	6
2	1	2	164.5320	726.5555	26.9547	6
2	1	3	154.5808	560.6918	23.6789	6
2	1	4	144.3919	694.0781	26.3454	6
2	1	5	175.7279	406.6730	20.1661	6
2	1	6	177.7694	250.0258	15.8122	6
2	1	7	175.7743	290.2617	17.0371	6
2	1	8	159.1674	672.2191	25.9272	6
2	1	9	142.5288	1803.7535	42.4706 *	6
2	1	10	140.4140	696.6484	26.3941	6
2	2	1	172.9209	537.2090	23.1778	6
2	2	2	165.5857	757.6574	27.5256	6
2	2	3	183.6878	151.0324	12.2895 *	6
2	2	4	152.7097	1118.5496	33.4447	5
2	2	5	161.2096	285.2992	16.8908	6
2	2	6	123.8633	1922.8617	43.8504 *	6
2	2	7	152.0097	556.5668	23.5917	6
2	2	8	142.5000	288.6902	16.9909	6
2	2	9	134.3777	642.6797	25.3492	6
2	2	10	140.5300	587.1113	24.2304	6
3	1	1	176.2336	267.4582	16.3541	6
3	1	2	182.2935	677.1598	26.0223	6
3	1	3	145.3874	541.6312	23.2730	6
3	1	4	165.8823	822.9504	28.6801	6
3	1	5	159.1486	223.4937	14.9497	6
3	1	6	171.1900	159.4004	12.6254 *	6
3	1	7	173.4242	305.6691	17.4834	6
3	1	8	174.1441	435.4336	20.8670	6
3	1	9	129.6330	566.7212	23.8060	6
3	1	10	142.1797	1817.4992	42.6321 *	6
3	2	1	175.2036	324.6742	18.0187	6
3	2	2	171.0398	213.6191	14.6157	6
3	2	3	163.6813	601.0687	24.5167	6

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 5

PAGE 42 42

3	2	4	154.5547	371.6118	19.2772	5
3	2	5	149.1736	696.5269	26.3918	6
3	2	6	122.4726	771.5379	27.7766	6
3	2	7	133.8439	866.7180	29.4401	6
3	2	8	132.4252	400.0016	20.0000	6
3	2	9	118.8966	1146.2848	33.8568 *	6
3	2	10	138.5393	838.1898	28.9515	6
4	1	1	168.4044	311.8758	17.6600	6
4	1	2	173.6723	1229.1832	35.0597 *	6
4	1	3	166.4751	266.2070	16.3159	5
4	1	4	166.6772	1028.6031	32.0718	6
4	1	5	148.0576	439.5086	20.9645	6
4	1	6	161.0145	542.9434	23.3011	6
4	1	7	178.8571	387.7328	19.6909	6
4	1	8	162.3260	641.2309	25.3225	6
4	1	9	150.3680	1339.0199	36.5926 *	6
4	2	1	135.3178	1124.1191	33.5279	6
4	2	2	170.5403	2119.8043	46.0413 *	6
4	2	3	168.0342	230.2266	15.1732	6
4	2	4	175.1718	759.3941	27.5571	6
4	2	5	136.8695	270.6785	16.4523	6
4	2	6	145.6869	379.9086	19.4912	6
4	2	7	141.2583	552.6492	23.5085	6
4	2	8	115.8605	961.6641	31.0107	6
4	2	9	133.4576	570.6016	23.8873	6
4	2	10	136.7118	223.1836	14.9393	6
5	1	1	150.4763	851.0187	29.1722	6
5	1	2	206.8491	347.9164	18.6525	6
5	1	3	212.5951	149.0797	12.2098 *	6
5	1	4	218.4132	127.9684	11.3123 *	6
5	1	5	197.0435	352.0801	18.7638	6
5	1	6	204.6331	213.7578	14.6205	6
5	1	7	195.9619	432.6621	20.8005	6
5	1	8	210.4238	1373.7633	37.0643 *	6
5	1	9	186.1996	522.0918	22.8493	6
5	1	10	139.7372	492.8337	22.1999	5
5	2	1	140.0368	1851.6504	43.0308 *	6
5	2	2	234.0579	312.2992	17.6720	6
5	2	3	193.8724	210.6137	14.5125	6
5	2	4	212.9199	143.8129	11.9922 *	6
5	2	5	171.9024	1109.3833	33.3074	5
5	2	6	183.5119	288.2312	16.9774	6
5	2	7	171.7385	345.8648	18.5974	6
5	2	8	156.2073	73.6594	8.5825 *	6
5	2	9	166.8035	384.3148	19.6039	6
5	2	10	185.4893	89.6316	9.4674 *	6
5	2	11	171.8801	610.7473	24.7133	6

RAT 1 CAN EFFICIENTLY UTILIZE Amino Y RECOVERED

3411

[illegible][illegible]

RAT LEAD FEEDING STUDY				STUDY I		RESPONSE 5		PAGE		40		40		M	
TIME				* PB LEVEL		TIME		* SEX							
1				I		I		I		I		I		I	
2				I		I		I		I		I		I	
3				I		I		I		I		I		I	
4				I		I		I		I		I		I	
5				I		I		I		I		I		I	
6				I		I		I		I		I		I	
7				I		I		I		I		I		I	
8				I		I		I		I		I		I	
9				I		I		I		I		I		I	
10				I		I		I		I		I		I	
13.45 42.20 70.95 99.70128.45157.20185.95				I		I		I		I		I		I	
13.45 42.20 70.95 99.70128.45157.20185.95				I		I		I		I		I		I	

RESPONSE NUMBER 2 LOG DATA

CELL IDENTIFICATION

CELL IDENTIFICATION	CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
1 1 1	148.8065	1208.0426	34.7569 *	12
1 1 2	174.3613	457.0465	21.3786	12
1 1 3	147.0399	1023.2269	31.9879	12
1 1 4	163.1618	367.1697	19.1617	11
1 1 5	158.0576	596.1076	24.4153	12
1 1 6	174.1486	205.5735	14.3378	12
1 1 7	175.8928	1075.1688	32.7897	12
1 1 8	164.0612	456.6602	21.3696	12
1 1 9	143.3607	1186.2368	34.4418 *	12
1 1 10	113.9828	898.7837	29.9797	12
1 2 1	187.1746	303.9123	17.4331	12
1 2 2	168.6600	367.7628	19.1771	12
1 2 3	167.2849	465.8675	21.5840	12
1 2 4	146.7578	829.2205	28.7962	10
1 2 5	155.9133	217.9347	14.7626	12
1 2 6	125.3972	1643.6914	40.5425 *	12
1 2 7	120.4713	2348.5611	48.4620 *	12
1 2 8	130.8097	318.8952	17.8576	12
1 2 9	122.2733	404.3288	20.1079	12
1 2 10	120.7898	785.6712	28.0298	12
2 1 1	141.1198	1049.2426	32.3920	6
2 1 2	164.5320	726.5555	26.9547	6
2 1 3	154.5808	560.6918	23.6789	6
2 1 4	144.3919	694.0781	26.3454	6
2 1 5	175.7279	406.6730	20.1661	6
2 1 6	177.7694	250.0258	15.8122	6
2 1 7	175.7743	290.2617	17.0371	6
2 1 8	159.1674	672.2191	25.9272	6
2 1 9	142.5288	1803.7535	42.4706 *	6
2 1 10	140.4140	696.6484	26.3941	6
2 2 1	172.9209	537.2090	23.1778	6
2 2 2	165.5857	757.6574	27.5256	6
2 2 3	183.6878	151.0324	12.2895 *	6
2 2 4	152.7097	1118.5496	33.4447	5
2 2 5	161.2096	285.2992	16.8908	6
2 2 6	123.8633	1922.8617	43.8504 *	6
2 2 7	152.0097	556.5668	23.5917	6
2 2 8	142.5000	288.6902	16.9909	6
2 2 9	134.3777	642.5797	25.3492	6
2 2 10	140.5300	587.1113	24.2304	6
3 1 1	176.2336	267.4562	16.3541	6
3 1 2	182.2935	677.1598	26.0223	6
3 1 3	145.3874	541.6312	23.2730	6
3 1 4	165.8823	822.5504	28.6801	6
3 1 5	159.1486	223.4937	14.9497	6
3 1 6	171.1900	159.4004	12.6254 *	6
3 1 7	173.4242	305.6691	17.4834	6
3 1 8	174.1441	435.4336	20.8670	6
3 1 9	129.6330	566.7242	23.8050	6
3 1 10	142.1797	1817.4992	42.6321 *	6
3 2 1	175.2036	324.6742	18.0187	6
3 2 2	171.0398	213.6191	14.6157	6
3 2 3	163.6813	601.0687	24.5167	6

RAT LEAD FEEDING STUDY				STUDY I	RESPONSE 5	PAGE	42	42	42
3	2	4	3	2	4	154.5547	371.6118	19.2772	5
3	2	5	3	2	5	149.1736	696.5269	26.3918	6
3	2	6	3	2	6	122.4726	771.5379	27.7766	6
3	2	7	3	2	7	133.8439	866.7180	29.4401	6
3	2	8	3	2	8	132.4252	400.0016	20.0000	6
3	2	9	3	2	9	118.8966	1146.2848	33.8568 *	6
3	2	10	3	2	10	138.5393	838.1898	28.9515	6
4	1	1	4	1	1	168.4044	311.8753	17.6600	6
4	1	2	4	1	2	173.6723	1229.1832	35.0597 *	6
4	1	3	4	1	3	166.4751	266.2070	16.3159	5
4	1	4	4	1	4	166.6772	1028.6031	32.0718	6
4	1	5	4	1	5	148.0576	439.5086	20.9645	6
4	1	6	4	1	6	161.0145	582.9434	23.3011	6
4	1	7	4	1	7	178.8571	387.7328	19.6909	6
4	1	8	4	1	8	162.3260	641.2309	25.3225	6
4	1	9	4	1	9	150.3680	1339.0199	36.5926 *	6
4	1	10	4	1	10	135.3178	1124.1191	33.5279	6
4	2	1	4	2	1	170.5403	2119.8043	46.0413 *	6
4	2	2	4	2	2	168.0342	230.2266	15.1732	6
4	2	3	4	2	3	175.1718	759.3941	27.5571	6
4	2	4	4	2	4	136.8695	270.6785	16.4523	6
4	2	5	4	2	5	145.6869	379.9086	19.4912	6
4	2	6	4	2	6	141.2583	552.6492	23.5085	6
4	2	7	4	2	7	115.8605	961.6641	31.0107	6
4	2	8	4	2	8	143.4576	570.6016	23.8873	6
4	2	9	4	2	9	138.7118	223.1836	14.9393	6
4	2	10	4	2	10	150.4763	851.0187	29.1722	6
5	1	1	5	1	1	206.8491	347.9164	18.6525	6
5	1	2	5	1	2	212.5951	149.0797	12.2098 *	6
5	1	3	5	1	3	218.4132	127.9684	11.3123 *	6
5	1	4	5	1	4	197.0435	352.0801	18.7638	6
5	1	5	5	1	5	204.6331	213.7578	14.6205	6
5	1	6	5	1	6	195.9619	432.6621	20.8005	6
5	1	7	5	1	7	210.4238	1373.7833	37.0643 *	6
5	1	8	5	1	8	186.1996	522.0918	22.8493	6
5	1	9	5	1	9	139.7372	492.8337	22.1999	5
5	1	10	5	1	10	140.0368	1851.6504	43.0308 *	6
5	2	1	5	2	1	234.0579	312.2992	17.6720	6
5	2	2	5	2	2	193.8724	210.6137	14.5125	6
5	2	3	5	2	3	212.9199	143.8129	11.9922 *	6
5	2	4	5	2	4	171.9024	1109.3833	33.3074	5
5	2	5	5	2	5	183.5119	288.2312	16.9774	6
5	2	6	5	2	6	171.7385	345.8648	18.5974	6
5	2	7	5	2	7	158.2073	73.6594	8.5825 *	6
5	2	8	5	2	8	166.8035	384.3148	19.6039	6
5	2	9	5	2	9	185.4893	89.6316	9.4674 *	6
5	2	10	5	2	10	171.8801	610.7473	24.7133	6

MEAN OF THE CELL MEANS =				160.52663	00
WITHIN CELL VARIANCE =				669.78501	
WITHIN CELL STANDARD DEVIATION =				25.88020	
HARMONIC MEAN OF CELL SIZE =				6.58289	
COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) =				.16122	
VARIANCE OF A CELL MEAN =				101.74641	
STANDARD ERROR OF A CELL MEAN =				10.08694	
CONTROL LIMITS FOR THE STANDARD DEVIATION					
UPPER CONTROL LIMIT =				33.84473	
LOWER CONTROL LIMIT =				14.15724	
* DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS					

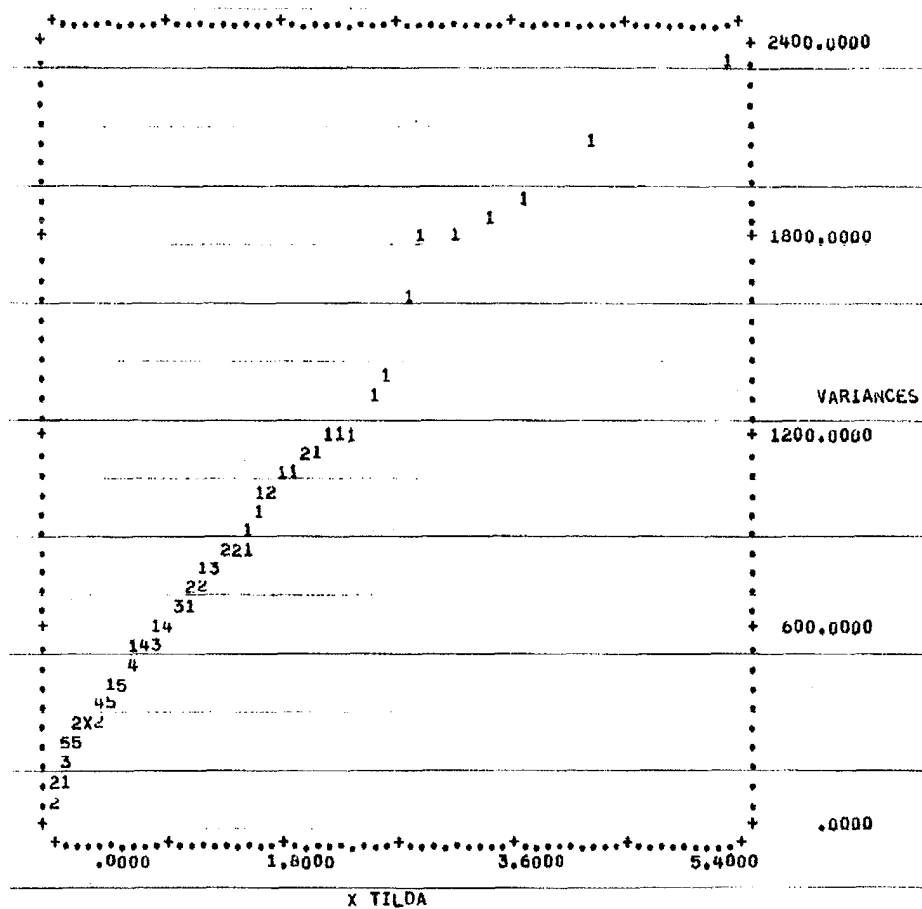
TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 79.85 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE Q1

Q

THE GAMMA PLOT



E(100)	=	-4.7042	RESIDUAL FOR HIGHEST VALUE OF X TILDA
T FOR SLOPE	=	58.8948	STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T CRITICAL	=	1.9843	T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS

+ +
+ +

65.9835

III

1
1
1
1
1

	1	1	+	35.5825
	1	2	+	

M

STANDARD DEVIATIONS

[illegible]

CELL MEANS

三

PLOT OF CELL MEANS VRS VARIANCES

[illegible]

地

$$1 + 1, 21 + 1873, 6594$$

1

[illegible]

VARIANCES

	1	11	21	.
+	+	+	+	+
113.9828	173.9828	233.9828	293.9828	

CELL MEANS

UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	99	.58916+05		
A = PH. LEVEL	4	.19319+05	4829.68353	47.47 **
B = SEX	1	.26036+04	2603.57001	25.59 **
AB	4	.44020+03	110.05006	1.08
C = TIME	5	.16589+05	1843.20341	18.12 **
AC	36	.46234+04	128.42862	1.26
BC	9	.11069+05	1229.93628	12.09 **
ABC	36	.42715+04	118.65250	1.17
REPLICATES	612		101.74641	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 2 LOG DATA

MEANS TABLES

PB LEVEL	MEANS			
	0	10	50	100
	150.4203	155.2700	153.9673	154.8619
				500
				188.1138
STANDARD ERROR OF A MEAN =				
95% CONFIDENCE LIMITS =				
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =				
LEAST SIGNIFICANT DIFFERENCE (LSD) =				
				2.2555
				4.4295
				3.1898
				6.2643

SEX	MEANS
MALE	165.6292
FEMALE	155.4241

STANDARD ERROR OF A MEAN =	1.4265
95% CONFIDENCE LIMITS =	2.8015
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =	2.0174
LEAST SIGNIFICANT DIFFERENCE (LSD) =	3.9619

PB LEVEL *** SEX** **INTERACTION**

PU LEVEL	SEX	MALE	FEMALE	DIFFERENCES
0		156.2873	144.8532	11.7341
10		157.6006	152.9394	4.6612
50		161.9516	145.9831	15.9685
100		161.1170	148.6067	12.5103
500		191.1893	185.0363	6.1510

STANDARD ERROR OF A MEAN =	3.1898
95% CONFIDENCE LIMITS =	6.2643
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =	4.5110
LEAST SIGNIFICANT DIFFERENCE (LSD) =	8.8591

TIME MEANS

1 178.1311 2 177.4646 3 173.4642 6 159.9951 9 164.1120 12 156.4814 15 159.4765 18 156.1894 21 140.5376 24 139.4147

STANDARD ERROR OF A MEAN =

95% CONFIDENCE LIMITS =

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

LEAST SIGNIFICANT DIFFERENCE (LSD) =

3.1898

6.2643

4.5110

8.8591

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

0 1 167.9906 2 171.5107 3 157.1624 6 154.9598 9 156.9855 12 149.7729 15 148.1820 18 147.4354 21 132.8170 24 117.3863
 10 157.0203 165.0588 169.1343 148.5508 168.4687 150.8163 163.8920 150.8337 138.4532 140.4720
 50 175.7186 176.6666 154.5344 150.2185 154.1611 146.8313 153.6341 151.2847 124.2548 140.3595
 100 169.4724 170.8533 170.8234 151.7733 146.8723 151.1364 147.3588 152.8918 144.5399 142.8971
 500 220.4535 203.2338 215.6665 184.4729 194.0725 183.8502 184.3155 176.5015 162.6132 155.9585

STANDARD ERROR OF A MEAN =

95% CONFIDENCE LIMITS =

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

LEAST SIGNIFICANT DIFFERENCE (LSD) =

7.1325

14.0075

10.0869

19.8095

SEX * TIME INTERACTION

SEX TIME

	1	2	3	6	9	12	15	18	21	24
MALE	168.2827	161.4908	166.3793	167.4313	169.1250	176.0169	182.8744	169.1797	141.1255	134.3862
FEMALE	187.9794	173.4384	180.5491	152.5588	159.0991	136.9460	136.0785	143.1992	139.9497	144.4431

	1	2	3	6	9	12	15	18	21	24
DIFFERENCES	-19.6968	8.0524	-14.1699	14.8725	10.0259	39.0709	46.7959	25.9805	1.1758	-10.0569

STANDARD ERROR OF A MEAN =

4.5110

95% CONFIDENCE LIMITS =

8.8591

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

6.3795

LEAST SIGNIFICANT DIFFERENCE (LSD) =

12.5287

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 5

PAGE 50 MEANS 50

SEX

PB LEVEL

MEANS	SEX	RESPONSE 5	STUDY 1	FEEDING	LEAD	RAT	PB LEVEL
1	+		*				
2	+		*				
3	+		*				
4	+		*				
5	+		*				

114.35132.55150.75168.95187.15205.35223.55

RAT LEAD FEEDING STUDY				STUDY I		RESPONSE 5		PAGE 51		51	
PB LEVEL	* SEX	TIME	MEANS								
PB LEVEL	1	+	1	+	+	+	+	+	+	+	+
	2	+	21	+	+	+	+	+	+	+	+
	3	+	2	1	+	+	+	+	+	+	+
	4	+	2	1	+	+	+	+	+	+	+
	5	+	21	+	+	+	+	+	+	+	+
114.35132.55150.75168.95187.15205.35223.55											
PB LEVEL	6	+	2	1	+	+	+	+	+	+	+
	7	+	2	1	+	+	+	+	+	+	+
	8	+	2	1	+	+	+	+	+	+	+
	9	+	2	1	+	+	+	+	+	+	+
	10	+	2	1	+	+	+	+	+	+	+
114.35132.55150.75168.95187.15205.35223.55											

TIME	* PF LEVEL	* SEX	TIME	* SEX
1	+	1	+	1
2	+	2	+	1
3	+	3	+	2
4	+	4	+	1
5	+	5	+	1
6	+	6	+	1
7	+	7	+	1
8	+	8	+	1
9	+	9	+	1
10	+	10	+	1

114.35132.55150.75168.95187.15205.35223.55

*****ENDRUN

*****MODEL NFAC=3,NOD=2,RFC=7,DESIGN=C,NREP=28,EQUAL=F./

*****FACTOR1 NAME=PB LEVEL,NLEV=5,LNAME=0,10,50,100,500/

*****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE/

*****FACTOR3 NAME=TIME,NLEV=10,LNAME=1,2,3,6,9,12,15,18,21,24/

*****RESPONSE URINE PB,LOG URINE PB/

*****MEANS 2

*****MEANS PLOT 2

*****CONST 100.,.05

*****OPCODES

OPCODES

ALB 1,902,1

MOV 1,902,1

MPY 1,901,801

LOG 801,802,10

MPY 802,901,802

OUT

40	1	902	1	0	1
9	1	902	1	0	2
3	1	901	801	0	3
8	801	802	10	0	4
3	802	901	802	0	5
999	0	0	0	0	6

*****FORMAT(16X,BF8.2/10FB.2/10FB.2)

*****DATA INOV=1

N36874.06

[illegible]

29	1	1	10	.25000
30	1	1	10	.15000
31	1	1	10	.35000
32	1	1	10	.50000
33	1	1	10	.25000
34	1	1	10	.25000
35	1	2	1	.27000
36	1	2	1	.23000
37	1	2	2	.29000
38	1	2	2	.23000
39	1	2	3	.05000
40	1	2	3	.40000
41	1	2	4	.05000
42	1	2	4	.10000
43	1	2	5	.05000
44	1	2	5	.05000
45	1	2	6	.10000
46	1	2	6	.20000
47	1	2	6	.20000
48	1	2	6	.30000
49	1	2	7	.10000
50	1	2	7	.20000
51	1	2	7	.10000
52	1	2	7	.05000
53	1	2	8	.30000
54	1	2	8	.10000
55	1	2	9	.20000
56	1	2	9	.15000
57	1	2	10	.24000

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 6

PAGE

4

58 1 2 10

.16000

59 1 2 10

.17000

60 1 2 10

.05000

61 1 2 10

.17000

62 1 2 10

.30000

63 1 2 10

.15000

64 1 2 10

.15000

65 1 2 10

.20000

66 1 2 10

.30000

67 1 2 10

.30000

68 2 1 1

.31000

69 2 1 2

.17000

70 2 1 3

1.00000

71 2 1 4

.35000

72 2 1 5

.20000

73 2 1 6

.55000

74 2 1 6

.65000

75 2 1 7

.50000

76 2 1 7

.20000

77 2 1 8

.20000

78 2 1 9

.20000

79 2 1 10

.35000

80 2 1 10

.35000

81 2 1 10

.38000

82 2 1 10

.75000

83 2 1 10

.35000

84 2 1 10

.80000

85 2 2 1

.38000

86 2 2 2

.39000

DUP050309916

	RAT LEAD FEEDING STUDY	STUDY I	RESPONSE 6	PAGE	5
87	2 2 3				
	1.00000				
88	2 2 4				
	.45000				
89	2 2 5				
	.10000				
90	2 2 6				
	.65000				
91	2 2 6				
	.35000				
92	2 2 7				
	.05000				
93	2 2 7				
	.10000				
94	2 2 8				
	.20000				
95	2 2 9				
	.45000				
96	2 2 10				
	.35000				
97	2 2 10				
	.20000				
98	2 2 10				
	.35000				
99	2 2 10				
	.60000				
100	2 2 10				
	.15000				
101	3 1 1				
	1.19000				
102	3 1 2				
	.59000				
103	3 1 3				
	1.00000				
104	3 1 4				
	1.20000				
105	3 1 5				
	.80000				
106	3 1 6				
	.80000				
107	3 1 6				
	.80000				
108	3 1 7				
	.40000				
109	3 1 7				
	.80000				
110	3 1 8				
	.60000				
111	3 1 9				
	.68000				
112	3 1 10				
	.75000				
113	3 1 10				
	.80000				
114	3 1 10				
	1.47000				
115	3 1 10				
	.65000				

DUP050309917

116	3	2	1	.30000
117	3	2	2	.39000
118	3	2	3	1.30000
119	3	2	4	.70000
120	3	2	5	.40000
121	3	2	6	.60000
122	3	2	6	.35000
123	3	2	7	.20000
124	3	2	7	.55000
125	3	2	8	1.70000
126	3	2	9	.63000
127	3	2	10	.94000
128	3	2	10	.60000
129	3	2	10	.90000
130	3	2	10	1.00000
131	3	2	10	.90000
132	4	1	1	2.16000
133	4	1	2	.92000
134	4	1	3	2.60000
135	4	1	4	2.00000
136	4	1	5	1.60000
137	4	1	6	1.80000
138	4	1	6	1.00000
139	4	1	7	1.20000
140	4	1	7	1.20000
141	4	1	8	.60000
142	4	1	9	1.20000
143	4	1	10	1.50000
144	4	1	10	.80000

174	5	1	8	2.50000
175	5	1	9	3.00000
176	5	1	10	1.40000
177	5	1	10	5.30000
178	5	1	10	1.20000
179	5	1	10	2.20000
180	5	1	10	1.50000
181	5	1	10	1.00000
182	5	2	1	5.20000
183	5	2	2	4.05000
184	5	2	3	4.60000
185	5	2	4	4.40000
186	5	2	5	1.70000
187	5	2	6	6.10000
188	5	2	6	7.30000
189	5	2	7	2.10000
190	5	2	7	3.80000
191	5	2	8	5.80000
192	5	2	9	4.60000
193	5	2	10	2.50000
194	5	2	10	2.20000
195	5	2	10	1.50000
196	5	2	10	5.70000
197	5	2	10	3.70000
198	5	2	10	3.00000

EXPANDED DATA MATRIX (IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

URINE PB	LOG URINE PB
1	1 1
2	1 1
3	1 1
4	1 1
5	1 1

NO. OF INPUT DATA ROWS = 198
 NO. OF ROWS DELETED BY LOGICAL TESTS = 0
 NO. OF ROWS DELETED FOR MISSING DATA = 0
 NO. OF EXPANDED DATA ROWS REMAINING = 198

*****ANOVA

RESPONSE NUMBER 1 URINE PB

CELL IDENTIFICATION

CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
-----------	---------------	-------------------------	------------------------

1 1 1	32.0000	72.0000	8.4853	2
1 1 2	23.0000	72.0001	8.4853	2
1 1 3	32.5000	1512.5001	38.8909 *	2
1 1 4	7.5000	12.5001	3.5355 *	2
1 1 5	5.0000	.0001	.0078 *	2
1 1 6	17.5000	25.0000	5.0000 *	4
1 1 7	11.2500	39.5834	6.2915 *	4
1 1 8	10.0000	.0001	.0078 *	2
1 1 9	25.0000	50.0000	7.0711 *	2
1 1 10	33.7500	232.3864	15.2442	12
1 2 1	25.0000	9.0000	2.8284 *	2
1 2 2	26.0000	18.0000	4.2426 *	2
1 2 3	22.5000	612.5000	24.7487 *	2
1 2 4	7.5000	12.5001	3.5355 *	2
1 2 5	5.0000	.0001	.0078 *	2
1 2 6	20.0000	66.6667	8.1650	4
1 2 7	11.2500	39.5834	6.2915 *	4
1 2 8	20.0000	200.0000	14.1421	2
1 2 9	17.5000	12.5000	3.5355 *	2
1 2 10	19.9091	62.4909	7.9051	11
2 1 1	31.0000	.0000	.0000 *	1
2 1 2	17.0000	.0000	.0000 *	1
2 1 3	100.0000	.0000	.0000 *	1
2 1 4	35.0000	.0000	.0000 *	1
2 1 5	20.0000	.0000	.0000 *	1
2 1 6	60.0000	50.0001	7.0711 *	2
2 1 7	35.0000	450.0000	21.2132 *	2
2 1 8	20.0000	.0000	.0000 *	1
2 1 9	20.0000	.0000	.0000 *	1
2 1 10	49.6667	468.6667	21.6487 *	6
2 2 1	38.0000	.0000	.0000 *	1
2 2 2	39.0000	.0000	.0000 *	1
2 2 3	100.0000	.0000	.0000 *	1
2 2 4	45.0000	.0000	.0000 *	1
2 2 5	10.0000	.0000	.0000 *	1
2 2 6	50.0000	450.0000	21.2132 *	2
2 2 7	7.5000	12.5001	3.5355 *	2
2 2 8	20.0000	.0000	.0000 *	1
2 2 9	45.0000	.0000	.0000 *	1
2 2 10	33.0000	307.5000	17.5357	5
3 1 1	119.0000	.0000	.0000 *	1
3 1 2	59.0000	.0000	.0000 *	1
3 1 3	100.0000	.0000	.0000 *	1
3 1 4	120.0000	.0000	.0000 *	1
3 1 5	80.0000	.0000	.0000 *	1
3 1 6	80.0000	.0001	.0110 *	2
3 1 7	60.0000	800.0001	28.2843 *	2
3 1 8	60.0000	.0000	.0000 *	1
3 1 9	68.0000	.0000	.0000 *	1
3 1 10	91.7500	1395.5836	37.3575 *	4
3 2 1	30.0000	.0000	.0000 *	1
3 2 2	39.0000	.0000	.0000 *	1
3 2 3	130.0000	.0000	.0000 *	1

RAT LEAD FEEDING STUDY STUDY I RESPONSE 6

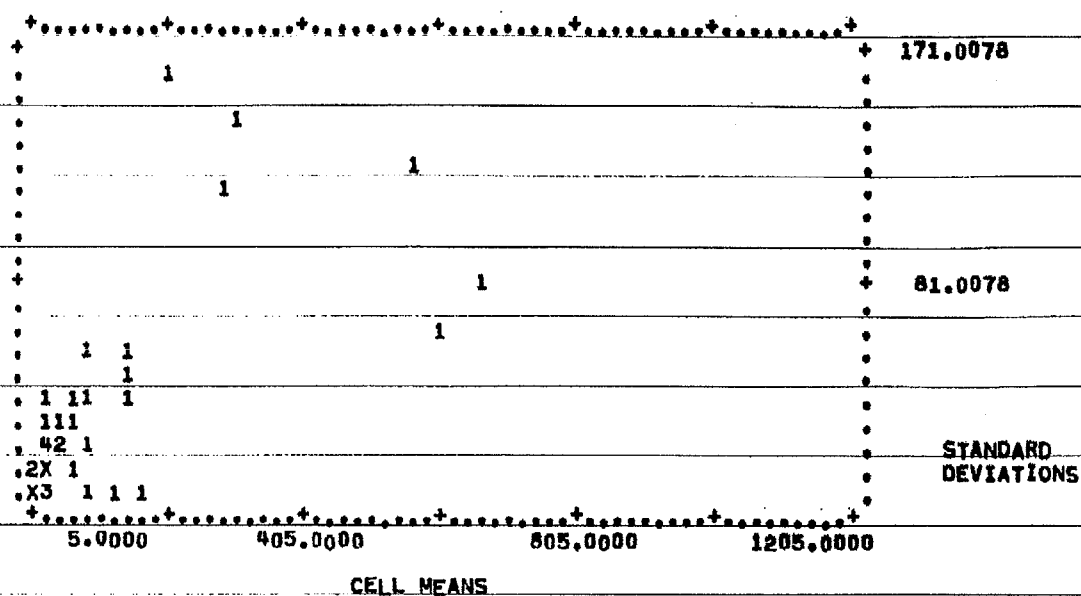
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1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TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

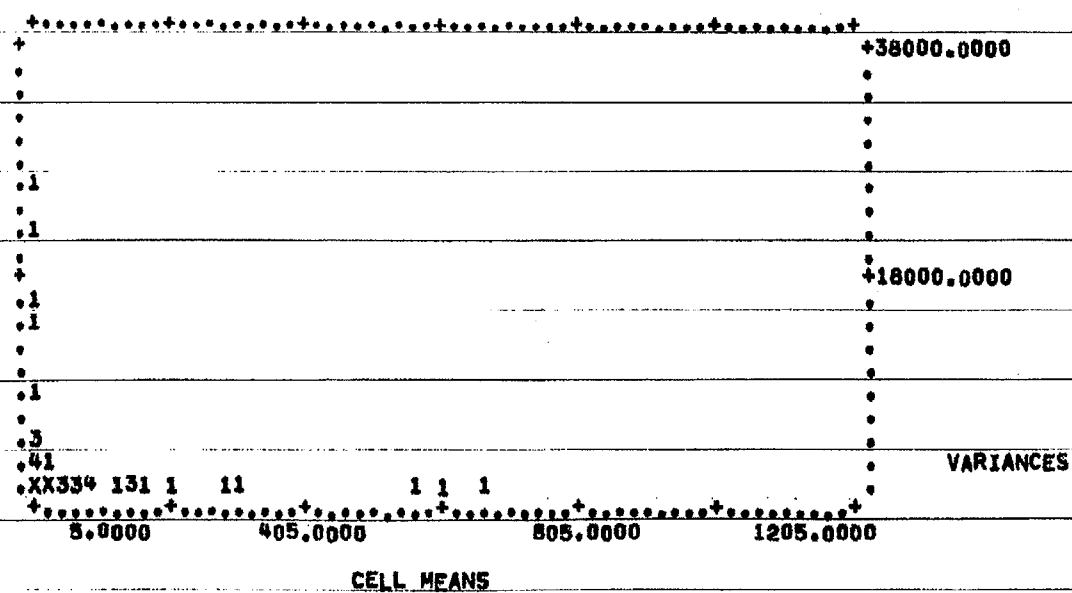
CHI SQUARE = 175.74 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



EXPECTED MEAN SQUARE TABLE

SOURCE OF VARIATION EXPECTED MEAN SQUARE

A = PB LEVEL
 B = SEX
 AB
 C = TIME
 AC
 BC
 ABC
 REPLICATES

REP + 20(A)
 REP + 50(B)
 REP + 10(AB)
 REP + 10(C)
 REP + 2(AC)
 REP + 8(BC)
 REP + 1(ABC)
 REP

RESPONSE NUMBER 1 URINE PB UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	99	.32032+07		
A = PB LEVEL	4	.25034+07		
B = SEX	1	.32523+04	.62586+06	264.08 **
AB	4	.52884+04	.32523+04	1.35
C = TIME	9	.11345+06	.12605+05	.55
AC	36	.22867+06	.63521+04	5.24 **
BC	9	.11232+06	.12480+05	2.64 **
ABC	36	.23677+06	.65769+04	5.19 **
REPLICATES	98		.24064+04	2.73 **

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

MEANS TABLES

RESPONSE NUMBER 1 URINE PB

PB LEVEL MEANS

0	18.6080	10	38.7583	50	79.0775	100	148.3867	500	450.9000
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STANDARD ERROR OF A MEAN = 10.9690
 95% CONFIDENCE LIMITS = 21.7678
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 15.5126
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 30.7844

SEX MEANS

MALE	152.8450	FEMALE	141.4392
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STANDARD ERROR OF A MEAN = 6.9374
 95% CONFIDENCE LIMITS = 13.7672
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 9.8110
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 19.4697

PB LEVEL * SEX INTERACTION

PB LEVEL SEX

PB LEVEL	FEMALE DIFFERENCES	
	MALE	FEMALE
0	19.7500	17.4659
10	38.7567	38.7500
50	83.7750	74.3800
100	151.1333	145.6000
500	470.8000	431.0000

STANDARD ERROR OF A MEAN = 15.5126
 95% CONFIDENCE LIMITS = 30.7844
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 21.9381
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 43.5357

TIME MEANS

1	2	3	6	9	12	15	18	21	24
178.1000	104.4000	190.5000	193.5000	124.0000	186.0000	123.7500	136.0000	123.3000	111.8209

STANDARD ERROR OF A MEAN =

15.5126

95% CONFIDENCE LIMITS =

30.7844

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

21.9381

LEAST SIGNIFICANT DIFFERENCE (LSD) =

43.5357

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

1	2	3	6	9	12	15	18	21	24
0	28.5000	24.5000	27.5000	7.5000	5.0000	16.7500	11.2500	15.0000	21.2000
10	34.5000	28.0000	100.0000	40.0000	15.0000	58.0000	21.2500	20.0000	32.5000
50	74.5000	49.0000	115.0000	95.0000	60.0000	68.7500	48.7500	115.0000	75.5000
100	196.5000	93.0000	260.0000	210.0000	105.0000	150.0000	105.0000	115.0000	107.5000
500	586.5000	327.5000	450.0000	615.0000	435.0000	657.5000	432.5000	415.0000	380.0000

STANDARD ERROR OF A MEAN =

34.6872

95% CONFIDENCE LIMITS =

68.8359

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

49.0551

LEAST SIGNIFICANT DIFFERENCE (LSD) =

97.3487

$$\frac{x}{100} = \text{mg}/100\text{ml}$$

$$2.85 \text{ mg}/100\text{ml}$$

$$2.85 \text{ mg}/100\text{ml}$$

SEX * TIME INTERACTION

SEX TIME

	1	2	3	6	9	12	15	18	21
MALE	198.2000	88.2000	186.5000	230.5000	193.0000	180.5000	159.2500	80.0000	
FEMALE	188.0000	120.6000	194.5000	186.5000	85.0000	191.5000	88.2500	192.0000	
DIFFERENCES	40.2000	-32.4000	-8.0000	74.0000	138.0000	-11.0000	71.0000	-112.0000	

STANDARD ERROR OF A MEAN =

21.9381

95% CONFIDENCE LIMITS =

43.8762

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

31.0251

LEAST SIGNIFICANT DIFFERENCE (LSD) =

61.8467

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

		TIME			
PB LEVEL	1	+	*	I	+
	2	+	*	I	+
	3	+	*	I	+
	4	+	*	I	+
	5	+	*	I	+
	6	+	*	I	+
	7	+	*	I	+
	8	+	*	I	+
	9	+	*	I	+
	10	+	*	I	+
		-13.60 98.05209.70321.35433.00544.65656.30		-13.60 98.05209.70321.35433.00544.65656.30	

RESPONSE NUMBER 2 LOG URINE PB

CELL IDENTIFICATION

CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	CELL NUMBER OF OBSERVATIONS
-----------	---------------	-------------------------	-----------------------------

1	1	1	149.7378	135.8120	11.6538 *	2
1	1	2	134.6423	269.0015	16.4013 *	2
1	1	3	123.8961	5823.1606	76.3096 *	2
1	1	4	84.9485	453.0952	21.2860 *	2
1	1	5	69.8970	.0000	.0000 *	2
1	1	6	122.5772	226.5472	15.0515 *	4
1	1	7	100.0000	604.1270	24.5790 *	4
1	1	8	100.0000	.0005	.0221 *	2
1	1	9	138.9076	155.0410	12.4515 *	2
1	1	10	148.7083	400.8086	20.0202 *	12
1	2	1	139.6546	24.2456	4.9240	2
1	2	2	141.2063	50.6724	7.1185	2
1	2	3	115.0515	4077.8574	63.8581 *	2
1	2	4	84.9485	453.0952	21.2860 *	2
1	2	5	69.8970	.0000	.0000 *	2
1	2	6	126.9795	392.4163	19.8095 *	4
1	2	7	100.0000	604.1270	24.5790 *	4
1	2	8	123.8961	1138.2236	33.7376 *	2
1	2	9	123.8961	78.0483	8.8345	2
1	2	10	125.7161	491.1758	22.1625 *	11
2	1	1	149.1362	.0000	.0000 *	1
2	1	2	123.8961	.0000	.0000 *	1
2	1	3	200.0000	.0000	.0000 *	1
2	1	4	154.4068	.0000	.0000 *	1
2	1	5	130.1030	.0000	.0000 *	1
2	1	6	177.6638	26.3184	5.1301	2
2	1	7	150.0000	791.7812	28.1386 *	2
2	1	8	130.1030	.0000	.0000 *	1
2	1	9	130.1030	.0000	.0000 *	1
2	1	10	166.8023	303.8965	17.4326 *	6
2	2	1	157.9784	.0000	.0000 *	1
2	2	2	159.1065	.0000	.0000 *	1
2	2	3	200.0000	.0000	.0000 *	1
2	2	4	165.3213	.0000	.0000 *	1
2	2	5	100.0000	.0000	.0000 *	1
2	2	6	167.8491	361.3887	19.0102 *	2
2	2	7	84.9485	453.0952	21.2860 *	2
2	2	8	130.1030	.0000	.0000 *	1
2	2	9	165.3213	.0000	.0000 *	1
2	2	10	146.8682	552.1353	23.4976 *	5
3	1	1	207.3547	.0000	.0000 *	1
3	1	2	177.0452	.0000	.0000 *	1
3	1	3	200.0000	.0000	.0000 *	1
3	1	4	207.9181	.0000	.0000 *	1
3	1	5	190.3090	.0000	.0000 *	1
3	1	6	190.3090	.0000	.0000 *	2
3	1	7	175.2575	453.0957	21.2860 *	2
3	1	8	177.8151	.0000	.0000 *	1
3	1	9	183.2509	.0000	.0000 *	1
3	1	10	193.9595	244.6764	15.6421 *	4
3	2	1	147.7121	.0000	.0000 *	1
3	2	2	159.1065	.0000	.0000 *	1
3	2	3	211.3943	.0000	.0000 *	1

RAT LEAD FEEDING STUDY STUDY I RESPONSE 6

PAGE 24 24

3	2	4	184.5098	.0000	.0000 *	1	24
3	2	5	160.2060	.0000	.0000 *	1	
3	2	6	172.3579	644.4839	25.3867 *	2	
3	2	7	182.0696	965.0659	31.0655 *	2	
3	2	8	223.0449	.0000	.0000 *	1	
3	2	9	191.9078	.0000	.0000 *	1	
3	2	10	193.1953	77.4368	8.7998	5	
4	1	1	233.4054	.0000	.0000 *	1	
4	1	2	196.3788	.0000	.0000 *	1	
4	1	3	241.4973	.0000	.0000 *	1	
4	1	4	230.1030	.0000	.0000 *	1	
4	1	5	220.4120	.0000	.0000 *	1	
4	1	6	212.7636	325.6213	18.0505 *	2	
4	1	7	207.9181	.0000	.0221 *	2	
4	1	8	177.8181	.0000	.0000 *	1	
4	1	9	207.9181	.0000	.0000 *	1	
4	1	10	214.2773	159.1453	12.6153 *	6	
4	2	1	224.7973	.0000	.0000 *	1	
4	2	2	197.3128	.0000	.0000 *	1	
4	2	3	241.4873	.0000	.0000 *	1	
4	2	4	236.2823	.0000	.0000 *	1	
4	2	5	169.8970	.0000	.0000 *	1	
4	2	6	220.4120	.0009	.0221 *	2	
4	2	7	190.6857	861.0191	29.3431 *	2	
4	2	8	223.0449	.0000	.0000 *	1	
4	2	9	197.7724	.0000	.0000 *	1	
4	2	10	212.4811	269.8933	16.4284 *	5	
5	1	1	277.3055	.0000	.0000 *	1	
5	1	2	239.7940	.0000	.0000 *	1	
5	1	3	264.3453	.0000	.0000 *	1	
5	1	4	288.7627	.0000	.0000 *	1	
5	1	5	284.8098	.0000	.0000 *	1	
5	1	6	278.0851	20.9473	4.5768 *	2	
5	1	7	278.8353	95.6377	9.7798	2	
5	1	8	239.7940	.0000	.0000 *	1	
5	1	9	287.7121	.0000	.0000 *	1	
5	1	10	224.4653	682.1820	25.1244 *	6	
5	2	1	271.6803	.0000	.0000 *	1	
5	2	2	260.7455	.0000	.0000 *	1	
5	2	3	266.2758	.0000	.0000 *	1	
5	2	4	264.3453	.0000	.0000 *	1	
5	2	5	223.0449	.0000	.0000 *	1	
5	2	6	282.4326	30.5146	5.5149	2	
5	2	7	245.1001	331.6968	18.2125 *	2	
5	2	8	276.3428	.0000	.0000 *	1	
5	2	9	266.2758	.0000	.0000 *	1	
5	2	10	245.2942	395.0468	19.8758 *	6	

MEAN OF THE CELL MEANS = 184.68804

WITHIN CELL VARIANCE = 457.71503
 WITHIN CELL STANDARD DEVIATION = 21.39428
 HARMONIC MEAN OF CELL SIZE = 1.39702
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .11571
 VARIANCE OF A CELL MEAN = 337.29435
 STANDARD ERROR OF A CELL MEAN = 18.36550

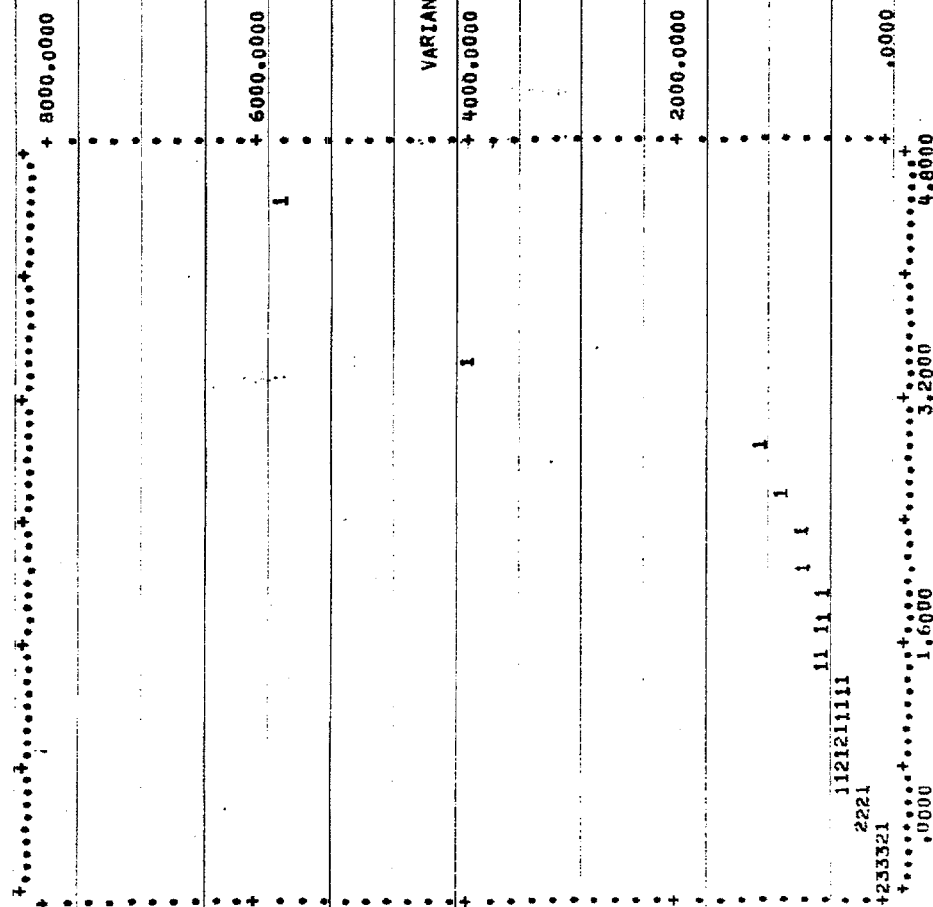
CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 11.01778
 LOWER CONTROL LIMIT = 4.60873

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 175.74 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY

THE GAMMA PLOT



RAT LEAD FEEDING STUDY STUDY I

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS

[illegible]

CELL MEANS

PLOT OF CELL MEANS VRS VARIANCES

[illegible]

CELL MEANS

RESPONSE NUMBER 2 LOG URINE PB UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	99	.30155+06		
A = PB LEVEL	4	.25115+06	.62789+05	18.15 **
B = SEX	1	.45546+03	.45546+03	1.35
AB	4	.27309+03	.68272+02	.20
C = TIME	9	.15928+05	.17698+04	5.25 **
AC	36	.18732+05	.52032+03	1.54 *
BC	9	.77328+04	.85920+03	2.55 *
ABC	36	.72764+04	.20212+03	.60
REPLICATES	98		.33729+03	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 2 LOG URINE PB

M E A N S T A B L E S

PB LEVEL MEANS

PB LEVEL	MEANS
0	116.2220
10	149.4279
50	184.9482
100	212.7301
500	261.1121

STANDARD ERROR OF A MEAN = 4.1067
 95% CONFIDENCE LIMITS = 8.1496
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 5.8077
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 11.5253

SEX

MEANS

SEX	MEANS
MALE	187.0222
FEMALE	182.7539

STANDARD ERROR OF A MEAN = 2.5973
 95% CONFIDENCE LIMITS = 5.1543
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 3.6731
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 7.2692

PB LEVEL

* SEX

INTERACTION

PB LEVEL

SEX

PB LEVEL	SEX	MEANS	FEMALE DIFFERENCES
0	MALE	117.3275	115.1166
10	MALE	151.1063	147.7496
50	MALE	190.3459	179.5504
100	MALE	214.2529	211.2073
500	MALE	262.0786	260.1457

STANDARD ERROR OF A MEAN = 5.8077
 95% CONFIDENCE LIMITS = 11.5253
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 8.2133
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 16.2992

TIME MEANS

1 195.8922 2 178.8423 3 206.3918 6 190.0506 9 161.8276 12 195.1400 15 180.1919 18 168.0979 21 185.3025 24 187.1441

STANDARD ERROR OF A MEAN =

5.8077

95% CONFIDENCE LIMITS =

11.5253

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

8.2133

LEAST SIGNIFICANT DIFFERENCE (LSD) =

16.2992

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

0	1	144.6362	2	137.9243	3	119.4538	6	84.9485	9	69.8970	12	124.7784	15	100.0000	18	111.9280	21	131.3018	24	137.2122
10	153.5573	141.0757	200.0000	159.8640	115.0515	172.7564	117.4742	130.1030	147.7121	156.6852										
50	177.6334	168.0958	205.6972	196.2140	175.2575	181.3334	163.6636	200.4300	187.5793	193.5774										
100	229.1213	196.8458	241.4973	232.1726	195.1545	216.5878	199.2819	200.4300	202.8452	213.3642										
500	274.4529	250.2697	265.3105	277.0540	253.7773	280.2438	260.0697	258.0684	256.9939	234.8813										

STANDARD ERROR OF A MEAN =

12.9864

95% CONFIDENCE LIMITS =

25.7713

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

18.3656

LEAST SIGNIFICANT DIFFERENCE (LSD) =

36.4461

Antilog $1.4490 = 27.9 \text{ mg Pb / head}$ $\log 25607 = 38.07$

$1.4490 = 27.9$
 $1.4490 = 5552$

SEX * TIME INTERACTION

SEX TIME

	1	2	3	6	9	12	15	18	21	24
MALE	203.4359	174.1890	205.9397	193.4278	179.0462	196.2737	181.6430	165.1054	181.5783	189.5831
FEMALE	188.3485	183.4955	206.6438	186.6734	144.6090	194.0062	154.5528	195.2783	189.0266	184.7050

	1	2	3	6	9	12	15	18	21	24
DIFFERENCES	15.0874	-9.3065	-9.9041	6.7544	34.4372	2.2675	27.0902	-30.1729	-7.4483	4.8782

STANDARD ERROR OF A MEAN =

8.2133

95% CONFIDENCE LIMITS =

16.2992

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

11.6154

LEAST SIGNIFICANT DIFFERENCE (LSD) =

23.0505

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

[illegible]

*****MODEL NFAC=3,NOD=2,RFC=7,DESIGN=C,NREP=28,EQUAL=F./
 *****FACTOR1 NAME=PB LEVEL,NLEV=5,LNAME=0,10,50,100,500/
 *****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE/
 *****FACTOR3 NAME=TIME,NLEV=10,LNAME=1,2,3,6,9,12,15,18,21,24/
 *****FACTOR3 NAME=TIME,NLEV=3,LNAME=12,18,24/
 *****RESPONSE URINE PB,LOG URINE PB/

*****MEANS 2

*****MEANS PLOT 2

*****CONST 100.,.05

*****OPCODES

DATA AT 12,18,24 MD

OPCODES

ALB 1,902,1
 MOV 1,902,1
 MPY 1,901,801
 LOG 801,802,10
 MPY 802,901,802
 OUT

40	1	902	1	0	1
9	1	902	1	0	2
3	1	901	801	0	3
8	801	802	10	0	4
3	802	901	802	0	5
999	0	0	0	0	6

*****FORMAT(16X,8F8.2/10F8.2)

*****DATA INOV=1

INPUT DATA MATRIX (DOES NOT INCLUDE TRANSFORMATIONS)

1	1	1	1	.20000
2	1	1	1	.20000
3	1	1	1	.20000
4	1	1	1	.10000
5	1	1	2	.10000
6	1	1	2	.10000
7	1	1	3	.15000
8	1	1	3	.50000
9	1	1	3	.35000
10	1	1	3	.40000
11	1	1	3	.65000
12	1	1	3	.25000
13	1	1	3	.25000
14	1	1	3	.15000
15	1	1	3	.35000
16	1	1	3	.50000
17	1	1	3	.25000
18	1	1	3	.25000
19	1	2	1	.10000
20	1	2	1	.20000
21	1	2	1	.20000
22	1	2	1	.30000
23	1	2	2	.30000
24	1	2	2	.10000
25	1	2	3	.24000
26	1	2	3	.16000
27	1	2	3	.17000
28	1	2	3	.05000

RAT LEAD FEEDING STUDY STUDY I RESPONSE 6

3

3

PAGE

29 1 2 3

30 1 2 3

31 1 2 3

32 1 2 3

33 1 2 3

34 1 2 3

35 1 2 3

36 2 1 1

37 2 1 1

38 2 1 2

39 2 1 3

40 2 1 3

41 2 1 3

42 2 1 3

43 2 1 3

44 2 1 3

45 2 2 1

46 2 2 1

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53 3 1 1

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.19000

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.80000

.60000

.75000

.80000

Page 5 of 5

RAT LEAD FEEDING STUDY STUDY I RESPONSE 6

5

5

PAGE

87

5 1 2

2.50000

88

5 1 3

1.40000

89

5 1 3

5.30000

90

5 1 3

1.20000

91

5 1 3

2.20000

92

5 1 3

1.50000

93

5 1 3

1.00000

94

5 2 1

6.10000

95

5 2 1

7.50000

96

5 2 2

5.80000

97

5 2 3

2.50000

98

5 2 3

2.20000

99

5 2 3

1.50000

100

5 2 3

5.70000

101

5 2 3

3.70000

102

5 2 3

3.00000

EXPANDED DATA MATRIX (IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

URINE PB	LOG URINE PB
1 1	1 1 1
20.00000	130.10300
2 2	1 1 1
20.00000	130.10300
3 3	1 1 1
20.00000	130.10300
4 4	1 1 1
10.00000	100.00000
5 5	1 1 2
10.00000	100.00000

NO. OF INPUT DATA ROWS = 102
NO. OF ROWS DELETED BY LOGICAL TESTS = 0
NO. OF ROWS DELETED FOR MISSING DATA = 0
NO. OF EXPANDED DATA ROWS REMAINING = 102

*****ANOVA

DUP050309954

CELL IDENTIFICATION

CELL IDENTIFICATION	CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
1 1 1	17.5000	25.0000	5.0000 *	4
1 1 2	10.0000	.0000	.0039 *	2
1 1 3	33.7500	232.3864	15.2442 *	12
1 2 1	20.0000	66.6667	8.1650 *	4
1 2 2	20.0000	200.0000	14.1421 *	2
1 2 3	19.9091	62.4909	7.9051 *	11
2 1 1	60.0000	50.0001	7.0711 *	2
2 1 2	20.0000	.0000	.0000 *	1
2 1 3	49.6667	468.6667	21.6487	6
2 2 1	50.0000	450.0001	21.2132	2
2 2 2	20.0000	.0000	.0000 *	1
2 2 3	33.0000	307.5000	17.5357	5
3 1 1	80.0000	.0001	.0120 *	2
3 1 2	60.0000	.0000	.0000 *	1
3 1 3	91.7500	1395.5837	37.3575	4
3 2 1	57.5000	1012.5001	31.8198	2
3 2 2	170.0000	.0000	.0000 *	1
3 2 3	86.8000	241.2002	15.5306 *	5
4 1 1	140.0000	3200.0005	56.5685 *	2
4 1 2	60.0000	.0000	.0000 *	1
4 1 3	143.3333	1226.6678	35.0238	6
4 2 1	160.0000	.0005	.0226 *	2
4 2 2	170.0000	.0000	.0000 *	1
4 2 3	140.0000	1850.0008	43.0116 *	5
5 1 1	605.0000	4050.0079	63.6397 *	2
5 1 2	250.0000	.0000	.0000 *	1
5 1 3	210.0000	26240.0027	161.9877 *	6
5 2 1	670.0000	7200.0079	84.8529 *	2
5 2 2	580.0000	.0000	.0000 *	1
5 2 3	310.0000	21720.0032	147.3771 *	6

MEAN OF THE CELL MEANS = 144.60696

WITHIN CELL VARIANCE = 3912.17957
 WITHIN CELL STANDARD DEVIATION = 62.54742
 HARMONIC MEAN OF CELL SIZE = 1.97487
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .43253
 VARIANCE OF A CELL MEAN = 1980.98544
 STANDARD ERROR OF A CELL MEAN = 44.50826

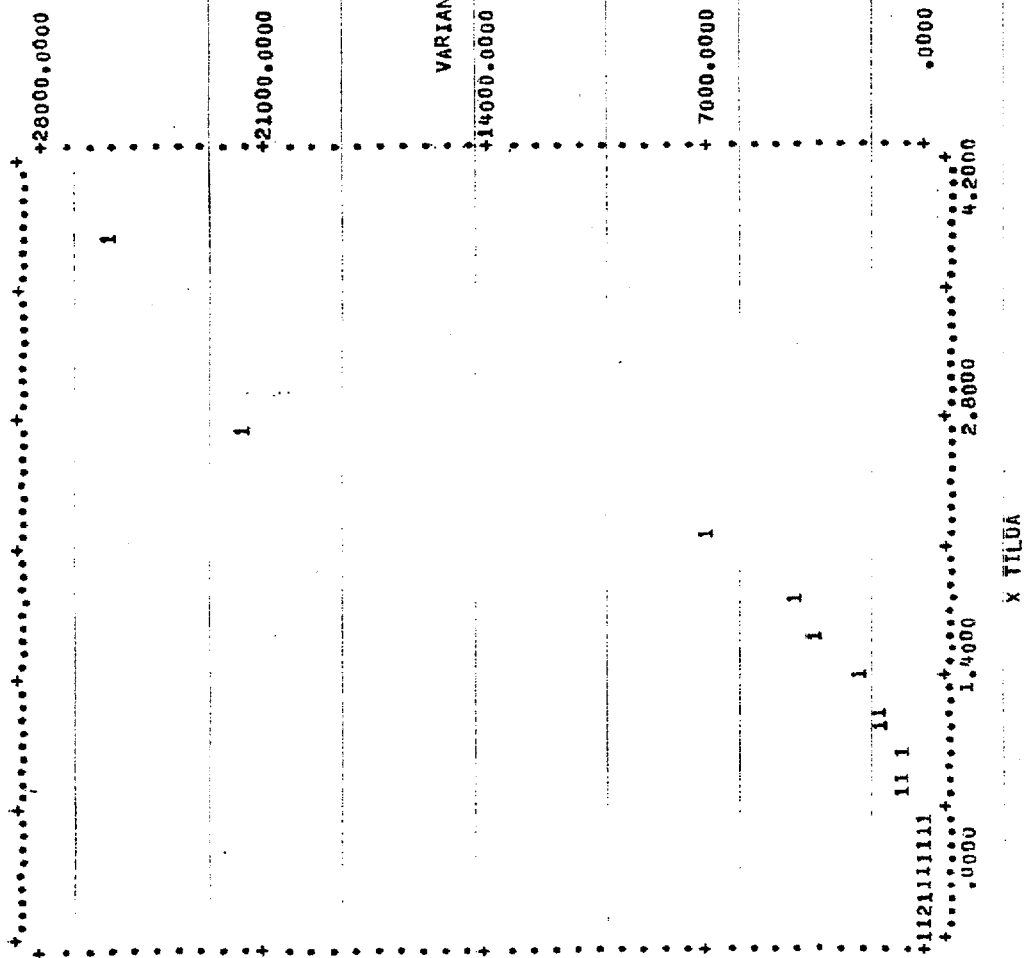
CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 37.37493
 LOWER CONTROL LIMIT = 15.63392
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 68.59 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

THE GAMMA PLOT

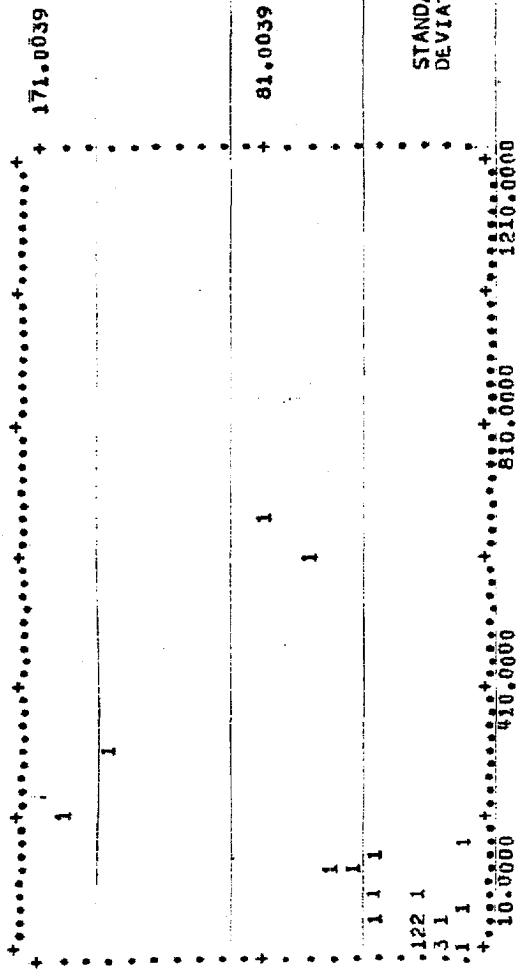


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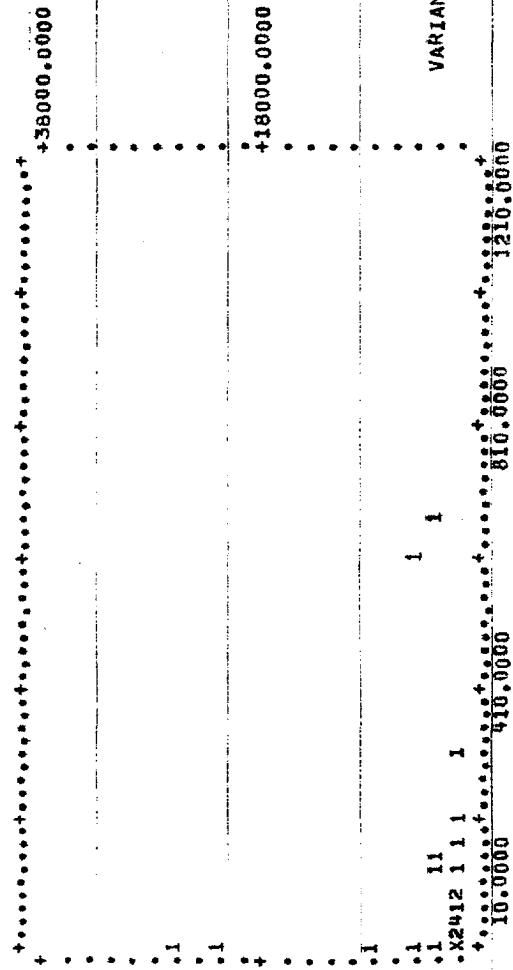
E( 22)      = 2.0853      RESIDUAL FOR HIGHEST VALUE OF X TILDA
T FOR SLOPE = 7.8354      STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T CRITICAL = 2.0790      T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

```

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



SOURCE OF VARIATION	EXPECTED MEAN SQUARE
Between groups	10.00
Within groups	1.00
Total	11.00

A = PB LEVEL	REP + 6(A)
B = SEX	REP + 15(B)
AB	REP + 3(AB)
C = TIME	REP + 10(C)
AC	REP + 2(AC)
BC	REP + 5(BC)
ABC	REP + 1(ABC)
REPLICATES	REP

11

PAGE 11

STUDY 1 RESPONSE 6

RAT LEAD FEEDING STUDY URINE PB

UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RAT, 0
TOTAL	29	.91589+06		
A = PB LEVEL	4	.69252+06	.17313+06	87.40 **
B = SEX	1	.15242+05	.15242+05	7.69 **
AB	4	.29524+05	.73810+04	3.73 **
C = TIME	2	.28624+05	.14312+05	7.22 **
AC	8	.12028+06	.15035+05	7.59 **
BC	2	.16795+05	.83976+04	4.24 *
ABC	8	.12910+05	.16137+04	.81
REPLICATES	72		.19810+04	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 URINE PB

MEANS TABLES

PB LEVEL	MEANS
0	20.1932
10	38.7778
50	91.0083
100	135.5556
500	437.5000

STANDARD ERROR OF A MEAN = 18.1704
 95% CONFIDENCE LIMITS = 36.2222
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 25.6969
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 51.2259

SEX	MEANS
MALE	122.0667
FEMALE	167.1473

STANDARD ERROR OF A MEAN = 11.4920
 95% CONFIDENCE LIMITS = 22.9089
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 16.2521
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 32.3981

INTERACTION

PB LEVEL * SEX

PB LEVEL SEX

PB LEVEL	MALE	FEMALE	DIFFERENCES
0	20.4167	19.9697	.4470
10	43.2222	38.3333	5.8889
50	77.2500	104.7667	-27.5167
100	114.4444	156.6667	-42.2222
500	355.0000	520.0000	-165.0000

STANDARD ERROR OF A MEAN =	25.6969
95% CONFIDENCE LIMITS =	51.2259
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =	36.3408
LEAST SIGNIFICANT DIFFERENCE (LSD) =	72.4443

TIME MEANS

12 186.0000 18 136.0000 24 111.8209

STANDARD ERROR OF A MEAN = 14.0747
 95% CONFIDENCE LIMITS = 28.0576
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 19.9047
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 39.6794

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

0 12 18.7500 18 15.0000 24 26.8295
 10 55.0000 20.0000 41.3333
 50 68.7500 115.0000 89.2750
 100 150.0000 115.0000 141.6667
 500 637.5000 415.0000 260.0000

STANDARD ERROR OF A MEAN = 31.4721
 95% CONFIDENCE LIMITS = 62.7386
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 94.5083
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 88.7258

SEX * TIME INTERACTION

SEX TIME

	12	18	24
MALE	180.5000	80.0000	105.7000
FEMALE	191.5000	192.0000	117.9418

DIFFERENCES -11.0000 -112.0000 -12.2418

STANDARD ERROR OF A MEAN =

95% CONFIDENCE LIMITS =

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

LEAST SIGNIFICANT DIFFERENCE (LSD) =

19.9047
39.6794
28.1495
56.1151

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- * - REPEATED SYMBOLS

PAGE 16
MEANS

16

1	I	+	*
2	I	+	*
3	I	+	*
4	I	+	*
5	I	+	*
	I	+	
-3,	30105,60216,50326,40436,30546,20656,		

3,50106.60216,50326,40436,30546,20656,10

	I	+-----+	I
1	+	+	+
	I		I
2	+	*	+
	I		I
	+-----+	+-----+	+-----+
	-3,30106,60216,50328,40436,30546,20656,10		

-3.30106.60216.50326.40436.30546.20656.10

PB LEVEL

TIME

MEANS

PB LEVEL	* SEX	STUDY 1	RESPONSE 6
1	+	1	1
2	+	21	1
3	+	1 2	1
4	+	1 2	1
5	+	1 2	1
-3.30106.60216.50326.40436.30546.20656.10			

PB LEVEL	* SEX	STUDY 1	RESPONSE 6
1	+	1	1
2	+	1	1
3	+	1	1
-3.30106.60216.50326.40436.30546.20656.10			

PB LEVEL	TIME
1	12
2	1
3	12
4	2
5	1

-3.30106.60216.50326.40436.30546.20656.10

CELL IDENTIFICATION

CELL IDENTIFICATION	CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
1 1 1	126.5772	226.5479	15.0515	4
1 1 2	100.0000	.0005	.0221 *	2
1 1 3	186.7083	400.8091	20.0202 *	12
1 2 1	126.9795	392.4163	19.8095 *	4
1 2 2	123.8561	1138.2236	33.7376 *	2
1 2 3	129.7161	491.1760	22.1625 *	11
2 1 1	177.6638	26.3188	5.1302 *	2
2 1 2	130.1030	.0000	.0000 *	1
2 1 3	166.5023	303.8967	17.4326 *	6
2 2 1	167.8491	361.3892	19.0102 *	2
2 2 2	130.1030	.0000	.0000 *	1
2 2 3	146.8682	552.1353	23.4976 *	5
3 1 1	190.3090	.0000	.0000 *	2
3 1 2	177.8151	.0000	.0000 *	1
3 1 3	193.9595	244.6768	15.6421 *	4
3 2 1	172.3579	644.4849	25.3867 *	2
3 2 2	223.0449	.0000	.0000 *	1
3 2 3	193.1953	77.4368	8.7998	5
4 1 1	212.7636	325.8213	18.0505 *	2
4 1 2	177.8151	.0000	.0000 *	1
4 1 3	214.2773	159.1457	12.6153	6
4 2 1	220.4120	.0010	.0313 *	2
4 2 2	223.0449	.0000	.0000 *	1
4 2 3	212.4511	269.8936	16.4284 *	5
5 1 1	278.0551	20.9497	4.5771 *	2
5 1 2	239.7949	.0000	.0000 *	1
5 1 3	224.4683	682.4822	26.1244 *	6
5 2 1	282.4326	30.4165	5.5151 *	2
5 2 2	276.3428	.0000	.0000 *	1
5 2 3	245.2942	395.0494	19.8758 *	6

MEAN OF THE CELL MEANS = 187.49186

WITHIN CELL VARIANCE = 357.77666
 WITHIN CELL STANDARD DEVIATION = 18.91498
 HARMONIC MEAN OF CELL SIZE = 1.97487
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .10088
 VARIANCE OF A CELL MEAN = 181.16509
 STANDARD ERROR OF A CELL MEAN = 13.45976

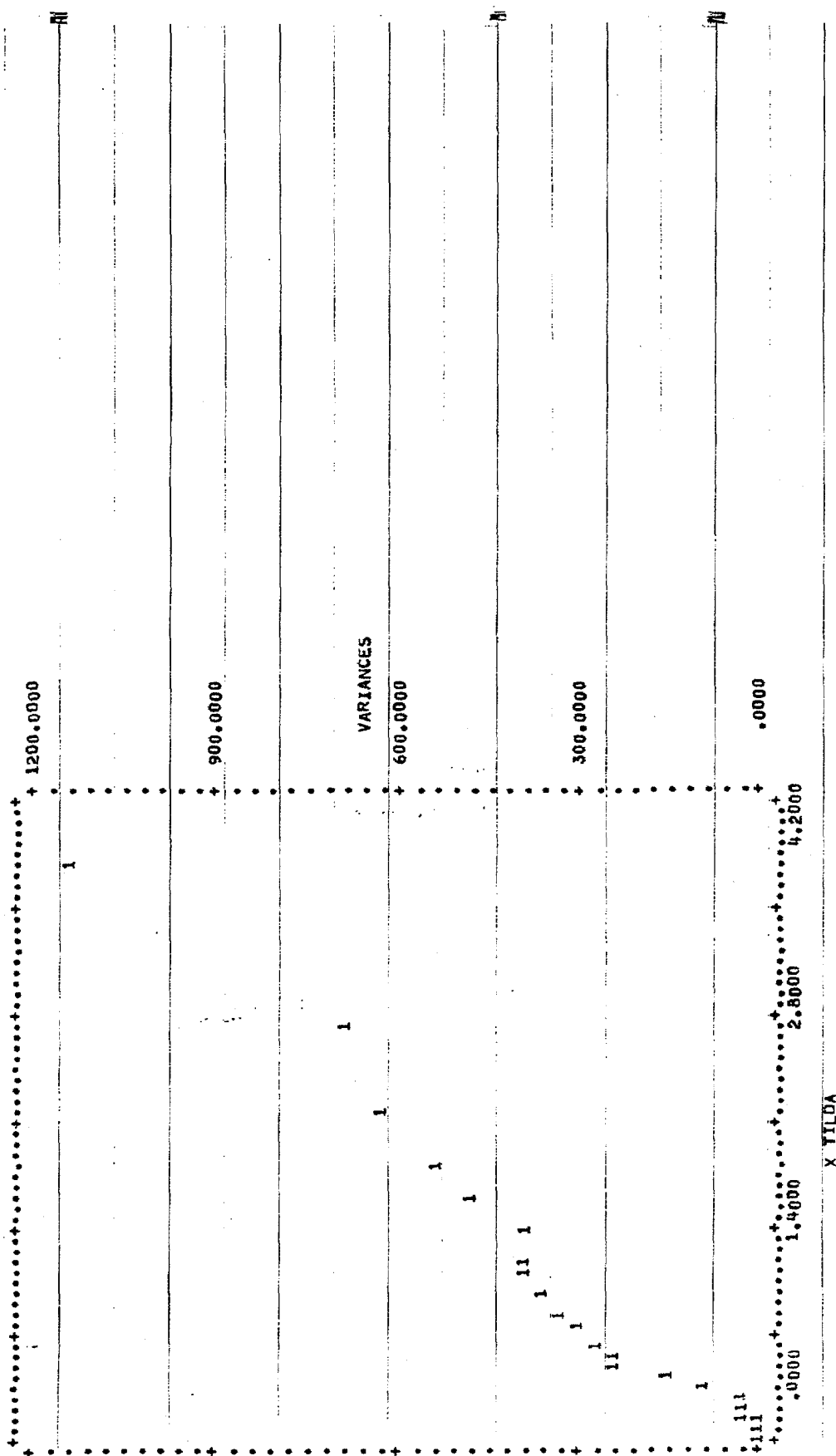
CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 15.46079
 LOWER CONTROL LIMIT = 6.46725
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 68.59 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

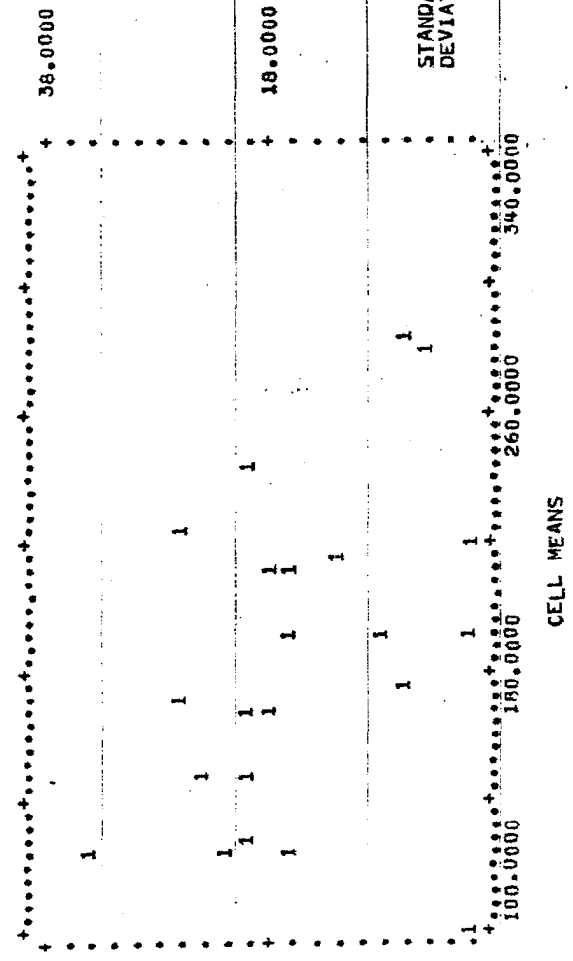
THE GAMMA PLOT



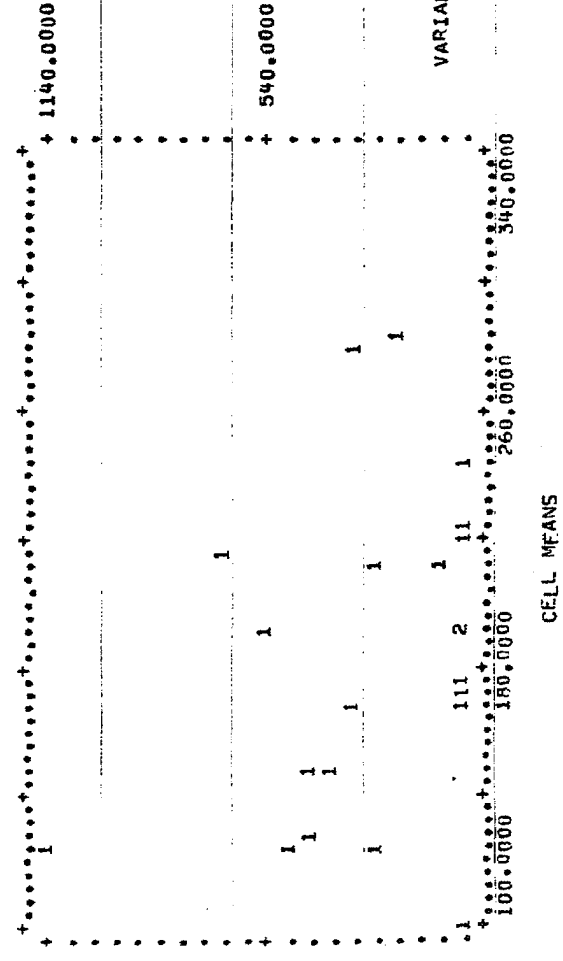
```

E( 22) = -.0242      RESIDUAL FOR HIGHEST VALUE OF X YILDA
T FOR SLOPE = 34.0799 STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T CRITICAL = 2.0798  T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

```



PLOT OF CELL MEANS VRS VARIANCES



RESPONSE NUMBER 2 LOG URINE PB UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	29	.72704+05		
A = PB LEVEL	4	.63552+05	.15888+05	87.70 **
B = SEX	1	.44188+03	.44188+03	2.44
AB	4	.89439+03	.22360+03	1.23
C = TIME	2	.11190+04	.55952+03	3.09
AC	8	.41014+04	.51268+03	2.83 **
BC	2	.19065+04	.95324+03	5.26 **
ABC	8	.68914+03	.86143+02	.48
REPLICATES	72		.18117+03	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 2 LOG URINE PB

MEANS TABLES

PB LEVEL	MEANS				
0	124.6395	153.1816	191.7803	210.1273	257.7312
10					
50					
100					
500					

STANDARD ERROR OF A MEAN = 5.4949
 95% CONFIDENCE LIMITS = 10.9540
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 7.7710
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 15.4912

SEX MEANS

MALE
183.6541

FEMALE
191.3298

STANDARD ERROR OF A MEAN = 3.4753
 95% CONFIDENCE LIMITS = 6.9279
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 4.9148
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 9.7975

PB LEVEL * SEX INTERACTION

PB LEVEL SEX

	FEMALE DIFFERENCES	
0	123.7618	125.5172
10	158.0897	148.2734
50	187.3612	196.1994
100	201.6187	218.6360
500	247.4391	268.0232

STANDARD ERROR OF A MEAN = 7.7710
 95% CONFIDENCE LIMITS = 15.4912
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 10.9828
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 21.9079

TIME MEANS

12 195.1400 18 180.1919 24 187.1441

STANDARD ERROR OF A MEAN = 4.2563
 95% CONFIDENCE LIMITS = 8.4849
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 6.0194
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 11.9995

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

0 12 124.7784 18 111.9280 24 137.2122
 10 172.7564 130.1030 156.6852
 50 181.3334 200.4300 193.5774
 100 216.5878 200.4300 213.3642
 500 280.2438 256.0684 234.8813

STANDARD ERROR OF A MEAN = 9.5175
 95% CONFIDENCE LIMITS = 18.9728
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 13.4598
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 26.8316

SEX * TIME INTERACTION

SEX TIME

	12	18	24
MALE	196.2737	165.1084	189.5831
FEMALE	194.0062	195.2783	189.7050

DIFFERENCES 2.2675 -30.1729 4.8782

STANDARD ERROR OF A MEAN =

6.0194

95% CONFIDENCE LIMITS =

11.9995

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

8.5127

LEAST SIGNIFICANT DIFFERENCE (LSD) =

16.9698

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- * - REPEATED SYMBOLS

TIME

106.95136.70166.45196.20225.95255.70285.45

106.95136.70166.45196.20225.95235.70285.45

PAGE 29
* SEX

[illegible]

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*****ENDRUN

美 美 美 美 美

STOP

DUP050309978

QIL

UPD BASE7,,BASE7

17:49:17.593

09 MAR 72

UPD BASE7, BASE7

BIL

5 XGT VARIAN
 2 SRAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7
 3 MODEL NFAC=2,NOD=2,RFC=7,DESIGN=C,NREP=28,EQUAL=F,
 4 FACTOR1 NAME=PB LEVEL,NLEV=5,LNAME=0.10,50.100,500/
 5 FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE/
 6 RESPONSE BLOOD PB LOG BLOOD PB/
 7 MEANS 2
 8 MEANS PLOT 2
 9 CONST 100,.,1
 10 OPCODES
 11 ALB 1,902,1
 12 MOV 1,902,1
 13 MPY 1,901,801
 14 LOG 801,802,10
 15 MPY 802,901,802
 16 OUT
 17 FORMAT(16X,8F8.2/10F8.2/10F8.2)

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13	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
14	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
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17	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
18	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
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27	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
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41	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
42	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
43	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
44	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
45	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
46	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
47	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
48	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
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52	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10
53	10	182410	70.90	0.50	1.00	0.60	1.40	1.60	1.00	1.00	0.10	0.10

ANOVA
 ENDRUN

N36874.07

DUP050309979

BIL

UPD.* BASE11, BASE11

09 MAR 72

17:49:17.872

ADD,* BASE11

09 MAR 72

DUP05030981

VOT VARIAN

09 MAR 72

■ XGT VARIAN

09 MAR 7

DUP050309982

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7

PAGE

1

1

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*****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE/

*****RESPONSE BLOOD PB,LOG BLOOD PB/

*****MEANS 2

*****MEANS PLOT 2

*****CONST 100,1,1

*****OPCODES

OPCODES

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MOV 1,902,1

MPY 1,901,801

LOG 801,802,10

MPY 802,901,802

OUT

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8	801	802	10	0	4
3	802	901	802	0	5
999	0	0	0	0	6

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RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7

PAGE

2

2

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7
INPUT DATA MATRIX (DOES NOT INCLUDE TRANSFORMATIONS)

PAGE 2 2

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18	1	1	2.10000	
19	1	1	1.10000	
20	1	1	1.10000	
21	1	1	1.50000	100
22	1	1	.80000	
23	1	1	1.00000	
24	1	1	.40000	
25	1	1	.40000	
26	1	2	1.50000	
27	1	2	2.30000	100
28	1	2	1.40000	
			2.70000	

RAT LEAD FEEDING STUDY STUDY I RESPONSE 7

PAGE 4

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59	2	1	
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			1.10000
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			1.00000
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			.60000
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			.60000
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			.90000
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			2.30000
83	3	1	
			1.60000
84	3	1	
			1.80000
85	3	1	
			1.20000
86	3	1	
			2.80000

DUPO50309987

RAT LEAD FEEDING STUDY STUDY I RESPONSE 7

PAGE

5

5

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88	3	1	1.80000	
89	3	1	2.20000	
90	3	1	2.10000	
91	3	1	1.90000	
92	3	1	2.10000	
93	3	1	1.00000	11
94	3	1	.60000	
95	3	2	1.20000	
96	3	2	1.90000	
97	3	2	2.00000	
98	3	2	1.90000	
99	3	2	2.70000	11
100	3	2	2.40000	
101	3	2	1.50000	
102	3	2	.63000	
103	3	2	2.60000	
104	3	2	2.30000	
105	3	2	1.70000	11
106	3	2	3.50000	
107	3	2	4.00000	
108	3	2	1.20000	
109	3	2	1.50000	
110	3	2	1.40000	
111	4	1	2.40000	11
112	4	1	4.40000	
113	4	1	2.50000	
114	4	1	4.20000	
115	4	1	3.40000	

216c

116	4	1	1.60000	111
117	4	1	3.35000	
118	4	1	4.60000	
119	4	1	1.40000	
120	4	1	2.90000	
121	4	1	3.40000	
122	4	1	2.80000	
123	4	1	3.20000	
124	4	2	4.50000	
125	4	2	3.10000	111
126	4	2	6.60000	
127	4	2	4.50000	
128	4	2	3.50000	
129	4	2	3.30000	
130	4	2	4.00000	
131	4	2	2.40000	111
132	4	2	5.50000	
133	4	2	4.60000	
134	4	2	2.40000	
135	4	2	4.10000	
136	4	2	5.00000	
137	4	2	3.50000	111
138	4	2	4.30000	
139	4	2	4.50000	
140	4	2	2.30000	
141	5	1	9.60000	
142	5	1	8.40000	
143	5	1	7.50000	111
144	5	1	6.50000	

RAT LEAD FEEDING STUDY STUDY I RESPONSE 7

PAGE 7

7

145	5	1	7.70000
146	5	1	
147	5	2	6.00000
148	5	2	7.00000
149	5	2	6.00000
150	5	2	8.33000
151	5	2	11.33000
152	5	2	4.50000
153	5	2	8.90000
154	5	2	8.33000
155	5	2	6.00000
156	5	2	9.17000
157	5	2	8.67000
158	5	2	11.10000
159	5	2	4.83000
160	5	2	3.30000
			13.70000

EXPANDED DATA MATRIX (IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

BLOOD PB	LOS BLOOD PB	
1	1	1
2	2	1
3	3	1
4	4	1
5	5	1
70,00000	184,50980	
110,00000	204,13927	
40,00000	160,20600	
70,00000	184,50980	
110,00000	204,13927	
NO. OF INPUT DATA ROWS = 160		
NO. OF ROWS DELETED BY LOGICAL TESTS = 0		
NO. OF ROWS DELETED FOR MISSING DATA = 0		
NO. OF EXPANDED DATA ROWS REMAINING = 160		

*****ANOVA

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7
 RESPONSE NUMBER 1 BLOOD PB

PAGE 9 9

CELL IDENTIFICATION

CELL MEAN CELL VARIANCE STANDARD DEVIATION CELL DEVIATION NUMBER OF OBSERVATIONS

1 1	111.6000	2364.0007	48.6210 *	25
1 2	142.8571	24591.5344	156.8169 *	28
2 1	98.8461	1108.9746	33.3013 *	13
2 2	121.3125	4372.8958	66.1279	16
3 1	167.5000	3893.1825	62.3954 *	12
3 2	202.6875	7643.5630	87.4275	16
4 1	302.6923	10477.5664	102.3600	13
4 2	400.5882	13143.3848	114.6446	17
5 1	761.6667	16896.6748	129.8333	6
5 2	794.0000	84133.1055	290.0571 *	14

MEAN OF THE CELL MEANS = 310.37504

WITHIN CELL VARIANCE = 16474.17090
 WITHIN CELL STANDARD DEVIATION = 128.35175
 HARMONIC MEAN OF CELL SIZE = 13.60891
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .41354
 VARIANCE OF A CELL MEAN = 1210.54269
 STANDARD ERROR OF A CELL MEAN = 34.79285

CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 153.92864
 LOWER CONTROL LIMIT = 64.38831
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 22.75 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

413.5013

[illegible]

STANDARD DEVIATIONS

98.8461	498.8461	898.8461	1298.8461
---------	----------	----------	-----------

CELL MEANS.

PLOT OF CELL MEANS VRS VARIANCES

+96108.9746

[illegible]

VARIANCES

11

98.8461	99.8461	99.8461	1298.8461
---------	---------	---------	-----------

CELL MEANS

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7 EXPECTED MEAN SQUARE TABLE

12

12

PAGE

SOURCE OF VARIATION EXPECTED MEAN SQUARE

A = PB LEVEL
 B = SEX
 AB
 REPLICATES

REP + 2(A)
 REP + 3(B)
 REP + 1(AB)
 REP

DUP050309995

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7

PAGE

12

12

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7
 RESPONSE NUMBER 1 BLOOD PB UNWEIGHTED ANALYSIS OF CELL MEANS

PAGE 13

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	9	.62583+06		
A = PB LEVEL	4	.61915+06	.15479+06	127.87 **
B = SEX	1	.48022+04	.48022+04	3.97 *
AB	4	.18722+04	.46806+03	.39
REPLICATES	150		.12105+04	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)
 ** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 BLOOD PB MEANS TABLES

PB LEVEL	MEANS	0	10	50	100	500
		127.2286	110.0793	185.0937	351.6803	777.8333
STANDARD ERROR OF A MEAN =						
95% CONFIDENCE LIMITS =						
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =						
LEAST SIGNIFICANT DIFFERENCE (LSD) =						
						24.6023
						58.6122
						34.7929
						68.7480

SEX	MEANS
MALE	288.4610
FEMALE	332.2891
STANDARD ERROR OF A MEAN =	
95% CONFIDENCE LIMITS =	
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =	
LEAST SIGNIFICANT DIFFERENCE (LSD) =	
	15.5598
	30.7451
	22.0049
	43.4801

PB LEVEL	* SEX	INTERACTION
PB LEVEL	SEX	
	MALE	FEMALE
0	111.6000	142.8571
10	98.8461	121.3125
50	167.5000	202.6875
100	302.6923	400.5882
500	761.6667	794.0000
STANDARD ERROR OF A MEAN =		
95% CONFIDENCE LIMITS =		
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =		
LEAST SIGNIFICANT DIFFERENCE (LSD) =		
		34.7929
		68.7480
		49.2045
		97.2244

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7

PAGE 15

15

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

1 - LEVEL 1

2 - LEVEL 2

* - REPEATED SYMBOLS

RAT LEAD FEEDING STUDY STUDY I RESPONSE 7

PAGE 16

16

SEX

PB LEVEL

MEANS	MEANS	SEX	MEANS
1	1	+	+
2	2	+	+
3	3	+	+
4	4	+	+
5	5	+	+
78.35201.05323.75446.45569.15691.85814.55	78.35201.05323.75446.45569.15691.85814.55		

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7

PAGE 17

17

PB LEVEL * SEX

1	1	+	12	1
2	+	12	+	1
3	1	+	12	1
4	1	+	1	2
5	1	+	12	1
78.35201.05323.75446.45569.15691.85814.55				

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7 PAGE 18 18

RESPONSE NUMBER 2 LOG BLOOD PB

CELL IDENTIFICATION

CELL MEAN CELL VARIANCE CELL STANDARD DEVIATION NUMBER OF OBSERVATIONS

1	1	200.6761	397.7930	19.9447	25
1	2	193.4614	2577.6151	50.7702 *	28
2	1	196.5049	328.4678	18.1237	13
2	2	199.6361	1126.6417	33.5655 *	16
3	1	219.0397	359.1115	18.9502	12
3	2	226.7463	368.5984	19.7129	16
4	1	245.4937	264.2168	16.2547	13
4	2	258.5279	166.1401	12.8895	17
5	1	287.6528	54.5770	7.3876 *	6
5	2	287.0315	294.6614	17.1657	14

MEAN OF THE CELL MEANS = 231.47724

WITHIN CELL VARIANCE = 797.96935
 WITHIN CELL STANDARD DEVIATION = 28.24835
 HARMONIC MEAN OF CELL SIZE = 13.60891
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .12204
 VARIANCE OF A CELL MEAN = 58.63579
 STANDARD ERROR OF A CELL MEAN = 7.65740

CONTROL LIMITS FOR THE STANDARD DEVIATION

UPPER CONTROL LIMIT = 30.28484
 LOWER CONTROL LIMIT = 12.66814

* DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 22.75 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

THE GAMMA PLOT

+ 2800.0000

1.

+ 2100.0000

VARIANCES

+ 1400.0000

1

+ 700.0000

1

1

1

1

1

.0000

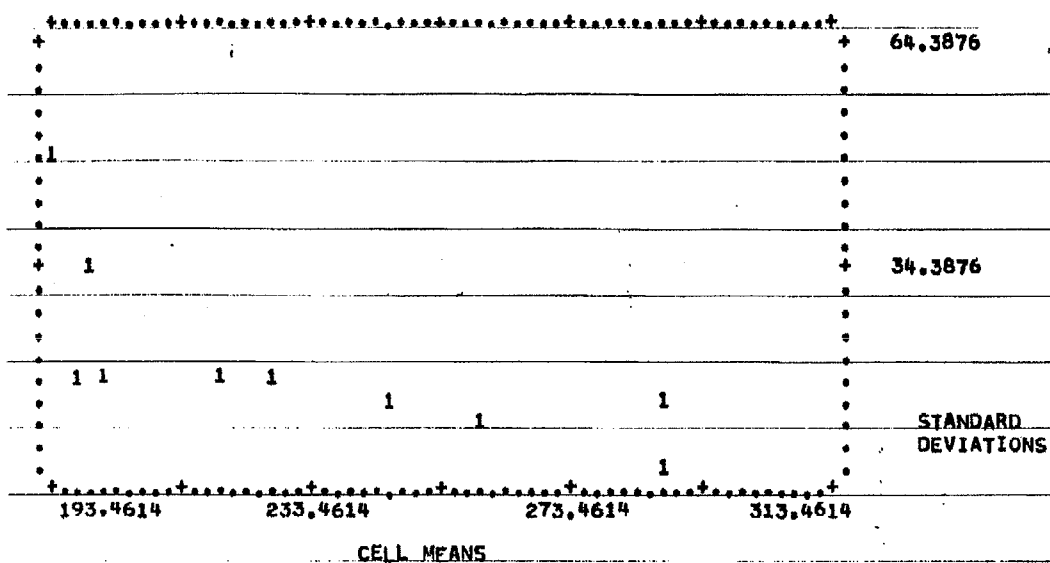
2.0000

3.0000

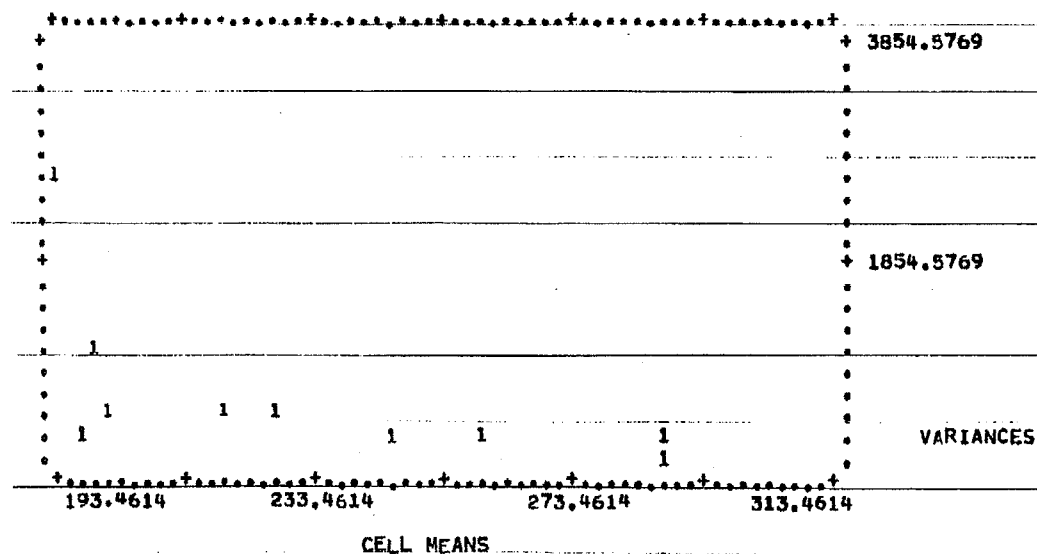
X TILDA

E(10) = 1.8217 RESIDUAL FOR HIGHEST VALUE OF X TILDA
 T FOR SLOPE = 9.5527 STUDENTIZED SLOPE, $Y=BX$, (INTERCEPT=0)
 T CRITICAL = 2.2618 T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



DUP050310003

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7

PAGE 21

21

UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	9	.11978405		
A = PB LEVEL	4	.11832405	2958.09952	50.45 **
B = SEX	1	.25709402	25.70871	.44
AB	4	.12003403	30.00672	.51
REPLICATES	150		58.63579	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7

PAGE

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7
 RESPONSE NUMBER 2 LOG BLOOD PB

PAGE 22

22

MEANS TABLES

PB LEVEL	MEANS				
0	197.0688	10	198.0705	50	222.8930
		100	252.0118	500	287.3422
STANDARD ERROR OF A MEAN =					
95% CONFIDENCE LIMITS =					
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =					
LEAST SIGNIFICANT DIFFERENCE (LSD) =					
					5.4146
					10.6988
					7.6574
					15.1304

SEX MEANS

MALE 229.8738 FEMALE 233.0806

STANDARD ERROR OF A MEAN = 3.4245
 95% CONFIDENCE LIMITS = 6.7665
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 4.8430
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 9.5693

PB LEVEL * SEX INTERACTION

PB LEVEL SEX

MALE FEMALE DIFFERENCES
 0 200.6761 193.4614 7.2147
 10 196.5049 199.6361 -3.1311
 50 219.0397 226.7463 -7.7065
 100 245.4957 258.5279 -13.0322
 500 287.6528 287.0315 .6213

STANDARD ERROR OF A MEAN = 7.6574
 95% CONFIDENCE LIMITS = 15.1304
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 10.8292
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 21.5977

DUP050310005

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7

PAGE 23

23

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- * - REPEATED SYMBOLS

DUP050310006

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 7

PAGE

24

24

RAT
PB LEVEL

1190.65207.30223.95240.60257.25273.90290.55

1190.65207.30223.95240.60257.25273.90290.55

DUP050310008

218

冰凍水喉水喉

1190.65207.30223.95240.60257.25273.90290.55

STOP

LOG NO 247

DATE 130372 PAGE 37

DATE 13 MAR 72 PRIORITY D MAN/SEC 752701/55000 CARDS IN 116 MAX PAGES 200 END TIME 16103110

IDENT YEATMAN SNEE

CHARGE J6469 /

CARDS OUT 0

PAGES 37

START TIME 16102143 BI

DUP050310010

*****MODEL NFAC=3,NOD=2,RF=7,DESIGN=C,NREP=28,EQUAL=F,./

*****FACTOR1 NAME=PB LEVEL,NLEV=5,LNAME=0,10,50,100,500/

*****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE/

*****FACTOR3 NAME=TIME,NLEV=4,LNAME=3,6,18,24/

*****RESPONSE BONE PB,LOG BONE PB/

*****MEANS 2

*****MEANS PLOT 2

*****CONST 100...1

*****OPCODES

OPCODES

ALB 1,902,1

MOV 1,902,1

MPY 1,901,801

LOG 801,802,10

MPY 802,901,802

OUT

*****FORMAT(16X,8F8.2/10F8.2)

*****DATA INOV=1

40	1	902	1	0	1
9	1	902	1	0	2
3	1	901	801	0	3
8	801	802	10	0	4
3	802	901	802	0	5
999	0	0	0	0	6

N36874.08

DUP050310011

INPUT DATA MATRIX (DOES NOT INCLUDE TRANSFORMATIONS)

1	1	1	1	
				.00000
2	1	1	1	
				.00000
3	1	1	2	
				.00000
4	1	1	2	
				.00000
5	1	1	3	
				22.10000
6	1	1	3	
				15.20000
7	1	1	4	
				8.50000
8	1	1	4	
				10.25000
9	1	2	1	
				.10000
10	1	2	1	
				.10000
11	1	2	2	
				.81000
12	1	2	2	
				.10000
13	1	2	3	
				5.80000
14	1	2	3	
				21.75000
15	1	2	4	
				10.50000
16	1	2	4	
				7.50000
17	2	1	1	
				.00000
18	2	1	2	
				.17000
19	2	1	3	
				17.80000
20	2	1	4	
				11.00000
21	2	2	1	
				.00000
22	2	2	2	
				.00000
23	2	2	3	
				.06000
24	2	2	4	
				7.00000
25	3	1	1	
				.00000
26	3	1	2	
				3.24000
27	3	1	3	
				28.40000
28	3	1	4	
				18.50000

RAT LEAD FEEDING STUDY STUDY I RESPONSE B

3

PAGE

3

3

29	3	2	1	
				.00000
30	3	2	2	
				3.46000
31	3	2	3	
				19.80000
32	3	2	4	
				16.50000
33	4	1	1	
				5.60000
34	4	1	2	
				3.04000
35	4	1	3	
				37.50000
36	4	1	4	
				25.50000
37	4	2	1	
				1.70000
38	4	2	2	
				9.00000
39	4	2	3	
				19.50000
40	4	2	4	
				28.00000
41	5	1	1	
				19.10000
42	5	1	2	
				27.73000
43	5	1	3	
				42.00000
44	5	1	4	
				72.80000
45	5	2	1	
				24.30000
46	5	2	2	
				23.43000
47	5	2	3	
				67.00000
48	5	2	4	
				110.00000

EXPANDED DATA MATRIX (IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

BONE PB	LOG BONE PB
1	1
1	1
1	1
10.00000	100.00000
2	1
2	1
10.00000	100.00000
3	1
3	1
3	2
10.00000	100.00000
4	1
4	1
4	2
10.00000	100.00000
5	1
5	1
5	3
2209.99999	334.43923

NO. OF INPUT DATA ROWS = 48

NO. OF ROWS DELETED BY LOGICAL TESTS = 0

NO. OF ROWS DELETED FOR MISSING DATA = 0

NO. OF EXPANDED DATA ROWS REMAINING = 48

*****ANOVA

RESPONSE NUMBER 1 BONE PB

CELL IDENTIFICATION

CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
10.0000	.0000	.0014 *	2
10.0000	.0000	.0014 *	2
1865.0000	238050.0645	487.9037 *	2
937.5000	15312.5314	123.7438 *	2
10.0000	.0000	.0014 *	2
45.5000	2520.5002	50.2046 *	2
1377.5000	1272012.6406	1127.8354 *	2
900.0000	45000.0317	212.1321 *	2
10.0000	.0000	.0000 *	1
17.0000	.0000	.0000 *	1
1780.0000	.0000	.0000 *	1
1100.0000	.0000	.0000 *	1
10.0000	.0000	.0000 *	1
10.0000	.0000	.0000 *	1
10.0000	.0000	.0000 *	1
700.0000	.0000	.0000 *	1
10.0000	.0000	.0000 *	1
324.0000	.0000	.0000 *	1
2840.0000	.0000	.0000 *	1
1850.0000	.0000	.0000 *	1
10.0000	.0000	.0000 *	1
346.0000	.0000	.0000 *	1
1980.0000	.0000	.0000 *	1
1650.0000	.0000	.0000 *	1
560.0000	.0000	.0000 *	1
304.0000	.0000	.0000 *	1
3750.0000	.0000	.0000 *	1
2550.0000	.0000	.0000 *	1
170.0000	.0000	.0000 *	1
900.0000	.0000	.0000 *	1
1950.0000	.0000	.0000 *	1
2800.0000	.0000	.0000 *	1
1910.0000	.0000	.0000 *	1
2773.0000	.0000	.0000 *	1
4200.0000	.0000	.0000 *	1
7280.0000	.0000	.0000 *	1
2430.0000	.0000	.0000 *	1
2343.0000	.0000	.0000 *	1
6700.0000	.0000	.0000 *	1
11000.0000	.0000	.0000 *	1

MEAN OF THE CELL MEANS = 1735.56244

WITHIN CELL VARIANCE =

HARMONIC MEAN OF CELL SIZE =

COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) =

VARIANCE OF A CELL MEAN =

STANDARD ERROR OF A CELL MEAN =

CONTROL LIMITS FOR THE STANDARD DEVIATION

UPPER CONTROL LIMIT = 70.57125

LOWER CONTROL LIMIT = 29.51993

* DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

196611.97070

443.40948

1.11111

.25548

176950.77344

420.65517

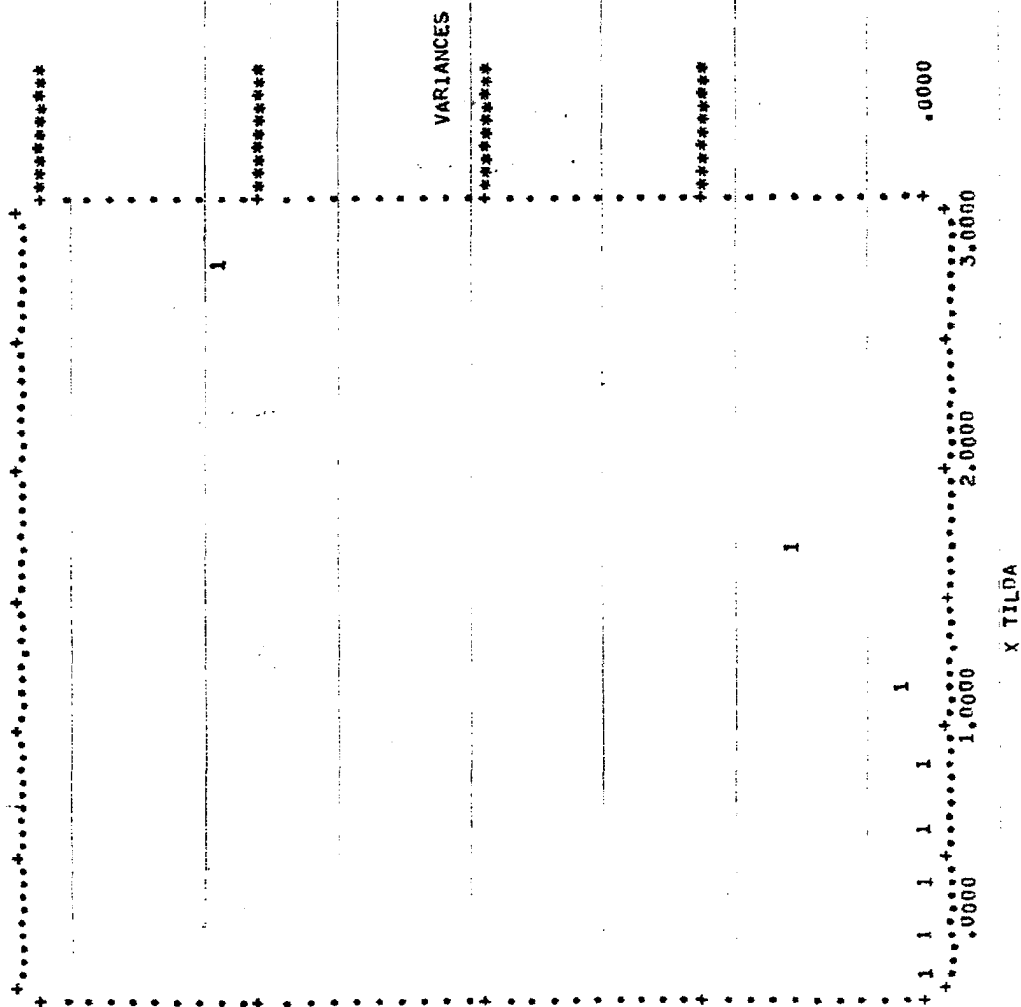
TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 5.33 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

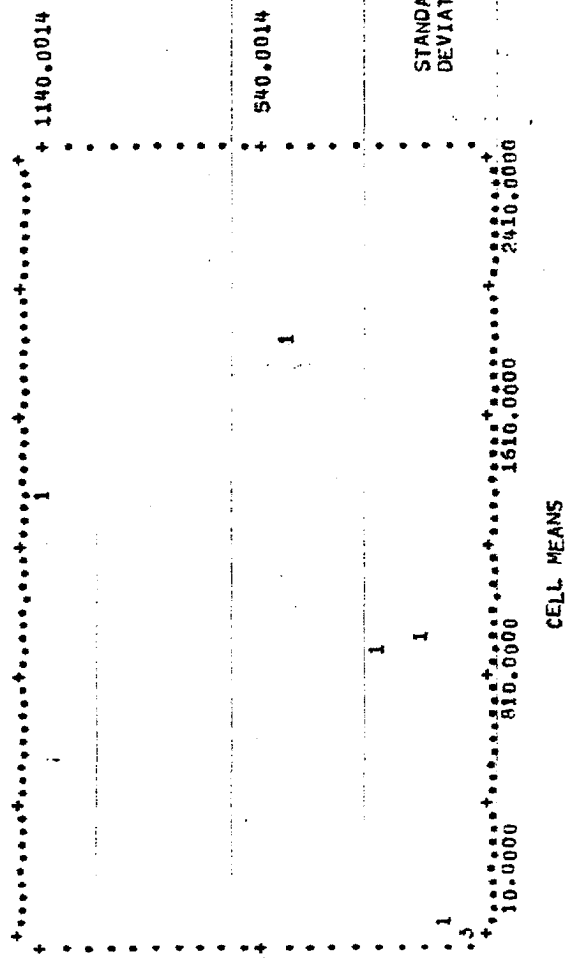
DUP050310016

THE GAMMA PLOT

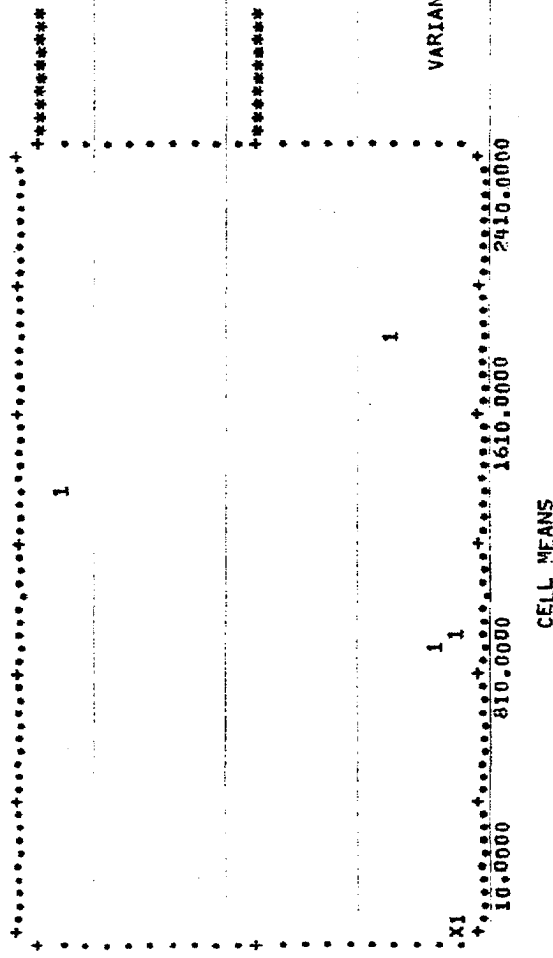


E(8) = 1.6579
 T FOR SLOPE = 4.3442
 T CRITICAL = 2.3639
 RESIDUAL FOR HIGHEST VALUE OF X TILDA
 STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
 T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



RAT LEAD FEEDING STUDY			STUDY I	RESPONSE B	PAGE	8
SOURCE OF VARIATION			EXPECTED MEAN SQUARE TABLE			
A = PB LEVEL			EXPECTED MEAN SQUARE			
B = SEX			REP + 8(A)			
AB			REP + 20(B)			
C = TIME			REP + 4(AB)			
AC			REP + 10(C)			
BC			REP + 2(AC)			
ABC			REP + 5(BC)			
REPLICATES			REP + 1(ABC)			
			REP			

UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	39	.20252+09		
A = PB LEVEL	4	.10230+09	.25575+08	14.53 **
B = SEX	1	.39785+05	.39785+05	.22
AB	4	.59201+07	.14800+07	8.36 **
C = TIME	3	.51784+08	.17261+08	97.55 **
AC	12	.34099+08	.28415+07	16.06 **
BC	3	.16616+07	.55386+06	3.13
ABC	12	.67120+07	.55933+06	3.16
REPLICATES	8		.17695+06	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 BONE PB

MEANS TABLES

PU LEVEL MEANS

0	644.4375	10	454.6250	50	1126.2500	100	1623.0000	500	4829.4999
---	----------	----	----------	----	-----------	-----	-----------	-----	-----------

STANDARD ERROR OF A MEAN = 148.7241
 95% CONFIDENCE LIMITS = 342.9616
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 210.3276
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 485.0210

SEX MEANS

MALE	1704.0249	FEMALE	1767.1000
------	-----------	--------	-----------

STANDARD ERROR OF A MEAN = 94.0614
 95% CONFIDENCE LIMITS = 216.9080
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 133.0228
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 306.7542

PU LEVEL * SEX INTERACTION

PU LEVEL SEX

PU LEVEL	SEX		INTERACTION
	MALE	FEMALE	
0	705.6250	581.2500	122.3750
10	726.7500	182.5000	544.2500
50	1256.0000	996.5000	259.5000
100	1791.0000	1455.0000	336.0000
500	4040.7500	5618.2499	-1577.5000

STANDARD ERROR OF A MEAN = 210.3276
 95% CONFIDENCE LIMITS = 485.0210
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 297.4441
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 685.9232

TIME MEANS

3	6	18	24
513.0000	707.2500	2645.2500	3076.7500

STANDARD ERROR OF A MEAN = 133.0228
 95% CONFIDENCE LIMITS = 306.7542
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 188.1227
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 433.8159

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

3	6	18	24
0	10.0000	27.7500	1621.2500
10	10.0000	13.5000	895.0000
50	10.0000	335.0000	2410.0000
100	365.0000	602.0000	2850.0000
500	2170.0000	2556.0000	5450.0000

STANDARD ERROR OF A MEAN = 297.4481
 95% CONFIDENCE LIMITS = 685.9232
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 420.6552
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 970.0419

SEX * TIME INTERACTION

SEX TIME

SEX	TIME	3	6	18	24
MALE		500.0000	685.6000	2887.0000	2743.5000
FEMALE		526.0000	728.9000	2403.5000	3410.0000
DIFFERENCES		-26.0000	-43.3000	483.5000	-666.5000

STANDARD ERROR OF A MEAN = 188.1227
 95% CONFIDENCE LIMITS = 433.8159
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 266.0457
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 613.5084

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- * - REPEATED SYMBOLS

RAT LEAD FEEDING STUDY STUDY I RESPONSE B

PAGE
MEANS

14

14

SEX

MEANS	SEX	RESPONSE B	STUDY I	FEEDING	LEAD	RAT
1	+	*	+	+	+	+
2	+	*	+	+	+	+
3	+	*	+	+	+	+
4	+	*	+	+	+	+
5	+	*	+	+	+	+

MEANS	SEX	RESPONSE B	STUDY I	FEEDING	LEAD	RAT
1	+	*	+	+	+	+
2	+	*	+	+	+	+
3	+	*	+	+	+	+
4	+	*	+	+	+	+
5	+	*	+	+	+	+

-.250+03 .300+04 .625+04 .950+04

[illegible][illegible]

2.

[illegible]

DUP050310027

RESPONSE NUMBER 2 LOG BONE PB

CELL IDENTIFICATION

CELL IDENTIFICATION	CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
1 1 1	100.0000	.0002	.0156 *	2
1 1 2	100.0000	.0002	.0156 *	2
1 1 3	326.3118	132.1118	11.4940 *	2
1 1 4	297.0071	33.0532	5.7492 *	2
1 1 2 1	100.0000	.0002	.0156 *	2
1 1 2 2	145.4242	4126.7253	64.2396 *	2
1 1 2 3	305.0444	1647.5601	40.5901 *	2
1 1 2 4	291.8125	106.7700	10.3330 *	2
2 1 1	100.0000	.0000	.0000 *	1
2 1 2	123.0449	.0000	.0000 *	1
2 1 3	325.0420	.0000	.0000 *	1
2 1 4	304.1393	.0000	.0000 *	1
2 2 1	100.0000	.0000	.0000 *	1
2 2 2	100.0000	.0000	.0000 *	1
2 2 3	100.0000	.0000	.0000 *	1
2 2 4	284.5098	.0000	.0000 *	1
3 1 1	100.0000	.0000	.0000 *	1
3 1 2	251.0545	.0000	.0000 *	1
3 1 3	345.3319	.0000	.0000 *	1
3 1 4	326.7172	.0000	.0000 *	1
3 2 1	100.0000	.0000	.0000 *	1
3 2 2	253.9076	.0000	.0000 *	1
3 2 3	329.6665	.0000	.0000 *	1
3 2 4	321.7484	.0000	.0000 *	1
4 1 1	274.8188	.0000	.0000 *	1
4 1 2	246.2874	.0000	.0000 *	1
4 1 3	357.4031	.0000	.0000 *	1
4 1 4	340.6540	.0000	.0000 *	1
4 2 1	223.0449	.0000	.0000 *	1
4 2 2	295.4242	.0000	.0000 *	1
4 2 3	329.0035	.0000	.0000 *	1
4 2 4	344.7158	.0000	.0000 *	1
5 1 1	328.1033	.0000	.0000 *	1
5 1 2	344.2950	.0000	.0000 *	1
5 1 3	362.3249	.0000	.0000 *	1
5 1 4	386.2131	.0000	.0000 *	1
5 2 1	338.5606	.0000	.0000 *	1
5 2 2	336.9772	.0000	.0000 *	1
5 2 3	382.6075	.0000	.0000 *	1
5 2 4	404.1393	.0000	.0000 *	1

MEAN OF THE CELL MEANS = 260.75834

WITHIN CELL VARIANCE =

WITHIN CELL STANDARD DEVIATION =

HARMONIC MEAN OF CELL SIZE =

COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) =

VARIANCE OF A CELL MEAN =

STANDARD ERROR OF A CELL MEAN =

CONTROL LIMITS FOR THE STANDARD DEVIATION

UPPER CONTROL LIMIT =

LOWER CONTROL LIMIT =

* DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

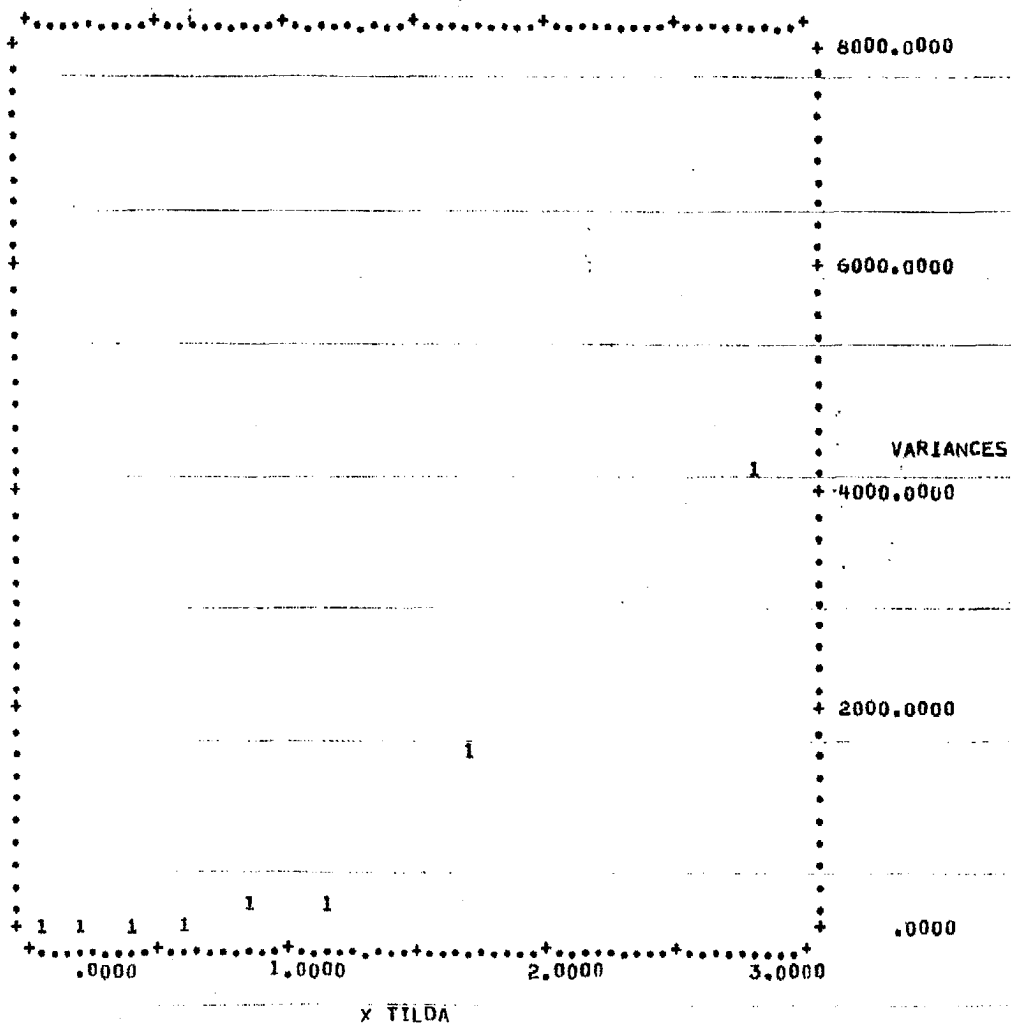
755.77765
27.49141
1.11111
.10543
680.19988
26.08064

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 5.33 (NOT SIGNIFICANT)

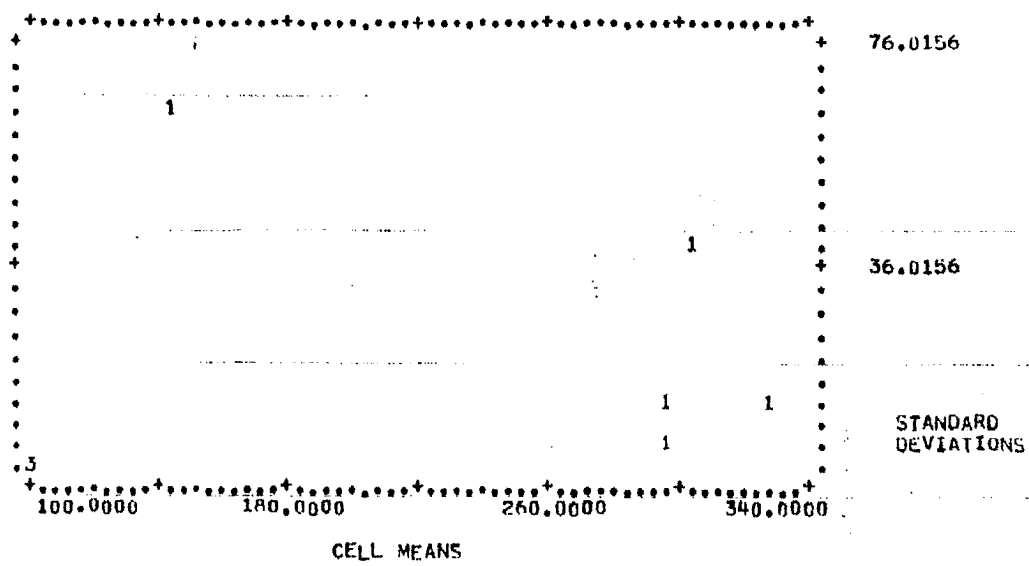
A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

THE GAMMA PLOT

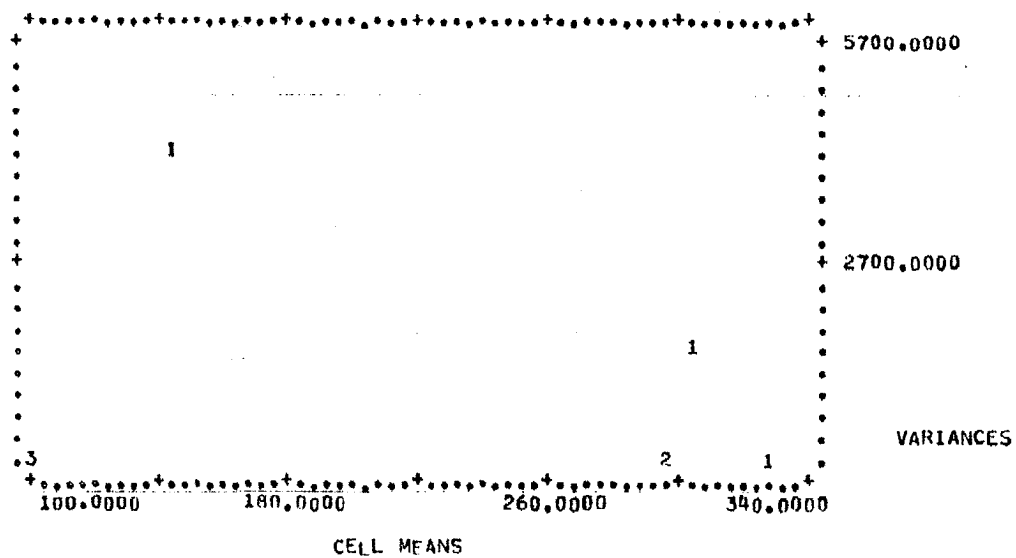


E(8)	=	1.4365	RESIDUAL FOR HIGHEST VALUE OF X TILDA
T FOR SLOPE	=	5.4880	STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T CRITICAL	=	2.3639	T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



RESPONSE NUMBER 2 LOG ROUNF PH UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	39	.41552+06		
A = PB LEVEL	4	.16773+06	.41931+05	61.05 **
B = SEX	1	.15771+04	.15771+04	2.32
AB	4	.78004+04	.19501+04	2.87
C = TIME	3	.16723+06	.55742+05	81.95 **
AC	12	.50081+05	.41734+04	6.14 **
BC	3	.63141+04	.21047+04	3.09
ABC	12	.14798+05	.12332+04	1.81
REPLICATES	8		.68020+03	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 2 LOG HOME PB

MEANS TABLES

PB LEVEL	MEANS
0	208.5750
10	179.5920
50	253.5532
100	301.6690
500	360.4026

STANDARD ERROR OF A MEAN = 9.2209
 95% CONFIDENCE LIMITS = 21.2636
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 13.0403
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 30.0713

SEX	MEANS
MALE	267.0374
FEMALE	254.4793

STANDARD ERROR OF A MEAN = 5.8318
 95% CONFIDENCE LIMITS = 13.4403
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 8.2474
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 19.0188

PU LEVEL * SEX INTERACTION

PU LEVEL SEX

PU LEVEL	MALE	FEMALE	DIFFERENCES
0	205.8297	211.3203	-5.4906
10	213.0565	146.1274	66.9291
50	255.7759	251.3306	4.4452
100	305.2908	298.0471	7.2437
500	355.2341	365.5711	-10.3371

STANDARD ERROR OF A MEAN = 13.0403
 95% CONFIDENCE LIMITS = 30.0713
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 18.4418
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 42.5273

TIME MEANS

3 176.4528 6 219.8415 18 316.2735 24 330.4656

STANDARD ERROR OF A MEAN = 8.2474
 95% CONFIDENCE LIMITS = 19.0188
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 11.6536
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 26.8966

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

0 100.0000 122.7121 18 315.6781 24 295.9098
 10 100.0000 111.5224 212.5210 294.3245
 50 100.0000 252.4811 337.4992 324.2328
 100 248.9318 271.8558 343.2033 342.6849
 500 333.3320 340.6361 372.4662 395.1762

STANDARD ERROR OF A MEAN = 18.4418
 95% CONFIDENCE LIMITS = 42.5273
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 26.0806
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 60.1426

SEX * TIME INTERACTION

SEX TIME

	3	6	10	24
MALE	180.5844	213.3363	343.2827	330.9461
FEMALE	172.3211	226.3467	289.2644	329.9852

DIFFERENCES 8.2633 -13.0103 54.0184 .9610

STANDARD ERROR OF A MEAN = 11.6636

95% CONFIDENCE LIMITS = 26.8966

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 16.4948

LEAST SIGNIFICANT DIFFERENCE (LSD) = 38.0375

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- * - REPEATED SYMBOLS

DUP050310036

25

2

91.30143.40195.50247.60299.70351.80403.90

91.30143.40195.50247.60299.70351.80403.90

PB LEVEL	* SEX	TIME	MEANS
1	+	12	1
2	+	2	2
3	+	21	3
4	+	21	4
5	+	1 2	1
91.30143.40195.50247.60299.70351.80403.90			
91.30143.40195.50247.60299.70351.80403.90			

TIME

* SEX

PB LEVEL

PB LEVEL		STUDY 1		RESPONSE 8		TIME		PAGE 27		27	
PB LEVEL		STUDY 1		RESPONSE 8		TIME		PAGE 27		27	
1	+	1	2	4	3	+	+	1	+	1	+
2	+	12	3	4	4	+	+	2	+	1	+
3	+	1	2	4	3	+	+	3	+	1	+
4	+	1	2	4	3	+	+	4	+	1	+
5	+	1	2	4	3	+	+	4	+	1	+
91.30143.40195.50247.60299.70351.80403.90											

*****ENDRUN

STOP

○

DUP050310040

LOG NO 182

DATE 130372 PAGE 43

DATE 15 MAR 72 PRIORITY D MAN/SEC 752701/55800 CAROS IN 154 MAX PAGES 200 END TIME 14:52:42

IDENT YEATMAN SNEE CHARGE J6469 / CARDS OUT 0 PAGES 43 START TIME 14:52:24 8

DUP050310041

*****MODEL NFAC=3,NODE=2,RFC=7,DESIGN=C,NREP=28,EQUAL=F, /

*****FACTOR1 NAME=PB LEVEL,NLEV=5,LNAME=D,10,50,100,500 /

*****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE /

*****FACTOR3 NAME=TIME,NLEV=4,LNAME=3,6,18,24 /

*****RESPONSE BRAIN PB,LOG BRAIN PB /

*****MEANS 2

*****MEANS PLOT 2

*****CONST 100,0,1

*****OPCODES

OPCODES

ALB 1,902,1

MOV 1,902,1

MPY 1,901,801

LOG 801,802,10

MPY 802,901,802

OUT

40	1	902	1	0	1
9	1	902	1	0	2
3	1	901	801	0	3
8	801	802	10	0	4
3	802	901	802	0	5
999	0	0	0	0	6

*****FORMAT(16X,8F8.2/10F8.2/10F8.2)

*****DATA INOV=1

N36874.09

1	1	1	1	1
2	1	1	1	1
3	1	1	2	1
4	1	1	2	1
5	1	1	3	1
6	1	1	3	1
7	1	1	4	1
8	1	1	4	1
9	1	2	1	1
10	1	2	1	1
11	1	2	2	1
12	1	2	2	1
13	1	2	3	1
14	1	2	3	1
15	1	2	4	1
16	1	2	4	1
17	2	1	1	1
18	2	1	2	1
19	2	1	3	1
20	2	1	4	1
21	2	2	1	1
22	2	2	2	1
23	2	2	3	1
24	2	2	4	1
25	3	1	1	1
26	3	1	2	1
27	3	1	3	1
28	3	1	4	1

RAT LEAD FEEDING STUDY			STUDY I	RESPONSE 9	PAGE	3	3
29	3	2 1					
30	3	2 2					
31	3	2 3					
32	3	2 4					
33	4	1 1					
34	4	1 2					
35	4	1 3					
36	4	1 4					
37	4	2 1					
38	4	2 2					
39	4	2 3					
40	4	2 4					
41	5	1 1					
42	5	1 2					
43	5	1 3					
44	5	1 4					
45	5	2 1					
46	5	2 2					
47	5	2 3					
48	5	2 4					

EXPANDED DATA MATRIX (IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

BRAIN PB	LOG	BRAIN PB
1	1	1
1	1	1
2	10.00000	100.00000
2	2	1
3	10.00000	100.00000
3	3	1
4	10.00000	100.00000
4	4	1
5	10.00000	100.00000
5	5	1
		3
	10.00000	100.00000

NO. OF INPUT DATA ROWS = 48
NO. OF ROWS DELETED BY LOGICAL TESTS = 0
NO. OF ROWS DELETED FOR MISSING DATA = 0
NO. OF EXPANDED DATA ROWS REMAINING = 48

*****ANOVA

RESPONSE NUMBER 1 BRAIN PB

CELL IDENTIFICATION

CELL IDENTIFICATION	CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
1 1 1	10.0000	.0000	.0014 *	2
1 1 2	10.0000	.0000	.0014 *	2
1 1 3	10.5000	.5000	.7071 *	2
1 1 4	11.5000	4.5000	2.1213 *	2
1 2 1	10.0000	.0000	.0014 *	2
1 2 2	15.5000	60.5000	7.7782 *	2
1 2 3	10.5000	.5000	.7071 *	2
1 2 4	16.0000	.0000	.0020 *	2
2 1 1	10.0000	.0000	.0000 *	1
2 1 2	14.0000	.0000	.0000 *	1
2 1 3	10.0000	.0000	.0000 *	1
2 1 4	23.0000	.0000	.0000 *	1
2 2 1	40.0000	.0000	.0000 *	1
2 2 2	16.0000	.0000	.0000 *	1
2 2 3	10.0000	.0000	.0000 *	1
2 2 4	15.0000	.0000	.0000 *	1
3 1 1	10.0000	.0000	.0000 *	1
3 1 2	10.0000	.0000	.0000 *	1
3 1 3	10.0000	.0000	.0000 *	1
3 1 4	36.0000	.0000	.0000 *	1
3 2 1	70.0000	.0000	.0000 *	1
3 2 2	16.0000	.0000	.0000 *	1
3 2 3	19.0000	.0000	.0000 *	1
3 2 4	10.0000	.0000	.0000 *	1
4 1 1	18.0000	.0000	.0000 *	1
4 1 2	15.0000	.0000	.0000 *	1
4 1 3	33.0000	.0000	.0000 *	1
4 1 4	70.0000	.0000	.0000 *	1
4 2 1	21.0000	.0000	.0000 *	1
4 2 2	18.0000	.0000	.0000 *	1
4 2 3	42.0000	.0000	.0000 *	1
4 2 4	70.0000	.0000	.0000 *	1
5 1 1	38.0000	.0000	.0000 *	1
5 1 2	73.0000	.0000	.0000 *	1
5 1 3	110.0000	.0000	.0000 *	1
5 1 4	70.0000	.0000	.0000 *	1
5 2 1	24.0000	.0000	.0000 *	1
5 2 2	60.0000	.0000	.0000 *	1
5 2 3	102.0000	.0000	.0000 *	1
5 2 4				

MEAN OF THE CELL MEANS = 29.82500

WITHIN CELL VARIANCE =

HARMONIC MEAN OF CELL SIZE =

COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) =

VARIANCE OF A CELL MEAN =

STANDARD ERROR OF A CELL MEAN =

CONTROL LIMITS FOR THE STANDARD DEVIATION

UPPER CONTROL LIMIT = .39906

LOWER CONTROL LIMIT = .16693

* DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

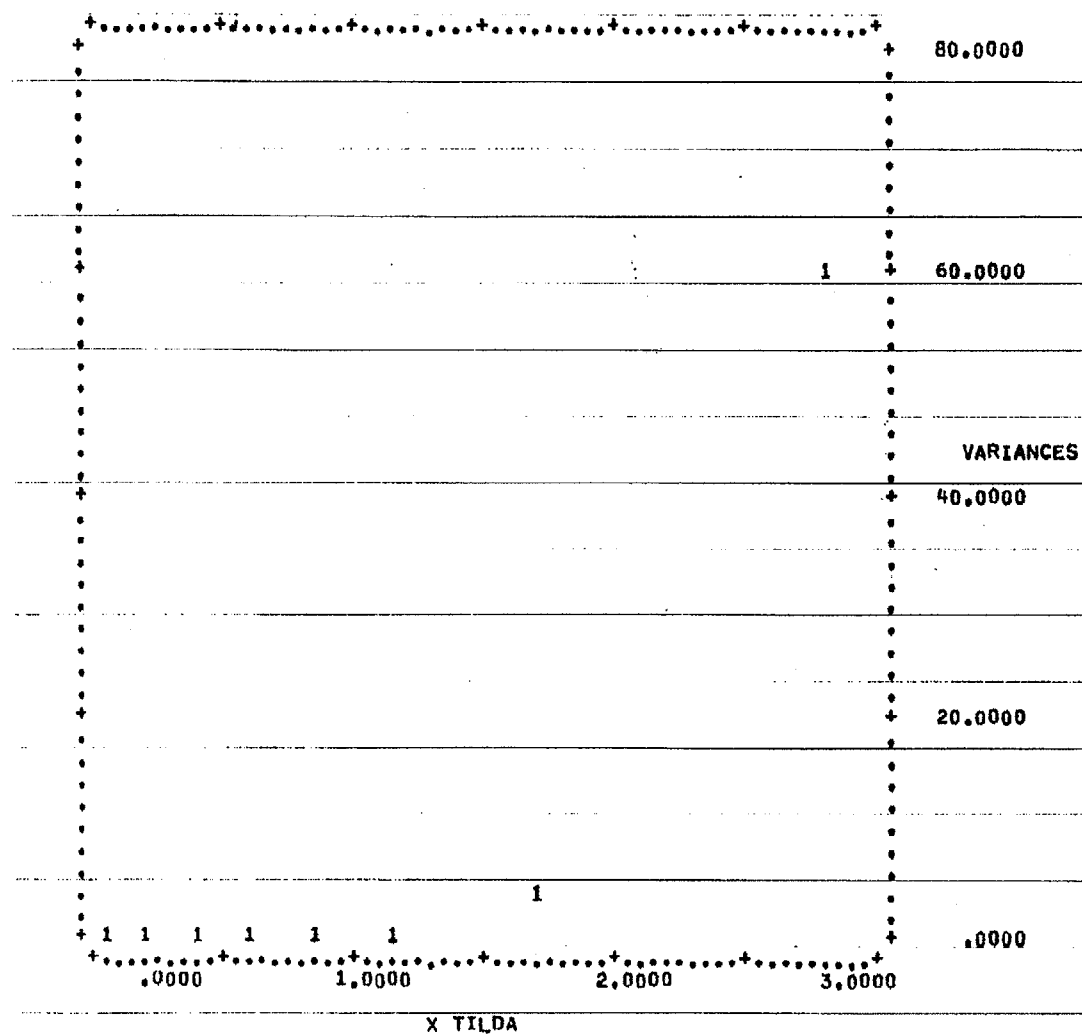
TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 5.33 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE

THE GAMMA PLOT



E(8) = 1.6883
 T FOR SLOPE = 3.5919
 T CRITICAL = 2.3639

RESIDUAL FOR HIGHEST VALUE OF X TILDA
 STUDENTIZED SLOPE, $Y=BX$, (INTERCEPT=0)
 T FOR ALPHA=.05, N=1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS

9.5014

1

4.5014

STANDARD
DEVIATIONS

CELL MEANS

PLOT OF CELL MEANS VRS VARIANCES

76.0000

1

36.0000

VARIANCES

CELL MEANS

SOURCE OF VARIATION EXPECTED MEAN SQUARE

A = PB LEVEL
 B = SEX
 AB
 C = TIME
 AC
 BC
 ABC
 REPLICATES

REP + 8(A)
 REP + 20(B)
 REP + 4(AB)
 REP + 10(C)
 REP + 2(AC)
 REP + 5(BC)
 REP + 1(ABC)
 REP

RESPONSE NUMBER 1 BRAIN PH UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	39	.28463+05		
A = PB LEVEL	4	.16117+05	4029.28751	54.66 **
B = SEX	1	.41603+03	416.02513	56.03 **
AB	4	.90285+03	225.71250	30.40 **
C = TIME	3	.34739+04	1157.97493	155.96 **
AC	12	.43179+04	359.82915	48.46 **
BC	3	.18742+04	624.74162	84.14 **
ABC	12	.13606+04	113.38749	15.27 **
REPLICATES	8		7.42500	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 BRAIN PB

MEANS TABLES

PB LEVEL MEANS

PB LEVEL	MEANS
0	11.7500
10	17.2500
50	23.3750
100	28.3750
500	68.3750

STANDARD ERROR OF A MEAN = .9634
 95% CONFIDENCE LIMITS = 2.2216
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 1.3624
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 3.1418

SEX MEANS

SEX	MEANS
MALE	26.6000
FEMALE	33.0500

STANDARD ERROR OF A MEAN = .6093
 95% CONFIDENCE LIMITS = 1.4051
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = .8617
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 1.9871

INTERACTION

* SEX

PB LEVEL

SEX

PB LEVEL	SEX	MEANS	DIFFERENCES
0	MALE	10.5000	13.0000
10	FEMALE	14.2500	20.2500
50	MALE	16.5000	30.2500
100	FEMALE	19.0000	37.7500
500	MALE	72.7500	64.0000

STANDARD ERROR OF A MEAN = 1.3624
 95% CONFIDENCE LIMITS = 3.1418
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 1.9268
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 4.4432

TIME MEANS

3 37.0000 18.2500 23.3000 40.7500

STANDARD ERROR OF A MEAN = .8617
 95% CONFIDENCE LIMITS = 1.9871
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 1.2186
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 2.8101

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

3 10.0000 12.7500 10.5000 13.7500
 25.0000 15.0000 10.0000 19.0000
 50 40.0000 13.0000 13.0000 27.5000
 100 40.0000 19.5000 16.5000 37.5000
 500 70.0000 31.0000 66.5000 106.0000

STANDARD ERROR OF A MEAN = 1.9268
 95% CONFIDENCE LIMITS = 4.4432
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 2.7249
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 6.2837

SEX * TIME INTERACTION

SEX TIME

3	6	18	24
MALE	22.0000	18.0000	23.7000
FEMALE	52.0000	18.5000	22.9000
			42.7000
			38.6000
DIFFERENCES	-30.0000	-.5000	.8000
			3.9000

STANDARD ERROR OF A MEAN = 1.2186
 95% CONFIDENCE LIMITS = 2.8101
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 1.7234
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 3.9741

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- * - REPEATED SYMBOLS

PB LEVEL	MEANS	SEX	PAGE	MEANS
1	1	+	1	1
2	1	+	1	1
3	1	+	1	1
4	1	+	1	1
5	1	+	1	1
7.15	24.10	41.05	58.00	74.95
91.90	108.85			

PB LEVEL

TIME

MEANS

PB LEVEL		STUDY 1		RESPONSE 9		TIME		MEANS	
1	+	12							
2	+	1	2						
3	+	1	2						
4	+	1	2						
5	+			2	1				

RAT LEAD FEEDING STUDY STUDY I RESPONSE 9

PB LEVEL # TIME

PAGE 16

* SEX

16

PB LEVEL	#	TIME	TIME	* SEX	
1	+	1	+	1	+
2	+	3 24 1	+	1	+
3	+	+	+	2	+
4	+	+	+	3	+
5	+	+	+	4	+
6	+	+	+	1	+
7	+	+	+	2	+
8	+	+	+	3	+
9	+	+	+	4	+
10	+	+	+	1	+
11	+	+	+	2	+
12	+	+	+	3	+
13	+	+	+	4	+
14	+	+	+	1	+
15	+	+	+	2	+
16	+	+	+	3	+
17	+	+	+	4	+
18	+	+	+	1	+
19	+	+	+	2	+
20	+	+	+	3	+
21	+	+	+	4	+
22	+	+	+	1	+
23	+	+	+	2	+
24	+	+	+	3	+
25	+	+	+	4	+
26	+	+	+	1	+
27	+	+	+	2	+
28	+	+	+	3	+
29	+	+	+	4	+
30	+	+	+	1	+
31	+	+	+	2	+
32	+	+	+	3	+
33	+	+	+	4	+
34	+	+	+	1	+
35	+	+	+	2	+
36	+	+	+	3	+
37	+	+	+	4	+
38	+	+	+	1	+
39	+	+	+	2	+
40	+	+	+	3	+
41	+	+	+	4	+
42	+	+	+	1	+
43	+	+	+	2	+
44	+	+	+	3	+
45	+	+	+	4	+
46	+	+	+	1	+
47	+	+	+	2	+
48	+	+	+	3	+
49	+	+	+	4	+
50	+	+	+	1	+
51	+	+	+	2	+
52	+	+	+	3	+
53	+	+	+	4	+
54	+	+	+	1	+
55	+	+	+	2	+
56	+	+	+	3	+
57	+	+	+	4	+
58	+	+	+	1	+
59	+	+	+	2	+
60	+	+	+	3	+
61	+	+	+	4	+
62	+	+	+	1	+
63	+	+	+	2	+
64	+	+	+	3	+
65	+	+	+	4	+
66	+	+	+	1	+
67	+	+	+	2	+
68	+	+	+	3	+
69	+	+	+	4	+
70	+	+	+	1	+
71	+	+	+	2	+
72	+	+	+	3	+
73	+	+	+	4	+
74	+	+	+	1	+
75	+	+	+	2	+
76	+	+	+	3	+
77	+	+	+	4	+
78	+	+	+	1	+
79	+	+	+	2	+
80	+	+	+	3	+
81	+	+	+	4	+
82	+	+	+	1	+
83	+	+	+	2	+
84	+	+	+	3	+
85	+	+	+	4	+
86	+	+	+	1	+
87	+	+	+	2	+
88	+	+	+	3	+
89	+	+	+	4	+
90	+	+	+	1	+
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92	+	+	+	3	+
93	+	+	+	4	+
94	+	+	+	1	+
95	+	+	+	2	+
96	+	+	+	3	+
97	+	+	+	4	+
98	+	+	+	1	+
99	+	+	+	2	+
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101	+	+	+	4	+
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105	+	+	+	4	+
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117	+	+	+	4	+
118	+	+	+	1	+
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120	+	+	+	3	+
121	+	+	+	4	+
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140	+	+	+	3	+
141	+	+	+	4	+
142	+	+	+	1	+
143	+	+	+	2	+
144	+	+	+	3	+
145	+	+	+	4	+
146	+	+	+	1	+
147	+	+	+	2	+
148	+	+	+	3	+
149	+	+	+	4	+
150	+	+	+	1	+
151	+	+	+	2	+
152	+	+	+	3	+
153	+	+	+	4	+
154	+	+	+	1	+
155	+	+	+	2	+
156	+	+	+	3	+
157	+	+	+	4	+
158	+	+	+	1	+
159	+	+	+	2	+
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161	+	+	+	4	+
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249	+	+	+	4	+
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297	+	+	+	4	+
298	+	+	+	1	+
299	+	+	+	2	+
300	+	+	+	3	+
301	+	+	+	4	+
302	+	+	+	1	+
303	+	+	+	2	+
304	+	+	+	3	+
305	+	+	+	4	+

RESPONSE NUMBER 2 LOG BRAIN PB

CELL IDENTIFICATION

CELL IDENTIFICATION	CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
---------------------	-----------	---------------	-------------------------	------------------------

1 1 1	100.0000	.0002	.0156 *	2
1 1 2	100.0000	.0002	.0156 *	2
1 1 3	102.0696	8.5667	2.9269 *	2
1 1 4	105.6972	64.9153	8.0570 *	2
1 2 1	100.0000	.0002	.0156 *	2
1 2 2	116.1110	519.1262	22.7843 *	2
1 2 3	102.0696	8.5667	2.9269 *	2
1 2 4	120.4120	.0002	.0156 *	2
2 1 1	100.0000	.0000	.0000 *	1
2 1 2	117.6128	.0000	.0000 *	1
2 1 3	100.0000	.0000	.0000 *	1
2 1 4	136.1728	.0000	.0000 *	1
2 2 1	160.2060	.0000	.0000 *	1
2 2 2	120.4120	.0000	.0000 *	1
2 2 3	100.0000	.0000	.0000 *	1
2 2 4	117.6091	.0000	.0000 *	1
3 1 1	100.0000	.0000	.0000 *	1
3 1 2	100.0000	.0000	.0000 *	1
3 1 3	100.0000	.0000	.0000 *	1
3 1 4	155.6302	.0000	.0000 *	1
3 2 1	184.5098	.0000	.0000 *	1
3 2 2	120.4120	.0000	.0000 *	1
3 2 3	120.4120	.0000	.0000 *	1
3 2 4	127.8754	.0000	.0000 *	1
4 1 1	100.0000	.0000	.0000 *	1
4 1 2	125.5273	.0000	.0000 *	1
4 1 3	117.6091	.0000	.0000 *	1
4 1 4	151.8514	.0000	.0000 *	1
4 2 1	184.5098	.0000	.0000 *	1
4 2 2	132.2219	.0000	.0000 *	1
4 2 3	125.5273	.0000	.0000 *	1
4 2 4	162.3249	.0000	.0000 *	1
5 1 1	184.5098	.0000	.0000 *	1
5 1 2	157.9784	.0000	.0000 *	1
5 1 3	186.3323	.0000	.0000 *	1
5 1 4	204.1393	.0000	.0000 *	1
5 2 1	184.5098	.0000	.0000 *	1
5 2 2	139.0211	.0000	.0000 *	1
5 2 3	177.8151	.0000	.0000 *	1
5 2 4	200.8600	.0000	.0000 *	1

MEAN OF THE CELL MEANS = 133.44871

WITHIN CELL VARIANCE =

WITHIN CELL STANDARD DEVIATION =

HARMONIC MEAN OF CELL SIZE =

COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) =

VARIANCE OF A CELL MEAN =

STANDARD ERROR OF A CELL MEAN =

CONTROL LIMITS FOR THE STANDARD DEVIATION

UPPER CONTROL LIMIT = 1.29583

LOWER CONTROL LIMIT = .54205

* DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

75.14697
8.66874
1.11111
.06496
67.63228
8.22388

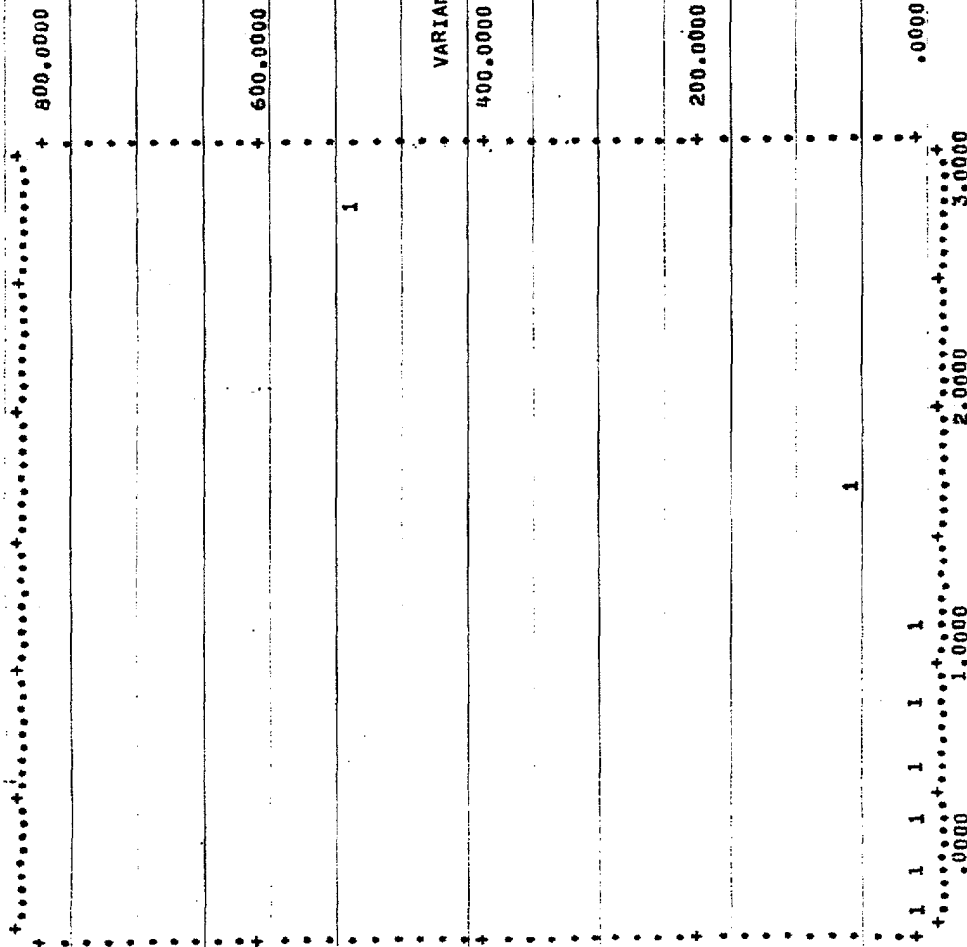
TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 5.33 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE

DUP050310060

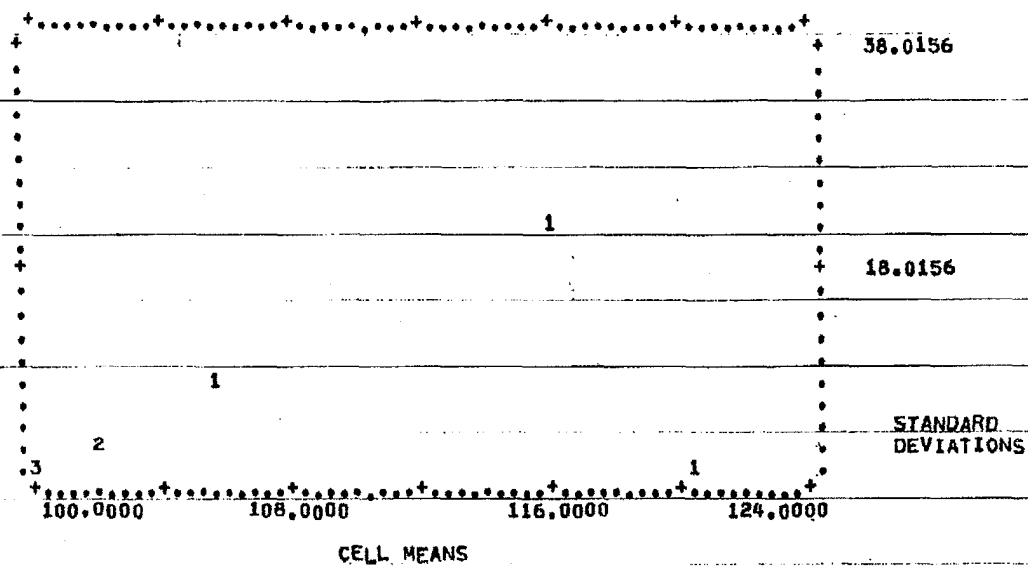
THE GAMMA PLOT



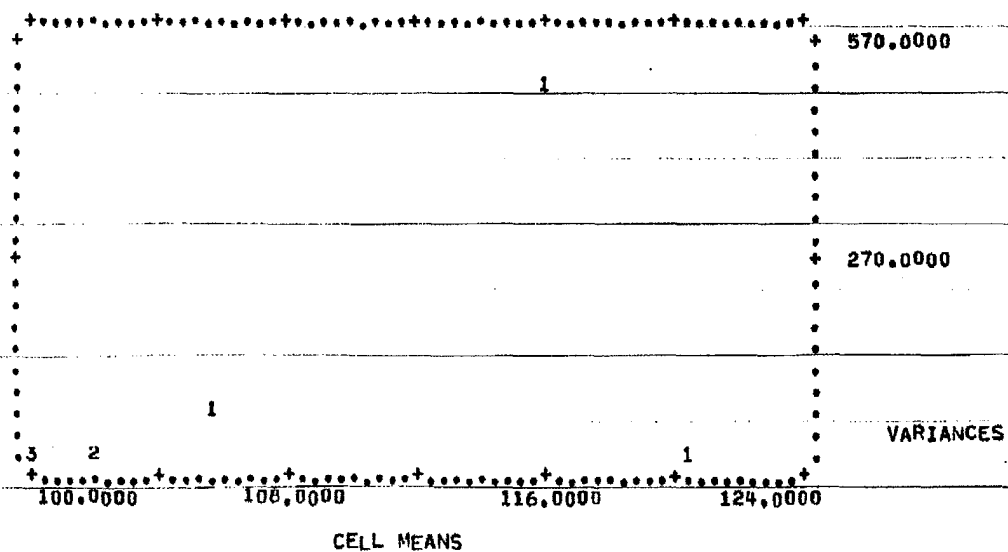
X TILDA

E(8) = 1.6790 RESIDUAL FOR HIGHEST VALUE OF X TILDA
 T FOR SLOPE = 3.9178 STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
 T CRITICAL = 2.3639 T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



DUPO50310062

UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	39	.43669+05		
A $\pm$ PB LEVEL	4	.25232+05	6307.99451	93.27 **
B = SEX	1	.16089+04	1608.94983	23.79 **
AB	4	.16088+04	402.20582	5.95 *
C = TIME	3	.48454+04	1615.14545	23.88 **
AC	12	.30585+04	254.87625	3.77 *
BC	3	.38288+04	1276.25723	18.87 **
ABC	12	.34861+04	290.51026	4.30 *
REPLICATES	8		67.63228	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 2 LOG BRAIN PB

MEANS TABLES

PB LEVEL	MEANS				
0	105.7949	10	118.6266	50	126.1049
				100	137.4465
				179.2707	

STANDARD ERROR OF A MEAN = 2.9076
 95% CONFIDENCE LIMITS = 6.7050
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 4.1119
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 9.4822

SEX

MEANS

MALE 127.1065
 FEMALE 139.7909

STANDARD ERROR OF A MEAN = 1.8389
 95% CONFIDENCE LIMITS = 4.2406
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 2.6006
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 5.9971

PB LEVEL

* SEX

INTERACTION

PB LEVEL

SEX

0	10	50	100	179.2707
MALE	101.9417	109.6481	-7.7064	
FEMALE	112.6964	124.5568	-11.8604	
	113.9076	138.3023	-24.3947	
	123.7469	151.1460	-27.3990	
	183.2399	175.3015	7.9384	

STANDARD ERROR OF A MEAN = 4.1119
 95% CONFIDENCE LIMITS = 9.4822
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 5.8152
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 13.4099

TIME MEANS

3 139.8245 6 122.5296 18 123.1035 24 148.2572

STANDARD ERROR OF A MEAN = 2.6006
 95% CONFIDENCE LIMITS = 5.9971
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 3.6778
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 8.4812

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

3 100.0000 6 108.0555 18 102.0696 24 113.0546
 10 130.1030 117.5124 100.0000 126.8910
 50 142.2549 110.2060 110.2060 141.7528
 100 142.2549 128.8746 121.5682 157.0882
 500 184.5098 147.9997 182.0737 202.4996

STANDARD ERROR OF A MEAN = 5.6152
 95% CONFIDENCE LIMITS = 13.4099
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 8.2239
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 18.9645

SEX * TIME INTERACTION

SEX TIME

	3	6	18	24
MALE	116.9020	119.6237	121.2022	150.6982
FEMALE	162.7471	125.4356	125.1648	145.8163

DIFFERENCES -45.8451 -5.8119 -3.9626 4.8819

STANDARD ERROR OF A MEAN = 3.6778

95% CONFIDENCE LIMITS = 8.4812

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 5.2012

LEAST SIGNIFICANT DIFFERENCE (LSD) = 11.9942

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- * - REPEATED SYMBOLS

1

PB LEVEL		STUDY I		RESPONSE 9		PAGE 26		MEANS		TIME		26	
1	+	1	2	+	+	+	+	+	+	+	+	+	+
2	+	1	2	+	+	+	+	+	+	+	+	+	+
3	+	1	2	+	+	+	+	+	+	+	+	+	+
4	+	1	2	+	+	+	+	+	+	+	+	+	+
5	+	1	2	+	+	+	+	+	+	+	+	+	+
96.9515.05133.15151.25169.35187.45205.55													
96.9515.05133.15151.25169.35187.45205.55													

27.

96.95115.05133.15151.25169.35187.45205.55

STOP

RAT LEAD FEEDING STUDY STUDY I RESPONSE 10

PAGE

1

1

*****MODEL NFAC=3,NOD=2,RF=7,DESIGN=C,NREP=28,EQUAL=F./

*****FACTOR1 NAME=PB LEVEL,NLEV=5,LNAME=0,10,50,100,500/

*****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE/

*****FACTOR3 NAME=TIME,NLEV=10,LNAME=1,2,3,6,9,12,15,18,21,24/

*****RESPONSE FECAL PB,LOG FECAL PB/

*****MEANS 2

*****MEANS PLOT 2

*****CONST 100.,.1

*****OPCODES

OPCODES

ALR 1,902,1

MOV 1,902,1

MOV 1,1,801

LOG 801,802,10

MPY 802,901,802

OUT

*****FORMAT(16X,8F8.2/10F8.2/10F8.2)

*****DATA INOV=1

40	1	902	1	0	1
9	1	902	1	0	2
9	1	1	801	0	3
8	801	802	10	0	4
3	802	901	802	0	5
999	0	0	0	0	6

N36874.1

INPUT DATA MATRIX (DOES NOT INCLUDE TRANSFORMATIONS)

WHAT I CAN EFFECTIVE & SUCCESSFUL

	RAT LEAD FEEDING STUDY	STUDY I	RESPONSE 10	PAGE	3
29	1 2 5		90.00000		
30	1 2 5		34.00000		
31	1 2 6		80.00000		
32	1 2 6		86.00000		
33	1 2 7		72.00000		
34	1 2 7		42.00000		
35	1 2 8		39.40000		
36	1 2 8		49.40000		
37	1 2 9		59.90000		
38	1 2 9		36.50000		
39	1 2 10		15.90000		
40	1 2 10		18.90000		
41	2 1 1		26.80000		
42	2 1 2		28.00000		
43	2 1 3		80.00000		
44	2 1 4		92.70000		
45	2 1 5		94.00000		
46	2 1 6		120.00000		
47	2 1 7		63.00000		
48	2 1 8		1151.10001		
49	2 1 9		202.00000		
50	2 1 10		87.70000		
51	2 2 1		26.40000		
52	2 2 2		101.00000		
53	2 2 3		75.00000		
54	2 2 4		110.70000		
55	2 2 5		44.00000		
56	2 2 6		110.70000		
57	2 2 7		113.00000		

[illegible]

RAT LEAD FEEDING STUDY STUDY I RESPONSE 10

PAGE 5

87	4	1	7	375.00000
88	4	1	8	394.10000
89	4	1	9	351.90000
90	4	1	10	428.30000
91	4	2	1	162.30000
92	4	2	2	241.00000
93	4	2	3	108.00000
94	4	2	4	513.80000
95	4	2	5	163.00000
96	4	2	6	440.00000
97	4	2	7	350.00000
98	4	2	8	625.00000
99	4	2	9	384.60000
100	4	2	10	576.50000
101	5	1	1	728.40000
102	5	1	2	966.00000
103	5	1	3	750.00000
104	5	1	4	2158.00000
105	5	1	5	1120.00000
106	5	1	6	2375.00000
107	5	1	7	1600.00000
108	5	1	8	1262.10001
109	5	1	9	1545.80000
110	5	1	10	871.50000
111	5	2	1	740.90000
112	5	2	2	950.00000
113	5	2	3	213.00000
114	5	2	4	2040.00000
115	5	2	5	1140.00000

DUP050310076

	RAT LEAD FEEDING STUDY	STUDY I	RESPONSE 10	PAGE	6
116	5 2 6				6
	1450.00000				
117	5 2 7				
	2625.00000				
118	5 2 8				
	2524.29999				
119	5 2 9				
	1439.00000				
120	5 2 10				
	1444.20000				

EXPANDED DATA MATRIX (IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

	FECAL PB	LOG	FECAL PB
1	1	1	1
	1,60000		20,41200
2	2	1	1
	19,50000		129,00346
3	3	1	2
	119,00000		207,55470
4	4	1	2
	126,00000		210,03705
5	5	1	3
	92,00000		196,37878

NO. OF INPUT DATA ROWS = 120

NO.	OF ROWS DELETED BY LOGICAL TESTS	=	0
1	0		
2	0		
3	0		
4	0		
5	0		
6	0		
7	0		
8	0		
9	0		
10	0		
11	0		
12	0		
13	0		
14	0		
15	0		
16	0		
17	0		
18	0		
19	0		
20	0		
21	0		
22	0		
23	0		
24	0		
25	0		
26	0		
27	0		
28	0		
29	0		
30	0		
31	0		
32	0		
33	0		
34	0		
35	0		
36	0		
37	0		
38	0		
39	0		
40	0		
41	0		
42	0		
43	0		
44	0		
45	0		
46	0		
47	0		
48	0		
49	0		
50	0		
51	0		
52	0		
53	0		
54	0		
55	0		
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57	0		
58	0		
59	0		
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61	0		
62	0		
63	0		
64	0		
65	0		
66	0		
67	0		
68	0		
69	0		
70	0		
71	0		
72	0		
73	0		
74	0		
75	0		
76	0		
77	0		
78	0		
79	0		
80	0		
81	0		
82	0		
83	0		
84	0		
85	0		
86	0		
87	0		
88	0		
89	0		
90	0		
91	0		
92	0		
93	0		
94	0		
95	0		
96	0		
97	0		
98	0		
99	0		
100	0		

NO. OF ROWS DELETED FOR MISSING DATA = 0

NO.	OF EXPANDED DATA ROWS REMAINING =	120

*****ANOVA

黄安其先生

RESPONSE NUMBER 1 FECAL PB

CELL IDENTIFICATION

CELL MEAN CELL VARIANCE CELL STANDARD DEVIATION NUMBER OF OBSERVATIONS

1	1	1	10.5500	160.2050	12.6572 *	2	100
1	1	2	122.5000	24.5001	4.9498 *	2	
1	1	3	79.0000	338.0001	18.3848 *	2	
1	1	4	68.0000	988.0001	31.1127 *	2	
1	1	5	43.0000	338.0000	18.3848 *	2	
1	1	6	121.0000	98.0004	9.8995 *	2	
1	1	7	41.0000	450.0000	21.2132 *	2	
1	1	8	32.7000	242.0000	15.5563 *	2	
1	1	9	46.8000	20.4800	4.5255 *	2	
1	1	10	25.0000	50.0000	7.0711 *	2	
1	2	1	6.7250	27.0113	5.1972 *	2	
1	2	2	124.0000	32.0004	5.6569 *	2	
1	2	3	72.0000	288.0001	16.9706 *	2	100
1	2	4	61.7500	1596.1251	39.9515 *	2	
1	2	5	62.0000	1568.0000	39.5980 *	2	
1	2	6	83.0000	18.0001	4.2427	2	
1	2	7	57.0000	450.0000	21.2132 *	2	
1	2	8	44.4000	50.0000	7.0711 *	2	
1	2	9	48.2000	273.7800	16.5463 *	2	
1	2	10	17.4000	4.5000	2.1213	2	100
2	1	1	26.8000	.0000	.0000 *	1	
2	1	2	28.0000	.0000	.0000 *	1	
2	1	3	80.0000	.0000	.0000 *	1	
2	1	4	92.7000	.0000	.0000 *	1	
2	1	5	94.0000	.0000	.0000 *	1	
2	1	6	120.0000	.0000	.0000 *	1	
2	1	7	63.0000	.0000	.0000 *	1	
2	1	8	1151.1000	.0000	.0000 *	1	
2	1	9	202.0000	.0000	.0000 *	1	
2	1	10	87.7000	.0000	.0000 *	1	
2	2	1	26.4000	.0000	.0000 *	1	
2	2	2	101.0000	.0000	.0000 *	1	
2	2	3	75.0000	.0000	.0000 *	1	
2	2	4	110.7000	.0000	.0000 *	1	
2	2	5	44.0000	.0000	.0000 *	1	
2	2	6	110.7000	.0000	.0000 *	1	
2	2	7	113.0000	.0000	.0000 *	1	100
2	2	8	108.2000	.0000	.0000 *	1	
2	2	9	46.7000	.0000	.0000 *	1	
2	2	10	77.9000	.0000	.0000 *	1	
3	1	1	64.9000	.0000	.0000 *	1	
3	1	2	100.0000	.0000	.0000 *	1	
3	1	3	108.0000	.0000	.0000 *	1	
3	1	4	357.3000	.0000	.0000 *	1	
3	1	5	157.0000	.0000	.0000 *	1	
3	1	6	286.7000	.0000	.0000 *	1	
3	1	7	213.0000	.0000	.0000 *	1	
3	1	8	223.0000	.0000	.0000 *	1	
3	1	9	351.9000	.0000	.0000 *	1	100
3	1	10	275.0000	.0000	.0000 *	1	
3	2	1	123.2000	.0000	.0000 *	1	
3	2	2	175.0000	.0000	.0000 *	1	
3	2	3	90.0000	.0000	.0000 *	1	

RAT LEAD FEEDING STUDY STUDY I RESPONSE 10

PAGE 9

9

3	2	4	301.3000	.0000	.0000 *	1
3	2	5	117.0000	.0000	.0000 *	1
3	2	6	273.3000	.0000	.0000 *	1
3	2	7	237.0000	.0000	.0000 *	1
3	2	8	268.0000	.0000	.0000 *	1
3	2	9	188.9000	.0000	.0000 *	1
3	2	10	241.1000	.0000	.0000 *	1
4	1	1	166.5000	.0000	.0000 *	1
4	1	2	164.0000	.0000	.0000 *	1
4	1	3	133.0000	.0000	.0000 *	1
4	1	4	772.0000	.0000	.0000 *	1
4	1	5	250.0000	.0000	.0000 *	1
4	1	6	570.0000	.0000	.0000 *	1
4	1	7	375.0000	.0000	.0000 *	1
4	1	8	394.1000	.0000	.0000 *	1
4	1	9	351.5000	.0000	.0000 *	1
4	1	10	428.3000	.0000	.0000 *	1
4	2	1	162.3000	.0000	.0000 *	1
4	2	2	241.0000	.0000	.0000 *	1
4	2	3	108.0000	.0000	.0000 *	1
4	2	4	513.8000	.0000	.0000 *	1
4	2	5	163.0000	.0000	.0000 *	1
4	2	6	440.0000	.0000	.0000 *	1
4	2	7	350.0000	.0000	.0000 *	1
4	2	8	625.0000	.0000	.0000 *	1
4	2	9	384.6000	.0000	.0000 *	1
4	2	10	576.5000	.0000	.0000 *	1
5	1	1	728.4000	.0000	.0000 *	1
5	1	2	966.0000	.0000	.0000 *	1
5	1	3	750.0000	.0000	.0000 *	1
5	1	4	2158.0000	.0000	.0000 *	1
5	1	5	1120.0000	.0000	.0000 *	1
5	1	6	2375.0000	.0000	.0000 *	1
5	1	7	1600.0000	.0000	.0000 *	1
5	1	8	1262.1000	.0000	.0000 *	1
5	1	9	1545.8000	.0000	.0000 *	1
5	1	10	871.5000	.0000	.0000 *	1
5	2	1	740.9000	.0000	.0000 *	1
5	2	2	950.0000	.0000	.0000 *	1
5	2	3	213.0000	.0000	.0000 *	1
5	2	4	2040.0000	.0000	.0000 *	1
5	2	5	1140.0000	.0000	.0000 *	1
5	2	6	1450.0000	.0000	.0000 *	1
5	2	7	2625.0000	.0000	.0000 *	1
5	2	8	2524.3000	.0000	.0000 *	1
5	2	9	1439.0000	.0000	.0000 *	1
5	2	10	1444.2000	.0000	.0000 *	1

MEAN OF THE CELL MEANS = 431.88723

WITHIN CELL VARIANCE =
 WITHIN CELL STANDARD DEVIATION =
 HARMONIC MEAN OF CELL SIZE =
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) =
 VARIANCE OF A CELL MEAN =
 STANDARD ERROR OF A CELL MEAN =

349.83011
 18.70375
 1.11111
 .04331
 314.84710
 17.74393

CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 4.26318
 LOWER CONTROL LIMIT = 1.78329
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 13.33 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE 0.6

DUP050310081

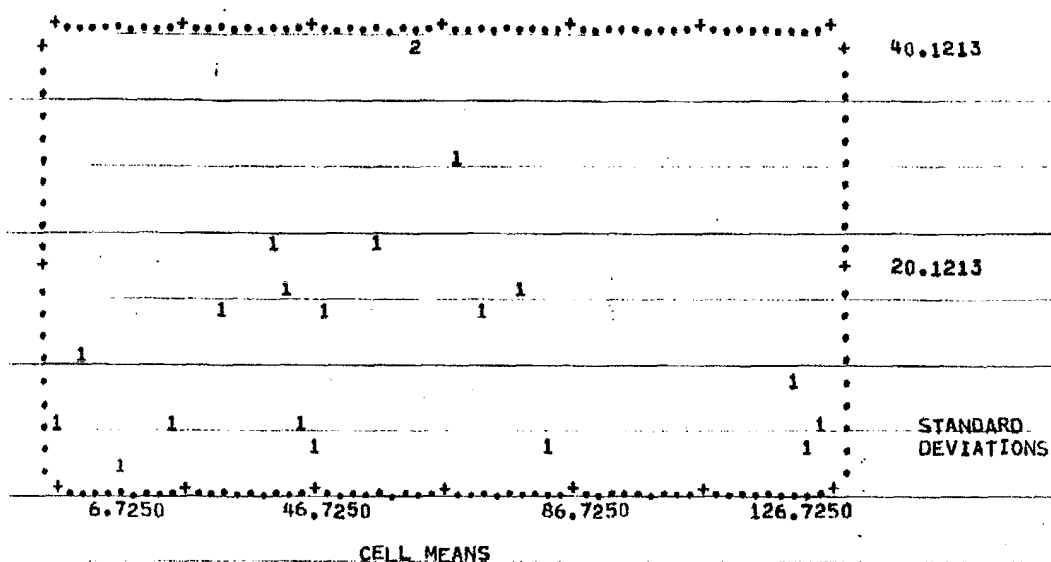
15

15

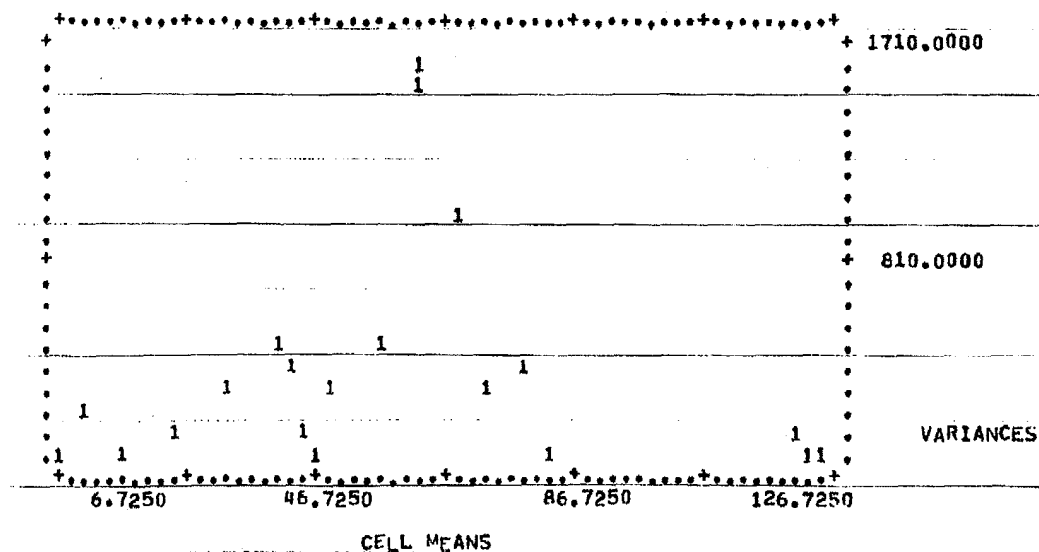
15

15

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



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EXPECTED MEAN SQUARE TABLE

10

SOURCE OF VARIATION	EXPECTED MEAN SQUARE
A = PB LEVEL	REP + 20(A)
B = SEX	REP + 50(B)
AB	REP + 10(AB)
C = TIME	REP + 10(C)
AC	REP + 2(AC)
BC	REP + 5(BC)
ABC	REP + 1(ABC)
REPLICATES	REP

10

10

10

10

10

UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	99	.34533+08		
A = PB LEVEL	4	.24269+08	.60671+07	*** **
B = SEX	1	.13871+03	.13871+03	.44
AB	4	.13549+06	.33873+05	107.58 **
C = TIME	9	.29306+07	.32563+06	*** **
AC	36	.45912+07	.12753+06	405.06 **
BC	9	.38842+06	.43158+05	137.07 **
ABC	36	.22190+07	.61640+05	195.78 **
REPLICATES	20		.31485+03	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 FECAL PB

MEANS TABLES

PB LEVEL MEANS

PB LEVEL	MEANS
0	58.3012
10	137.9450
50	207.5800
100	358.4500
500	1397.1600

STANDARD ERROR OF A MEAN = 3.9677
 95% CONFIDENCE LIMITS = 8.2763
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 5.6111
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 11.7045

SEX MEANS

SEX	MEANS
MALE	433.0650
FEMALE	430.7095

STANDARD ERROR OF A MEAN = 2.5094
 95% CONFIDENCE LIMITS = 5.2344
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 3.5480
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 7.4026

PB LEVEL * SEX INTERACTION

PB LEVEL SEX

PB LEVEL	SEX	MEANS	FEMALE DIFFERENCES
0	MALE	58.9550	57.6475
10	MALE	194.5300	81.3600
50	MALE	213.6800	201.4800
100	MALE	360.4800	356.4200
500	MALE	1337.6900	1456.6400

STANDARD ERROR OF A MEAN = 5.6111
 95% CONFIDENCE LIMITS = 11.7045
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 7.9353
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 16.5527

TIME MEANS

1 205.6675 2 297.1500 3 170.8000 6 647.5550 9 319.0000 12 582.9700 15 567.4000 18 663.2900 21 460.5000 24 404.4600

STANDARD ERROR OF A MEAN =

5.6111

95% CONFIDENCE LIMITS =

11.7045

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

7.9353

LEAST SIGNIFICANT DIFFERENCE (LSD) =

16.5527

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

1 8.6375 2 123.2500 3 75.5000 6 64.8750 9 52.5000 12 102.0000 15 49.0000 18 38.5500 21 47.5000 24 21.2000
 0 26.6000 64.5000 77.5000 101.7000 69.0000 88.0000 629.6500 124.3500 82.8000
 50 94.0500 137.5000 99.0000 129.3000 137.0000 289.0000 225.0000 245.5000 270.4000 258.0500
 100 164.4000 202.5000 120.5000 642.9000 206.5000 505.0000 362.5000 509.5500 368.2500 502.4000
 500 734.6500 958.0000 481.5000 2099.0000 1130.0000 1912.5000 2112.5000 1893.2000 1492.4000 1157.8500

STANDARD ERROR OF A MEAN =

12.5469

95% CONFIDENCE LIMITS =

26.1721

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

17.7439

LEAST SIGNIFICANT DIFFERENCE (LSD) =

37.0129

SEX * TIME INTERACTION

SEX TIME

	1	2	3	6	9	12	15	18	21	24
MALE	199.4300	276.1000	230.0000	689.6000	335.8000	694.5400	458.4000	612.6000	499.6800	337.5000
FEMALE	211.9050	318.2000	111.6000	605.5100	305.2000	471.4000	676.4000	713.9800	421.4800	471.4200
DIFFERENCES	-12.4750	-42.1000	118.4000	84.0900	27.6000	223.1400	-218.0000	-101.3800	78.2000	-133.9200

STANDARD ERROR OF A MEAN =

7.9353

95% CONFIDENCE LIMITS =

16.5527

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

11.2822

LEAST SIGNIFICANT DIFFERENCE (LSD) =

23.4090

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

23

[illegible]

19

TIME

MEANS

PB LEVEL

* SEX

PB LEVEL	* SEX	TIME	MEANS
1	+	+	+
2	+	+	+
3	+	+	+
4	+	+	+
5	+	+	+
6	+	+	+
7	+	+	+
8	+	+	+
9	+	+	+
10	+	+	+
11	+	+	+
12	+	+	+
13	+	+	+
14	+	+	+
15	+	+	+
16	+	+	+
17	+	+	+
18	+	+	+
19	+	+	+
20	+	+	+
21	+	+	+
22	+	+	+
23	+	+	+
24	+	+	+
25	+	+	+
26	+	+	+
27	+	+	+
28	+	+	+
29	+	+	+
30	+	+	+
31	+	+	+
32	+	+	+
33	+	+	+
34	+	+	+
35	+	+	+
36	+	+	+
37	+	+	+
38	+	+	+
39	+	+	+
40	+	+	+
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91	+	+	+
92	+	+	+
93	+	+	+
94	+	+	+
95	+	+	+
96	+	+	+
97	+	+	+
98	+	+	+
99	+	+	+
100	+	+	+

RESPONSE NUMBER 2 LOG FECAL PB

CELL IDENTIFICATION

CELL MEAN CELL VARIANCE CELL STANDARD DEVIATION NUMBER OF OBSERVATIONS

1	1	1	74.7077	5896.0532	76.7858 *	2
1	1	2	208.7959	3.0815	1.7554 *	2
1	1	3	189.1666	104.0322	10.1996 *	2
1	1	4	180.8500	424.8174	20.6111 *	2
1	1	5	161.2655	367.3867	19.1673 *	2
1	1	6	208.2057	12.6538	3.5572 *	2
1	1	7	158.1581	555.1606	23.5618 *	2
1	1	8	148.8471	462.1470	21.4976 *	2
1	1	9	166.9228	17.6924	4.2062 *	2
1	1	10	138.9076	155.0415	12.4516 *	2
1	2	1	75.0667	1419.0249	37.6699 *	2
1	2	2	209.3196	3.9292	1.9822 *	2
1	2	3	185.1215	106.7681	10.3329 *	2
1	2	4	173.9644	921.0537	30.3489 *	2
1	2	5	174.2861	893.6455	29.8939 *	2
1	2	6	191.8794	4.9331	2.2211 *	2
1	2	7	174.0291	273.9761	16.5522 *	2
1	2	8	164.4612	48.2471	6.9460 *	2
1	2	9	166.9860	231.4141	15.2123 *	2
1	2	10	123.8929	28.1733	5.3079 *	2
2	1	1	142.8135	.0000	.0000 *	1
2	1	2	144.7158	.0000	.0000 *	1
2	1	3	190.3090	.0000	.0000 *	1
2	1	4	196.7080	.0000	.0000 *	1
2	1	5	197.3128	.0000	.0000 *	1
2	1	6	207.9181	.0000	.0000 *	1
2	1	7	179.9341	.0000	.0000 *	1
2	1	8	306.1113	.0000	.0000 *	1
2	1	9	230.5351	.0000	.0000 *	1
2	1	10	194.3000	.0000	.0000 *	1
2	2	1	142.1604	.0000	.0000 *	1
2	2	2	200.4321	.0000	.0000 *	1
2	2	3	187.5061	.0000	.0000 *	1
2	2	4	204.4148	.0000	.0000 *	1
2	2	5	164.3453	.0000	.0000 *	1
2	2	6	204.4148	.0000	.0000 *	1
2	2	7	205.3078	.0000	.0000 *	1
2	2	8	203.4227	.0000	.0000 *	1
2	2	9	166.9317	.0000	.0000 *	1
2	2	10	189.1537	.0000	.0000 *	1
3	1	1	181.2245	.0000	.0000 *	1
3	1	2	200.0000	.0000	.0000 *	1
3	1	3	203.3424	.0000	.0000 *	1
3	1	4	255.3033	.0000	.0000 *	1
3	1	5	219.5900	.0000	.0000 *	1
3	1	6	245.7428	.0000	.0000 *	1
3	1	7	232.8380	.0000	.0000 *	1
3	1	8	234.8305	.0000	.0000 *	1
3	1	9	254.6419	.0000	.0000 *	1
3	1	10	243.9333	.0000	.0000 *	1
3	2	1	209.0611	.0000	.0000 *	1
3	2	2	224.3038	.0000	.0000 *	1
3	2	3	195.4242	.0000	.0000 *	1

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RAT LEAD FEEDING STUDY STUDY I RESPONSE 10

PAGE 22

3	2	4	247.8999	.0000	1	.0000 *
3	2	5	206.8186	.0000	1	.0000 *
3	2	6	243.6640	.0000	1	.0000 *
3	2	7	237.4748	.0000	1	.0000 *
3	2	8	242.8135	.0000	1	.0000 *
3	2	9	227.6232	.0000	1	.0000 *
3	2	10	238.2197	.0000	1	.0000 *
4	1	1	222.1414	.0000	1	.0000 *
4	1	2	221.4844	.0000	1	.0000 *
4	1	3	212.3852	.0000	1	.0000 *
4	1	4	288.7617	.0000	1	.0000 *
4	1	5	239.7940	.0000	1	.0000 *
4	1	6	275.5875	.0000	1	.0000 *
4	1	7	257.4031	.0000	1	.0000 *
4	1	8	259.5606	.0000	1	.0000 *
4	1	9	254.6419	.0000	1	.0000 *
4	1	10	263.1748	.0000	1	.0000 *
4	2	1	221.0319	.0000	1	.0000 *
4	2	2	238.2017	.0000	1	.0000 *
4	2	3	203.3424	.0000	1	.0000 *
4	2	4	271.0794	.0000	1	.0000 *
4	2	5	221.2188	.0000	1	.0000 *
4	2	6	264.3453	.0000	1	.0000 *
4	2	7	254.4068	.0000	1	.0000 *
4	2	8	279.5880	.0000	1	.0000 *
4	2	9	258.5009	.0000	1	.0000 *
4	2	10	276.0799	.0000	1	.0000 *
5	1	1	286.2370	.0000	1	.0000 *
5	1	2	298.4977	.0000	1	.0000 *
5	1	3	287.5061	.0000	1	.0000 *
5	1	4	333.4051	.0000	1	.0000 *
5	1	5	304.9218	.0000	1	.0000 *
5	1	6	337.5664	.0000	1	.0000 *
5	1	7	320.4120	.0000	1	.0000 *
5	1	8	310.1094	.0000	1	.0000 *
5	1	9	318.9153	.0000	1	.0000 *
5	1	10	294.0267	.0000	1	.0000 *
5	2	1	286.9760	.0000	1	.0000 *
5	2	2	297.7724	.0000	1	.0000 *
5	2	3	232.8380	.0000	1	.0000 *
5	2	4	330.9630	.0000	1	.0000 *
5	2	5	305.6905	.0000	1	.0000 *
5	2	6	316.1368	.0000	1	.0000 *
5	2	7	341.9129	.0000	1	.0000 *
5	2	8	340.2141	.0000	1	.0000 *
5	2	9	319.8061	.0000	1	.0000 *
5	2	10	315.9627	.0000	1	.0000 *

MEAN OF THE CELL MEANS = 228.36924

WITHIN CELL VARIANCE =

WITHIN CELL STANDARD DEVIATION =

HARMONIC MEAN OF CELL SIZE =

COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) =

VARIANCE OF A CELL MEAN =

STANDARD ERROR OF A CELL MEAN =

596.46152
24.42256
1.1111
.10694
535.81537
23.16928

CONTROL LIMITS FOR THE STANDARD DEVIATION

UPPER CONTROL LIMIT = 4.93917

LOWER CONTROL LIMIT = 2.06605

* DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 13.33 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE Q.1

THE GAMMA PLOT

+ 8000.0000

+ 6000.0000

VARIANCES

+ 4000.0000

+ 2000.0000

.00000

4.2000

2.8000

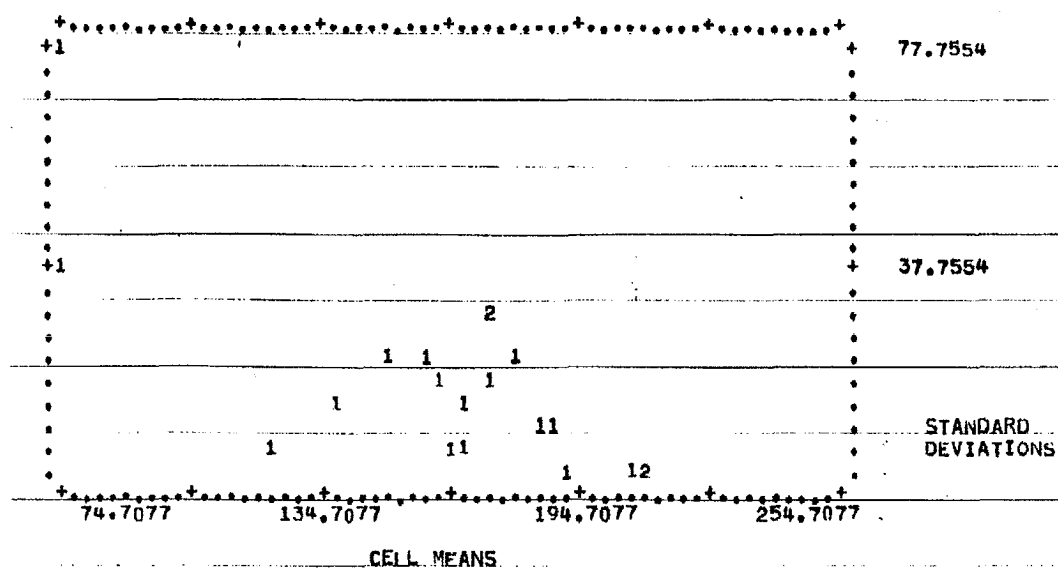
1.4000

.00000

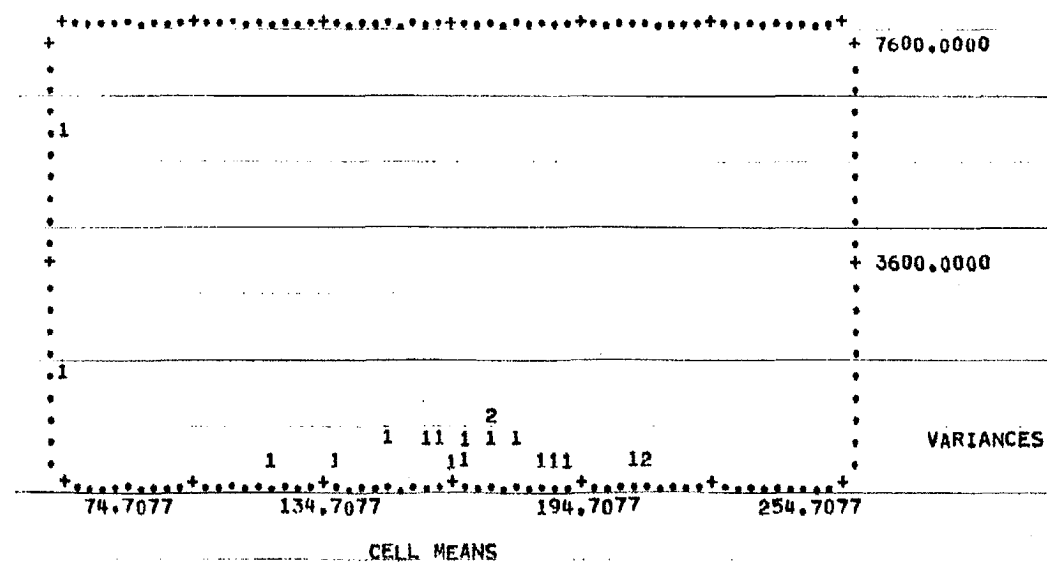
X TILDA

E(20) = 3.4200 RESIDUAL FOR HIGHEST VALUE OF X TILDA
T FOR SLOPE = 6.6993 STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T CRITICAL = 2.0932 T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	99	.33034+06		
A = PB LEVEL	4	.28666+06	.61664+05	110.87 **
B = SEX	1	.17423+03	.17423+03	.32
AB	4	.58283+03	.14571+03	.27
C = TIME	9	.38321+05	.42579+04	7.93 **
AC	36	.30213+05	.83925+03	1.56
BC	9	.33849+04	.37610+03	.70
ABC	36	.11010+05	.30584+03	.57
REPLICATES	20		.53682+03	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 2 LOG FECAL PB

MEANS TABLES

III

PB LEVEL	MEANS				
0	163.7417	10	192.9373	50	227.2375
				100	249.1365
				500	308.7935
STANDARD ERROR OF A MEAN =					
95% CONFIDENCE LIMITS =					
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =					
LEAST SIGNIFICANT DIFFERENCE (LSD) =					
					5.1808
					10.8069
					7.3268
					15.2833

III

SEX

MEANS

MALE	229.6892	FEMALE	227.0493
------	----------	--------	----------

STANDARD ERROR OF A MEAN = 3.2766
 95% CONFIDENCE LIMITS = 6.8349
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 4.6339
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 9.6660

III

PB LEVEL * SEX INTERACTION

PB LEVEL SEX

0	MALE	163.5827	FEMALE	163.9007	DIFFERENCES	-3180
10		199.0650		186.8089		12.2568
50		227.1446		227.3303		-1856
100		249.4935		248.7795		.7140
500		309.1598		308.4272		.7325

STANDARD ERROR OF A MEAN = 7.3268
 95% CONFIDENCE LIMITS = 15.2833
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 10.3616
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 21.6138

III

TIME MEANS

1 184.1420 2 224.3523 3 208.6941 6 248.3350 9 219.5243 12 249.5461 15 236.1877 18 248.9958 21 236.1505 24 227.7651

STANDARD ERROR OF A MEAN =

7.3268

95% CONFIDENCE LIMITS =

15.2833

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

10.3616

LEAST SIGNIFICANT DIFFERENCE (LSD) =

21.6138

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

0 1 74.8872 2 209.0577 3 187.1441 6 177.4072 9 167.7758 12 200.0426 15 166.0936 18 156.6541 21 166.9444 24 131.4003
 10 142.4869 172.5700 188.9076 200.5614 180.8290 206.1664 192.6209 254.7670 198.7334 191.7269
 50 195.1428 212.1519 192.3833 251.6016 213.2843 244.7034 235.1584 238.8220 241.1326 241.0765
 100 221.5866 229.8430 207.8638 279.9206 230.3064 269.9664 255.9050 269.5743 256.5714 269.6274
 500 286.6065 298.1350 260.1720 332.1841 305.3061 326.8516 331.1625 325.1617 317.3607 304.9947

STANDARD ERROR OF A MEAN =

16.3832

95% CONFIDENCE LIMITS =

34.1744

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

23.1693

LEAST SIGNIFICANT DIFFERENCE (LSD) =

48.3299

INTERACTION

* TIME

SEX

TIME

SEX

	1	2	3	6	9	12	15	18	21	24
MALE	181.4248	214.6988	216.5418	251.0056	224.5768	255.0041	229.7490	251.8918	245.1314	226.8685
FEMALE	186.8592	234.0059	200.8464	245.6643	214.4718	244.0880	242.6263	246.0999	227.1656	228.6618

	1	2	3	6	9	12	15	18	21	24
DIFFERENCES	-5.4344	-19.3072	15.6954	5.3413	10.1050	10.9161	-12.8773	5.7919	17.9619	-1.7933

STANDARD ERROR OF A MEAN =

10.3616

95% CONFIDENCE LIMITS =

21.6138

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

14.6535

LEAST SIGNIFICANT DIFFERENCE (LSD) =

30.5665

3	2	7	237.4748	.0000	*	1
3	2	8	242.8135	.0000	*	1
3	2	9	227.6232	.0000	*	1
3	2	10	238.2197	.0000	*	1
4	1	1	222.1414	.0000	*	1
4	1	2	221.4844	.0000	*	1
4	1	3	212.3852	.0000	*	1
4	1	4	288.7617	.0000	*	1
4	1	5	239.7940	.0000	*	1
4	1	6	275.5875	.0000	*	1
4	1	7	257.4031	.0000	*	1
4	1	8	259.5606	.0000	*	1
4	1	9	254.6419	.0000	*	1
4	1	10	263.1748	.0000	*	1
4	2	1	221.0319	.0000	*	1
4	2	2	238.2017	.0000	*	1
4	2	3	203.3824	.0000	*	1
4	2	4	271.0794	.0000	*	1
4	2	5	221.2188	.0000	*	1
4	2	6	264.3453	.0000	*	1
4	2	7	254.4068	.0000	*	1
4	2	8	279.5880	.0000	*	1
4	2	9	258.5009	.0000	*	1
4	2	10	276.0799	.0000	*	1
5	1	1	286.2370	.0000	*	1
5	1	2	298.4977	.0000	*	1
5	1	3	287.5061	.0000	*	1
5	1	4	333.4051	.0000	*	1
5	1	5	304.9218	.0000	*	1
5	1	6	337.5664	.0000	*	1
5	1	7	320.4120	.0000	*	1
5	1	8	310.1094	.0000	*	1
5	1	9	318.9153	.0000	*	1
5	1	10	294.0267	.0000	*	1
5	2	1	286.9760	.0000	*	1
5	2	2	297.7724	.0000	*	1
5	2	3	232.8380	.0000	*	1
5	2	4	330.9630	.0000	*	1
5	2	5	305.6905	.0000	*	1
5	2	6	316.1368	.0000	*	1
5	2	7	341.9129	.0000	*	1
5	2	8	340.2141	.0000	*	1
5	2	9	315.8061	.0000	*	1
5	2	10	315.9627	.0000	*	1

MEAN OF THE CELL MEANS = 228.36924

WITHIN CELL VARIANCE =	596.46152
WITHIN CELL STANDARD DEVIATION =	24.42256
HARMONIC MEAN OF CELL SIZE =	1.11111
COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) =	.10694
VARIANCE OF A CELL MEAN =	536.81537
STANDARD ERROR OF A CELL MEAN =	23.16928

CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 4.93917
 LOWER CONTROL LIMIT = 2.86605
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

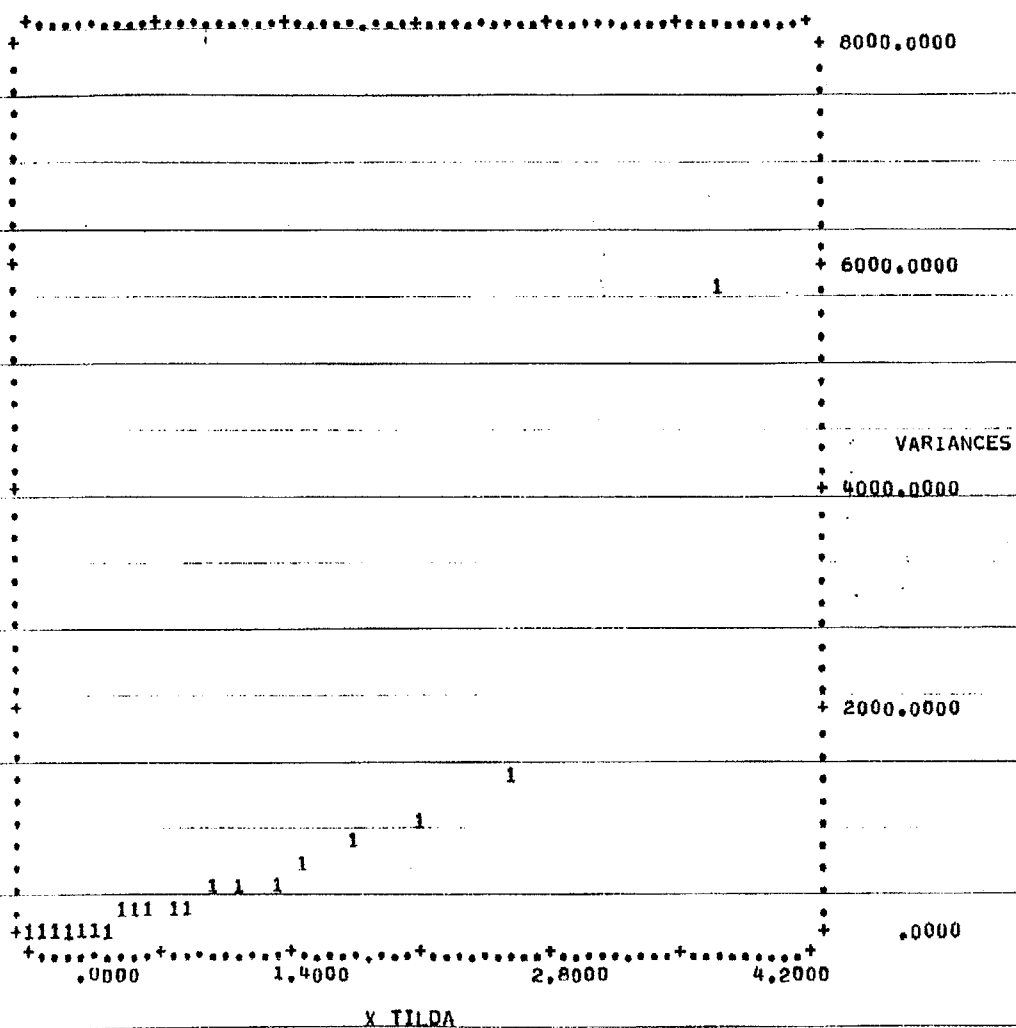
TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 13.33 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE 0.1

DUP060310103

THE GAMMA PLOT



E(20) = 3.4200
T FOR SLOPE = 6.6993
T CRITICAL = 2.0932

RESIDUAL FOR HIGHEST VALUE OF X TILDA
STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

DUP050310104

UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	99	.33034+06		
A = PB LEVEL	4	.24666+06	.61664+05	11.87 **
B = SEX	1	.17423+03	.17423+03	.32
AB	4	.58283+03	.14571+03	.27
C = TIME	9	.38321+05	.42579+04	7.93 **
AC	36	.30213+05	.83925+03	1.56
BC	9	.33849+04	.37610+03	.70
ABC	36	.11010+05	.30584+03	.57
REPLICATES	20		.53682+03	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 2 LOG FECAL PB

MEANS TABLES

PB LEVEL	MEANS	
0	163.7417	192.9373
10	227.2375	249.1365
50	308.7935	
500		

STANDARD ERROR OF A MEAN =

95% CONFIDENCE LIMITS =

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

LEAST SIGNIFICANT DIFFERENCE (LSD) =

SEX MEANS

MALE	229.6892	FEMALE	227.0493
------	----------	--------	----------

STANDARD ERROR OF A MEAN =

95% CONFIDENCE LIMITS =

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

LEAST SIGNIFICANT DIFFERENCE (LSD) =

PB LEVEL * SEX

INTERACTION

SEX

PB LEVEL	MALE	FEMALE	DIFFERENCES
0	163.5827	163.9007	-.3180
10	199.0658	186.8089	12.2568
50	227.1446	227.3303	-.1856
100	249.4935	248.7795	.7140
500	309.1598	308.4272	.7325

STANDARD ERROR OF A MEAN =

95% CONFIDENCE LIMITS =

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

LEAST SIGNIFICANT DIFFERENCE (LSD) =

7.3268	15.2833	10.3616	21.6138
--------	---------	---------	---------

TIME MEANS

1	2	3	6	9	12	15	18	21	24
184.1420	224.3523	208.6941	248.3350	219.5243	249.5461	236.1877	248.9958	236.1505	227.7651

STANDARD ERROR OF A MEAN =

7.3268

95% CONFIDENCE LIMITS =

15.2833

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

10.3616

LEAST SIGNIFICANT DIFFERENCE (LSD) =

21.6138

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

0	1	2	3	6	9	12	15	18	21	24
74.8872	209.0577	187.1441	177.4072	167.7758	200.0426	166.0936	156.6541	166.9444	131.4003	
142.4069	172.5740	188.9076	200.5614	180.8290	206.1664	192.6209	254.7670	198.7334	191.7269	
195.1428	212.1519	199.3033	251.6016	213.2043	244.7034	235.1564	238.8220	241.1326	241.0765	
221.5866	229.8430	207.8638	279.9206	230.5064	269.9664	255.9050	269.5743	256.5714	269.6274	
286.6095	298.1350	260.1720	332.1841	305.3061	326.8516	331.1625	325.1617	317.3607	304.9947	

STANDARD ERROR OF A MEAN =

16.3832

95% CONFIDENCE LIMITS =

34.1744

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

23.1693

LEAST SIGNIFICANT DIFFERENCE (LSD) =

48.3299

SEX * TIME INTERACTION

SEX TIME

	1	2	3	6	9	12	15	18	21	24
MALE	181.4248	214.6988	216.5418	251.0056	224.5768	255.0041	229.7490	251.8918	245.1414	226.8685
FEMALE	186.8592	234.0059	200.8464	245.6843	214.4718	244.0880	242.6263	246.0999	227.1496	228.6618
DIFFERENCES	-5.4344	-19.3072	15.6954	5.3413	10.1050	10.9161	-12.8773	5.7919	17.9619	-1.7933

STANDARD ERROR OF A MEAN =

10.3616

95% CONFIDENCE LIMITS =

21.6138

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

14.6535

LEAST SIGNIFICANT DIFFERENCE (LSD) =

30.5665

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
29	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

67.30112.75158.20203.65249.10294.55340.00

67.30112.75158.20203.65249.10294.55340.00

PB LEVEL	* SEX	TIME	PAGE	MEANS
1	+	+	1	+
2	+	+	2	+
3	+	+	3	+
4	+	+	4	+
5	+	+	5	+
6	+	+	6	+
7	+	+	7	+
8	+	+	8	+
9	+	+	9	+
10	+	+	10	+
67.30112.75158.20203.65249.10294.55340.00				
67.30112.75158.20203.65249.10294.55340.00				

TIME	1	2	3	4	5	6	7	8	9	10	TIME	1	2	3	4	5	6	7	8	9	10
1	+	+	+	+	+	+	+	+	+	+	1	+	+	+	+	+	+	+	+	+	+
2	+	+	+	+	+	+	+	+	+	+	2	+	+	+	+	+	+	+	+	+	+
3	+	+	+	+	+	+	+	+	+	+	3	+	+	+	+	+	+	+	+	+	+
4	+	+	+	+	+	+	+	+	+	+	4	+	+	+	+	+	+	+	+	+	+
5	+	+	+	+	+	+	+	+	+	+	5	+	+	+	+	+	+	+	+	+	+
6	+	+	+	+	+	+	+	+	+	+	6	+	+	+	+	+	+	+	+	+	+
7	+	+	+	+	+	+	+	+	+	+	7	+	+	+	+	+	+	+	+	+	+
8	+	+	+	+	+	+	+	+	+	+	8	+	+	+	+	+	+	+	+	+	+
9	+	+	+	+	+	+	+	+	+	+	9	+	+	+	+	+	+	+	+	+	+
10	+	+	+	+	+	+	+	+	+	+	10	+	+	+	+	+	+	+	+	+	+
67.30112.75158.20203.65249.10294.55340.00												67.30112.75158.20203.65249.10294.55340.00									

*****ENDRUN

STOP

DUP050310115

DATE 130372 PAGE 115

184

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012345678999876543210++++012345678999876543210++++.RING IN.YOUR MASTER TAPE.....

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 11

PAGE

1

1

*****MODEL NFAC=3,NOD=2,RFC=7,DESIGN=C,NREP=28,EQUAL=F,./

*****FACTOR1 NAME=PB LEVEL,NLEV=5,LNAME=0,10,50,100,500/

*****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE/

*****FACTOR3 NAME=TIME,NLEV=5,LNAME=3,6,12,18,24/

*****RESPONSE KIDNEY PB,LOG KIDNEY PB/

*****MEANS 2

*****MEANS PLOT 2

*****CONST 100...1

*****OPCODES

OPCODES

ALB 1,902,1

MOV 1,902,1

MPY 1,901,801

LOG 801,802,10

MPY 802,901,802

OUT

40	1	902	1	0	1
9	1	902	1	0	2
3	1	901	801	0	3
8	801	802	10	0	4
3	802	901	802	0	5
999	0	0	0	0	6

*****FORMAT(16X,8F8.2/10F8.2)

*****DATA INOV=1

N36874.11

DUP050310118

RAT LEAD FEEDING STUDY STUDY I RESPONSE 11
 INPUT DATA MATRIX (DOES NOT INCLUDE TRANSFORMATIONS)

PAGE 2 2

1	1	1	1	.37000	11
2	1	1	1	.39000	
3	1	1	2	.45000	
4	1	1	2	.25000	
5	1	1	3	.27000	
6	1	1	3	.22000	
7	1	1	4	.15000	11
8	1	1	4	.30000	
9	1	1	5	1.91000	
10	1	1	5	1.92000	
11	1	1	5	.67000	
12	1	1	5	.18000	
13	1	1	5	.16000	11
14	1	1	5	.22000	
15	1	1	5	.16000	
16	1	1	5	.06000	
17	1	2	1	.38000	
18	1	2	1	.40000	
19	1	2	2	.25000	11
20	1	2	2	.24000	
21	1	2	3	.16000	
22	1	2	3	.20000	
23	1	2	4	.15000	
24	1	2	4	.21000	
25	1	2	5	.13000	11
26	1	2	5	.21000	
27	1	2	5	.11000	
28	1	2	5	.11000	

[illegible]

RAT LEAD FEEDING STUDY				STUDY I	RESPONSE 11	PAGE	4
58	3	1	5				
					1.22000		
59	3	2	1				
					1.50000		
60	3	2	2				
					1.87000		
61	3	2	3				
					1.17000		
62	3	2	4				
					1.54000		
63	3	2	5				
					1.41000		
64	3	2	5				
					1.44000		
65	3	2	5				
					1.17000		
66	3	2	5				
					1.27000		
67	3	2	5				
					1.18000		
68	4	1	1				
					4.47000		
69	4	1	2				
					2.66000		
70	4	1	3				
					6.28000		
71	4	1	4				
					1.50000		
72	4	1	5				
					1.05000		
73	4	1	5				
					.74000		
74	4	1	5				
					.62000		
75	4	1	5				
					.57000		
76	4	2	1				
					3.88000		
77	4	2	2				
					2.98000		
78	4	2	3				
					2.44000		
79	4	2	4				
					2.94000		
80	4	2	5				
					1.81000		
81	4	2	5				
					2.89000		
82	4	2	5				
					4.50000		
83	4	2	5				
					5.41000		
84	4	2	5				
					3.59000		
85	4	2	5				
					5.00000		
86	5	1	1				
					18.20000		

DUP050310121

RAT LEAD FEEDING STUDY			STUDY I	RESPONSE 11	PAGE	5	5
87	5	1	2	18,52000			
88	5	1	3	11,89000			
89	5	1	4	8,87000			
90	5	1	5	8,70000			
91	5	1	5	1,71000			
92	5	1	5	6,85000			
93	5	2	1	22,20000			
94	5	2	2	35,40000			
95	5	2	3	20,63000			
96	5	2	4	17,74000			
97	5	2	5	5,67000			
98	5	2	5	23,82000			
99	5	2	5	18,82000			
100	5	2	5	42,95000			
101	5	2	5	11,95000			

EXPANDED DATA MATRIX (IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

KIDNEY PB	LOG KIDNEY P
1 1	1 1
2 37.00000	156.82017
2 2	1 1
3 39.00000	159.10646
3 3	1 1
4 45.00000	165.32125
4 4	1 1
5 25.00000	139.79400
5 5	1 1
27.00000	143.13638

NO. OF INPUT DATA ROWS = 101

NO. OF ROWS DELETED BY LOGICAL TESTS = 0

NO. OF ROWS DELETED FOR MISSING DATA = 0

NO. OF EXPANDED DATA ROWS REMAINING = 101

*****ANOVA

RESPONSE NUMBER 1 KIDNEY PB

CELL IDENTIFICATION

CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
38.0000	2.0000	1.4142 *	2
35.0000	200.0000	14.1421 *	2
24.5000	12.5000	3.5355 *	2
22.5000	112.5000	10.6066 *	2
66.5000	6267.9899	79.1707 *	8
39.0000	2.0000	1.4142 *	2
24.5000	.5000	.7071 *	2
18.0000	8.0000	2.8284 *	2
18.0000	18.0000	4.2426 *	2
13.3333	12.5000	3.5355 *	9
74.0000	.0000	.0000 *	1
66.0000	.0000	.0000 *	1
36.0000	.0000	.0000 *	1
53.0000	.0000	.0000 *	1
22.0000	432.6666	20.8006 *	4
80.0000	.0000	.0000 *	1
57.0000	.0000	.0000 *	1
67.0000	.0000	.0000 *	1
43.0000	.0000	.0000 *	1
39.2000	12.7000	3.5637 *	5
188.0000	.0000	.0000 *	1
147.0000	.0000	.0000 *	1
96.0000	.0000	.0000 *	1
100.0000	.0000	.0000 *	1
40.5000	153.6667	12.3962 *	4
150.0000	.0000	.0000 *	1
187.0000	.0000	.0000 *	1
117.0000	.0000	.0000 *	1
154.0000	.0000	.0000 *	1
129.4000	159.3002	12.6214 *	5
447.0000	.0000	.0000 *	1
266.0000	.0000	.0000 *	1
628.0000	.0000	.0000 *	1
150.0000	.0000	.0000 *	1
74.5000	464.3334	21.5484 *	4
388.0000	.0000	.0000 *	1
298.0000	.0000	.0000 *	1
244.0000	.0000	.0000 *	1
294.0000	.0000	.0000 *	1
386.6667	18655.4702	136.5850 *	6
1820.0000	.0000	.0000 *	1
1852.0000	.0000	.0000 *	1
1149.0000	.0000	.0000 *	1
887.0000	.0000	.0000 *	1
575.3333	131170.3359	362.1745 *	3
2220.0000	.0000	.0000 *	1
3540.0000	.0000	.0000 *	1
2063.0000	.0000	.0000 *	1
1774.0000	.0000	.0000 *	1
2064.2000	2026944.6875	1423.7081 *	5

MEAN OF THE CELL MEANS = 465.32265

WITHIN CELL VARIANCE = 166893.49414
 WITHIN CELL STANDARD DEVIATION = 408.52600
 HARMONIC MEAN OF CELL SIZE = 1.31281
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .87794
 VARIANCE OF A CELL MEAN = 127126.48047
 STANDARD ERROR OF A CELL MEAN = 356.54800

CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 59.64875
 LOWER CONTROL LIMIT = 24.95105
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 85.63 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)

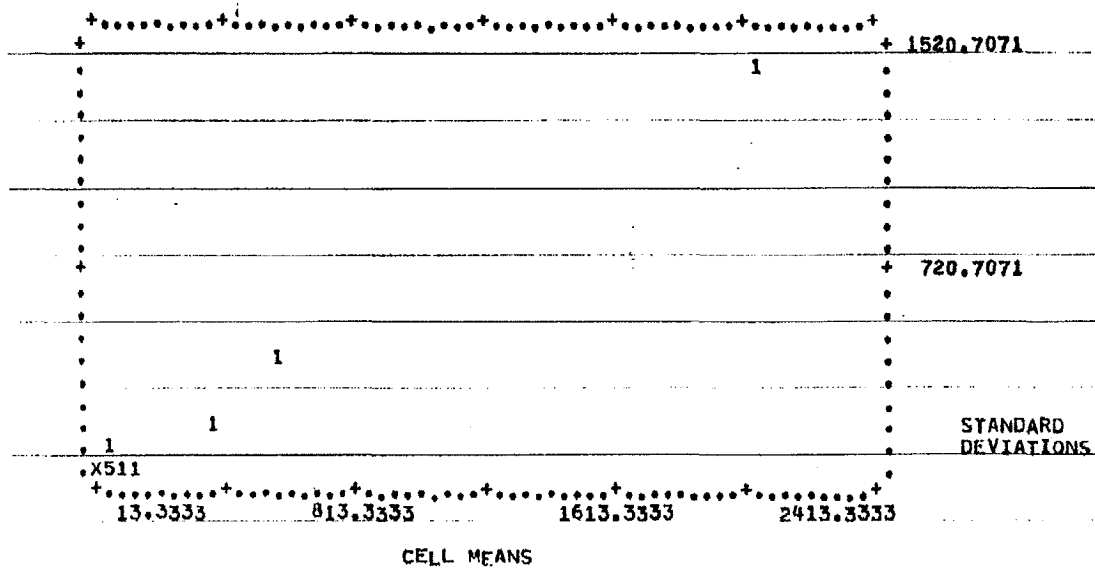
A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

VARIANCES

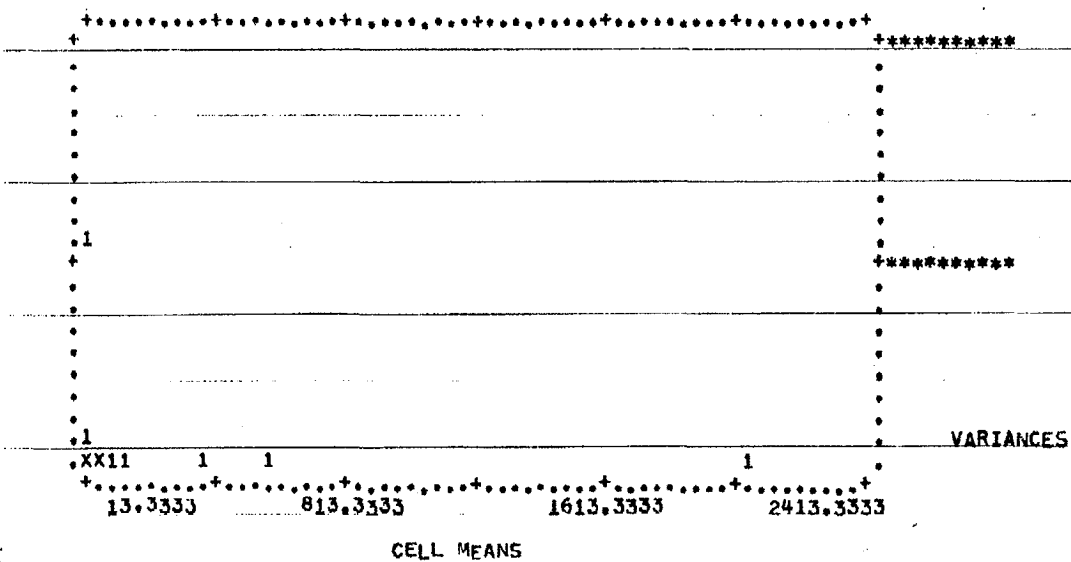
[illegible]

E(18)	=	3.1941	RESIDUAL FOR HIGHEST VALUE OF X YILDA
T FOR SLOPE	=	3.6338	STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T CRITICAL	=	2.1099	T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



RAT LEAD FEEDING STUDY STUDY I RESPONSE 11 EXPECTED MEAN SQUARE TABLE

11

11

PAGE

SOURCE OF VARIATION EXPECTED MEAN SQUARE

A = PB LEVEL REP + 10(A)
 B = SEX REP + 25(B)
 AB REP + 5(AB)
 C = TIME REP + 10(C)
 AC REP + 2(AC)
 BC REP + 5(BC)
 ABC REP + 1(ABC)
 REPLICATES REP

RESPONSE NUMBER 1 KIDNEY PB UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	49	.28938+08		
A = PB LEVEL	4	.22592+08	.56481+07	4.43 **
B = SEX	1	.61615+06	.61615+06	4.85 *
AB	4	.22796+07	.56990+06	4.48 **
C = TIME	4	.68614+06	.17153+06	1.35
AC	16	.20913+07	.13071+06	1.03
BC	4	.18783+06	.46957+05	.37
ABC	16	.48498+06	.30311+05	.24
REPLICATES	51	.12713+06		

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

STANDARD ERROR OF A MEAN =	159.4531
95% CONFIDENCE LIMITS =	320.1149
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =	225.5008
LEAST SIGNIFICANT DIFFERENCE (LSD) =	452.7109

TIME MEANS

3	6	12	18	24
544.4000	647.2500	444.2500	349.5500	341.1633

STANDARD ERROR OF A MEAN = 112.7504
 95% CONFIDENCE LIMITS = 226.3554
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 159.4531
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 320.1149

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

0	3	6	12	18	24
	38.5000	29.7500	21.2500	20.2500	39.9167
10	77.0000	61.5000	51.5000	48.0000	30.6000
50	169.0000	167.0000	106.5000	127.0000	84.9500
100	417.5000	282.0000	436.0000	222.0000	230.5833
500	2020.0000	2696.0000	1606.0000	1330.5000	1319.7666

STANDARD ERROR OF A MEAN = 252.1175
 95% CONFIDENCE LIMITS = 506.1961
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 356.5480
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 715.7987

SEX * TIME INTERACTION

SEX TIME

	3	6	12	18	24
MALE	513.4000	473.2000	386.7000	242.5000	155.7667
FEMALE	575.4000	821.3000	501.8000	456.6000	526.5600
DIFFERENCES	-62.0000	-348.1000	-115.1000	-214.1000	-370.7933

STANDARD ERROR OF A MEAN = 159.4531
 95% CONFIDENCE LIMITS = 320.1149
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 225.5008
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 452.7109

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

PB LEVEL		SEX		PAGE MEANS		17	
1	+	+	+	+	+	+	+
2	+	+	+	+	+	+	+
3	+	+	+	+	+	+	+
4	+	+	+	+	+	+	+
5	+	+	+	+	+	+	+
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RAY LEAD FEEDING STUDY STUDY I RESPONSE 11
 RESPONSE NUMBER 2 LOG KIDNEY PB

PAGE 20 20

CELL IDENTIFICATION

CELL IDENTIFICATION	CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
1 1 1	157.9633	2.6143	1.6169 *	2
1 1 2	152.5576	325.8203	18.0505 *	2
1 1 3	138.6893	39.5532	6.2891	2
1 1 4	132.6606	453.0957	21.2860 *	2
1 1 5	154.9543	2600.1071	50.9912 *	8
1 2 1	159.0322	2.4814	1.5753 *	2
1 2 2	138.9076	1.5713	1.2535 *	2
1 2 3	125.2575	46.9585	6.8526	2
1 2 4	124.9155	106.7671	10.3328 *	2
1 2 5	111.2814	112.5808	10.6104 *	9
2 1 1	186.9232	.0000	.0000 *	1
2 1 2	181.9544	.0000	.0000 *	1
2 1 3	155.6302	.0000	.0000 *	1
2 1 4	172.4276	.0000	.0000 *	1
2 1 5	122.5092	1176.3949	34.2986 *	4
2 2 1	190.3090	.0000	.0000 *	1
2 2 2	175.5875	.0000	.0000 *	1
2 2 3	182.6075	.0000	.0000 *	1
2 2 4	163.3468	.0000	.0000 *	1
2 2 5	159.1809	16.2729	4.0340	5
3 1 1	227.4158	.0000	.0000 *	1
3 1 2	216.7317	.0000	.0000 *	1
3 1 3	198.2271	.0000	.0000 *	1
3 1 4	200.0000	.0000	.0000 *	1
3 1 5	158.7244	267.7503	16.3631 *	4
3 2 1	217.6091	.0000	.0000 *	1
3 2 2	227.1842	.0000	.0000 *	1
3 2 3	206.8186	.0000	.0000 *	1
3 2 4	218.7321	.0000	.0000 *	1
3 2 5	211.0291	17.7925	4.2181	5
4 1 1	265.0308	.0000	.0000 *	1
4 1 2	242.4882	.0000	.0000 *	1
4 1 3	279.7960	.0000	.0000 *	1
4 1 4	217.6091	.0000	.0000 *	1
4 1 5	185.9672	138.2659	11.7587 *	4
4 2 1	258.8832	.0000	.0000 *	1
4 2 2	247.4216	.0000	.0000 *	1
4 2 3	238.7390	.0000	.0000 *	1
4 2 4	246.8347	.0000	.0000 *	1
4 2 5	255.9842	318.4855	17.8462 *	6
5 1 1	326.0071	.0000	.0000 *	1
5 1 2	326.7641	.0000	.0000 *	1
5 1 3	306.0320	.0000	.0000 *	1
5 1 4	294.7924	.0000	.0000 *	1
5 1 5	266.9402	1455.3276	38.1488 *	3
5 2 1	334.6353	.0000	.0000 *	1
5 2 2	354.9003	.0000	.0000 *	1
5 2 3	331.4699	.0000	.0000 *	1
5 2 4	324.8954	.0000	.0000 *	1
5 2 5	322.3095	1089.9841	33.0149 *	5

MEAN OF THE CELL MEANS = 215.93453

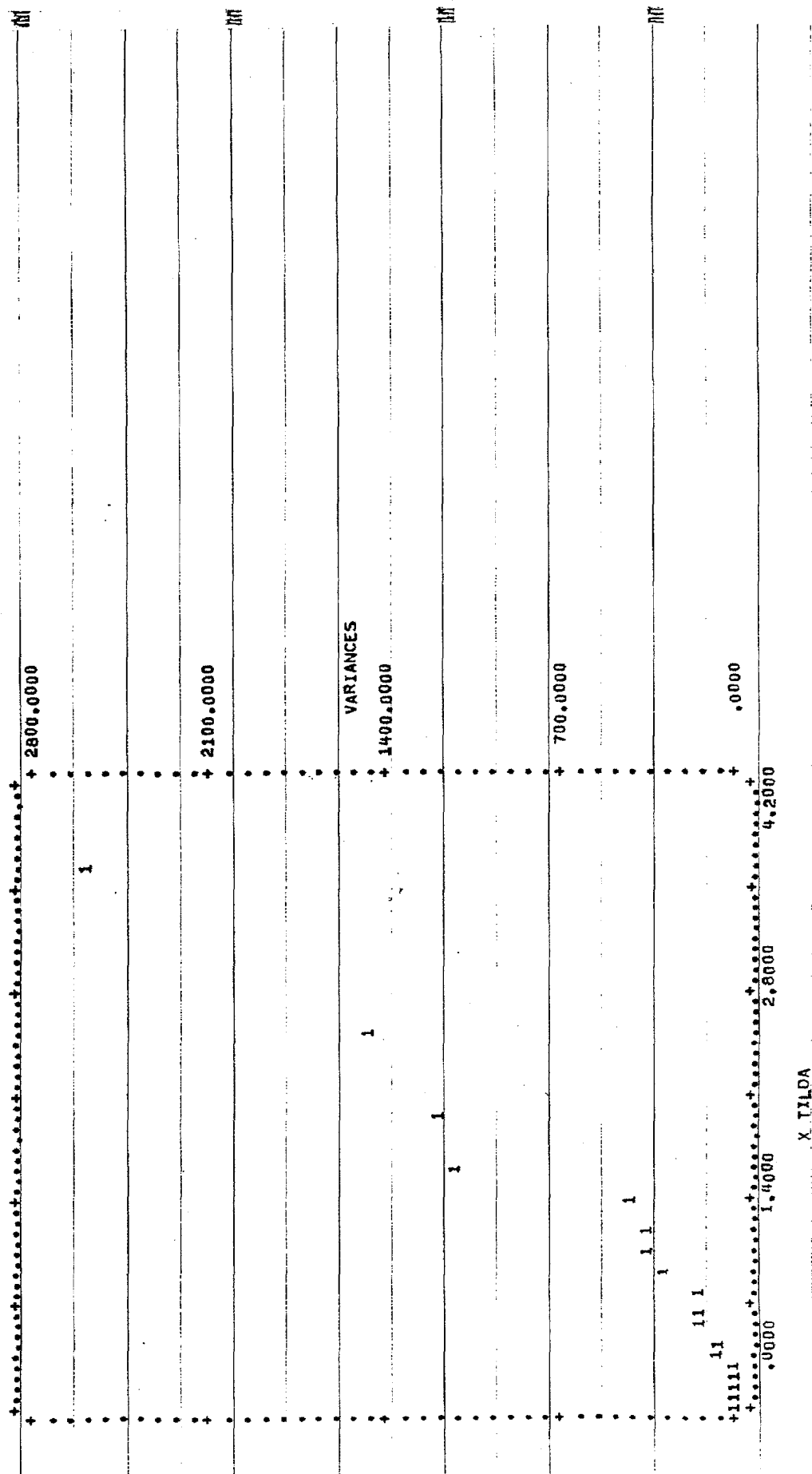
WITHIN CELL VARIANCE = 663.27003
 WITHIN CELL STANDARD DEVIATION = 25.75403
 HARMONIC MEAN OF CELL SIZE = 1.31281
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .11927
 VARIANCE OF A CELL MEAN = 505.22751
 STANDARD ERROR OF A CELL MEAN = 22.47727

CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 8.13765
 LOWER CONTROL LIMIT = 3.40398
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 85.63 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)
 A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

THE GAMMA PLOT



[illegible]

28,2535

DEVIANT

351.2814

CELL MEANS

PLOT OF CELL MEANS VRS VARIANCES

.....+ 3800.0000

W. D. T. A.

CELL MEANS

RESPONSE NUMBER 2 LOO KIDNEY PB UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	49	.21575+06		
A = PB LEVEL	4	.19857+06	.48643+05	92.28 **
B = SEX	1	.13430+04	.13430+04	2.66
AB	4	.26712+04	.66780+03	1.32
C = TIME	4	.86419+04	.21605+04	4.28 **
AC	16	.20919+04	.13074+03	.26
BC	4	.20059+04	.50149+03	.99
ABC	16	.44286+04	.27678+03	.55
REPLICATES	51		.50523+03	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RAT LEAD FEEDING STUDY STUDY I RESPONSE 11

RESPONSE NUMBER 2 LOG KIDNEY PB

MEANS TABLES

PB LEVEL	MEANS			
	0	10	50	100
	139.6279	169.0476	208.2492	243.8754
				500
				318.8726
STANDARD ERROR OF A MEAN =				
95% CONFIDENCE LIMITS =				
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =				
LEAST SIGNIFICANT DIFFERENCE (LSD) =				
				7.1079
				14.2698
				10.0521
				20.1805

SEX	MEANS	
	MALE	FEMALE
	210.7518	221.1173
STANDARD ERROR OF A MEAN =		
95% CONFIDENCE LIMITS =		
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =		
LEAST SIGNIFICANT DIFFERENCE (LSD) =		
		4.4955
		9.0250
		6.3575
		12.7633

PB LEVEL	* SEX	INTERACTION	
PB LEVEL	SEX		
	MALE	FEMALE	DIFFERENCES
0	147.3650	131.8908	15.4742
10	163.8889	174.2063	-10.3174
50	200.2198	216.2786	-16.0588
100	238.1782	240.5725	-11.3943
500	304.1072	333.6381	-29.5309
STANDARD ERROR OF A MEAN =			
95% CONFIDENCE LIMITS =			
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =			
LEAST SIGNIFICANT DIFFERENCE (LSD) =			
			10.0521
			20.1805
			14.2159
			28.5395

TIME		MEANS	
		3	232.3869
		6	226.4497
		12	216.3247
		18	209.6234
		24	194.8880

STANDARD ERROR OF A MEAN = 7.1079
 95% CONFIDENCE LIMITS = 14.2698
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 10.0521
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 20.1805

PU LEVEL		* TIME		INTERACTION	
		3	158.5277	6	145.7326
		10	188.6161	12	131.9734
		50	222.5125	18	128.7881
		100	261.9570	24	133.1178
		500	330.3212		140.8450
					184.8767
					220.9757
					294.6248

STANDARD ERROR OF A MEAN = 15.8938
 95% CONFIDENCE LIMITS = 31.9081
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 22.4773
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 45.1249

INTERACTION

* TIME

TIME

SEX	3	6	12	18	24	
MALE	232.6680	224.0992	215.6749	203.4979	177.8190	
FEMALE	232.1058	228.8002	216.9745	215.7489	211.9570	
DIFFERENCES	.5623	-4.7010	-1.2996	-12.2510	-34.1380	
STANDARD ERROR OF A MEAN =	10.0521					
95% CONFIDENCE LIMITS =	20.1805					
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =	14.2159					
LEAST SIGNIFICANT DIFFERENCE (LSD) =	28.5395					

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

1	2	3	4	5	*
LEVEL	LEVEL	LEVEL	LEVEL	LEVEL	REPEATED

PB LEVEL	RAT LEAD FEEDING STUDY		STUDY I	RESPONSE II	SEX	PAGE MEANS	29	29
	MEANS							
1	+	+	+	+	+	+	+	+
2	+	+	+	+	+	+	+	+
3	+	+	+	+	+	+	+	+
4	+	+	+	+	+	+	+	+
5	+	+	+	+	+	+	+	+
122.50159.95197.40234.85272.30309.75347.20								

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11
PAGE 31 31

TIME

X35 #

12

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*****ENDRUN

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Notes

20

*****MODEL NFAC=2,NODE=2,RFC=7,DESIGN=28,EQUAL=F,7

*****FACTOR1 NAME=PB LEVEL,NLEV=5,LNAME=0,10,50,100,500/

*****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE/

*****RESPONSE KIDNEY PB,LOG KIDNEY PB7

*****MEANS 2

*****MEANS PLOT 2

*****CONST 100.0.1

*****OPCODES

24 DATA ONLY

OPCODES

ALB 1,902,1

MOV 1,902,1

MPY 1,901,801

LOG 801,802,10

MPY 802,901,802

OUT

40	1	902	1	0	0	1
9	1	902	1	0	0	2
3	1	901	801	0	0	3
8	801	802	10	0	0	4
3	802	901	802	0	0	5
999	0	0	0	0	0	6

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*****DATA INOV=1

INPUT DATA MATRIX (DOES NOT INCLUDE TRANSFORMATIONS)

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3	1	1.92000
4	1	.67000
5	1	.18000
6	1	.16000
7	1	.22000
8	1	.16000
9	1	.06000
10	1	.13000
11	1	.21000
12	1	.11000
13	1	.11000
14	1	.16000
15	1	.07000
16	1	.14000
17	1	.07000
18	2	.14000
19	2	.15000
20	2	.09000
21	2	.53000
22	2	.09000
23	2	.43000
24	2	.42000
25	2	.38000
26	2	.34000
27	3	.39000
28	3	.45000
		.48000

RAT LEAD FEEDING STUDY				STUDY I RESPONSE I1		PAGE		3	
29	3	1							3
30	3	1	.47000						
31	3	2	.22000						
32	3	2	1.41000						
33	3	2	1.44000						
34	3	2	1.17000						
35	3	2	1.27000						
36	4	1	1.18000						
37	4	1	1.05000						
38	4	1	.74000						
39	4	1	.62000						
40	4	2	.57000						
41	4	2	1.81000						
42	4	2	2.89000						
43	4	2	4.50000						
44	4	2	5.41000						
45	4	2	3.59000						
46	5	1	5.00000						
47	5	1	8.70000						
48	5	1	1.71000						
49	5	2	6.85000						
50	5	2	5.67000						
51	5	2	23.82000						
52	5	2	18.82000						
53	5	2	42.95000						
			11.95000						

三

KIDNEY PB	LOG KIDNEY P
1	1
2	1
3	1
4	1
5	1

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NO. OF INPUT DATA ROWS = 53
NO. OF ROWS DELETED BY LOGICAL TESTS = 0
NO. OF ROWS DELETED FOR MISSING DATA = 0
NO. OF EXPANDED DATA ROWS REMAINING = 53
```

南京国民政府

CELL IDENTIFICATION

CELL	MEAN	VARIANCE	STANDARD DEVIATION	NUMBER OF OBSERVATIONS
1 1	66.5000	6267.9994	79.1707 *	8
1 2	13.3333	12.4995	3.5355 *	9
2 1	22.0000	432.6667	20.8006 *	4
2 2	39.2000	12.7002	3.5637 *	5
3 1	40.5000	153.6667	12.3962 *	4
3 2	129.4000	159.2998	12.6214 *	5
4 1	74.5000	464.3333	21.5484 *	4
4 2	386.6667	18655.4709	136.5850	6
5 1	575.3333	131170.3418	362.1745 *	3
5 2	2064.2000	2026944.8281	1423.7081 *	5

MEAN OF THE CELL MEANS = 341.16332

WITHIN CELL VARIANCE = 197935.19141
 WITHIN CELL STANDARD DEVIATION = 444.89908
 HARMONIC MEAN OF CELL SIZE = 4.79361
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = 1.30406
 VARIANCE OF A CELL MEAN = 41291.47900
 STANDARD ERROR OF A CELL MEAN = 203.20305

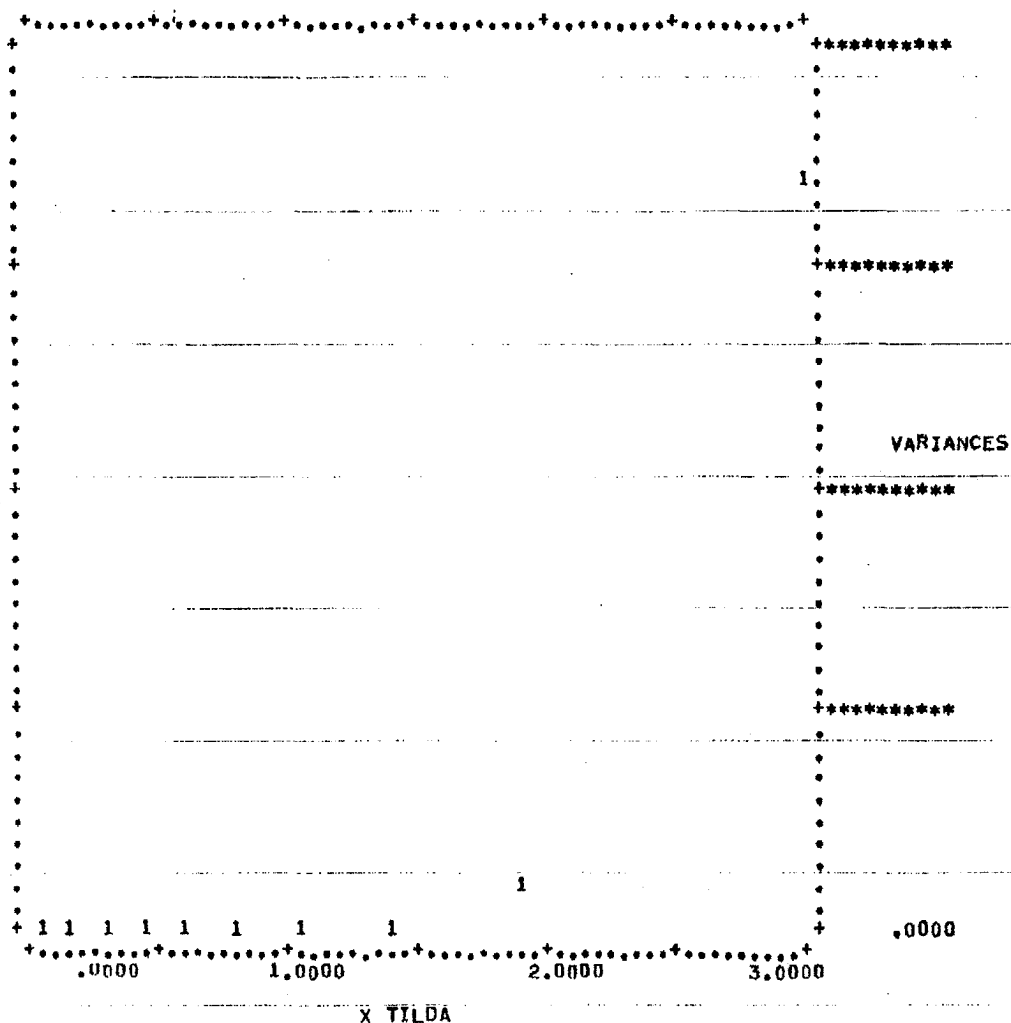
CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 292.75959
 LOWER CONTROL LIMIT = 122.46125
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 6.06 (NOT SIGNIFICANT)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

THE GAMMA PLOT



E(10)	=	2.0520	RESIDUAL FOR HIGHEST VALUE OF X TILDA
T FOR SLOPE	=	3.5113	STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T CRITICAL	=	2.2618	T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

EXPECTED MEAN SQUARE TABLE

SOURCE OF VARIATION	EXPECTED MEAN SQUARE
A = PB LEVEL;	REP + 2(A)
B = SEX	REP + 5(B)
AB	REP + 1(AB)
REPLICATES	REP

RESPONSE NUMBER 1 KIDNEY PB UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	9	.36081+07		
A = PB LEVEL	4	.24455+07	.61137+06	14.81 **
B = SEX	1	.34372+06	.34372+06	8.32 **
AB	4	.81888+06	.20472+06	4.96 **
REPLICATES	43		.41291+05	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 KIDNEY PB

MEANS TABLES

PB LEVEL	MEANS				
0	39.9167	10	50	100	500
		30.6000	84.9500	230.5833	1319.7666

STANDARD ERROR OF A MEAN = 143.6863
 95% CONFIDENCE LIMITS = 289.7698
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 203.2030
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 409.7965

SEX

MEANS

MALE FEMALE
 155.7667 526.5600

STANDARD ERROR OF A MEAN = 90.8752
 95% CONFIDENCE LIMITS = 183.2665
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 128.5169
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 259.1700

PB LEVEL

* SEX

INTERACTION

PB LEVEL

SEX

	MALE	FEMALE	DIFFERENCES
0	66.5000	13.3333	53.1667
10	22.0000	39.2000	-17.2000
50	40.5000	129.4000	-88.9000
100	74.5000	386.6667	-312.1667
500	575.3333	2064.2000	-1488.8666

STANDARD ERROR OF A MEAN = 203.2030
 95% CONFIDENCE LIMITS = 409.7965
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 287.3725
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 579.5397

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

1 - LEVEL 1
2 - LEVEL 2
* - REPEATED SYMBOLS

PB LEVEL	MEANS	SEX	MEANS
1	1 + *	1	1
2	1 + *	1	1
3	1 + *	1	1
4	1 + *	1	1
5	1 + *	1	1
MEANS	-.250+02	MEANS	-.250+02
	.725+03		.725+03
	.147+04		.147+04
	.222+04		.222+04

DUP050310162

RESPONSE NUMBER 2 LOG KIDNEY PB

CELL IDENTIFICATION

CELL IDENTIFICATION	CELL MEAN	CELL VARIANCE	CELL STANDARD DEVIATION	NUMBER OF OBSERVATIONS
1 1	154.9543	2600.1060	50.9912 *	8
1 2	111.2814	112.5801	10.6104 *	9
2 1	122.5092	1176.3945	34.2986 *	4
2 2	159.1809	16.2729	4.0340 *	5
3 1	158.7244	267.7493	16.3630	4
3 2	211.0291	17.7920	4.2181 *	5
4 1	189.9672	138.2650	11.7586 *	4
4 2	253.9842	318.4852	17.8462	6
5 1	266.9402	1455.3271	38.1487 *	3
5 2	322.3095	1089.9844	33.0149 *	5

MEAN OF THE CELL MEANS = 194.88802

WITHIN CELL VARIANCE = 763.90431
 WITHIN CELL STANDARD DEVIATION = 27.63882
 HARMONIC MEAN OF CELL SIZE = 4.79361
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .14182
 VARIANCE OF A CELL MEAN = 159.35892
 STANDARD ERROR OF A CELL MEAN = 12.62374

CONTROL LIMITS FOR THE STANDARD DEVIATION

UPPER CONTROL LIMIT = 31.20408
 LOWER CONTROL LIMIT = 13.05266

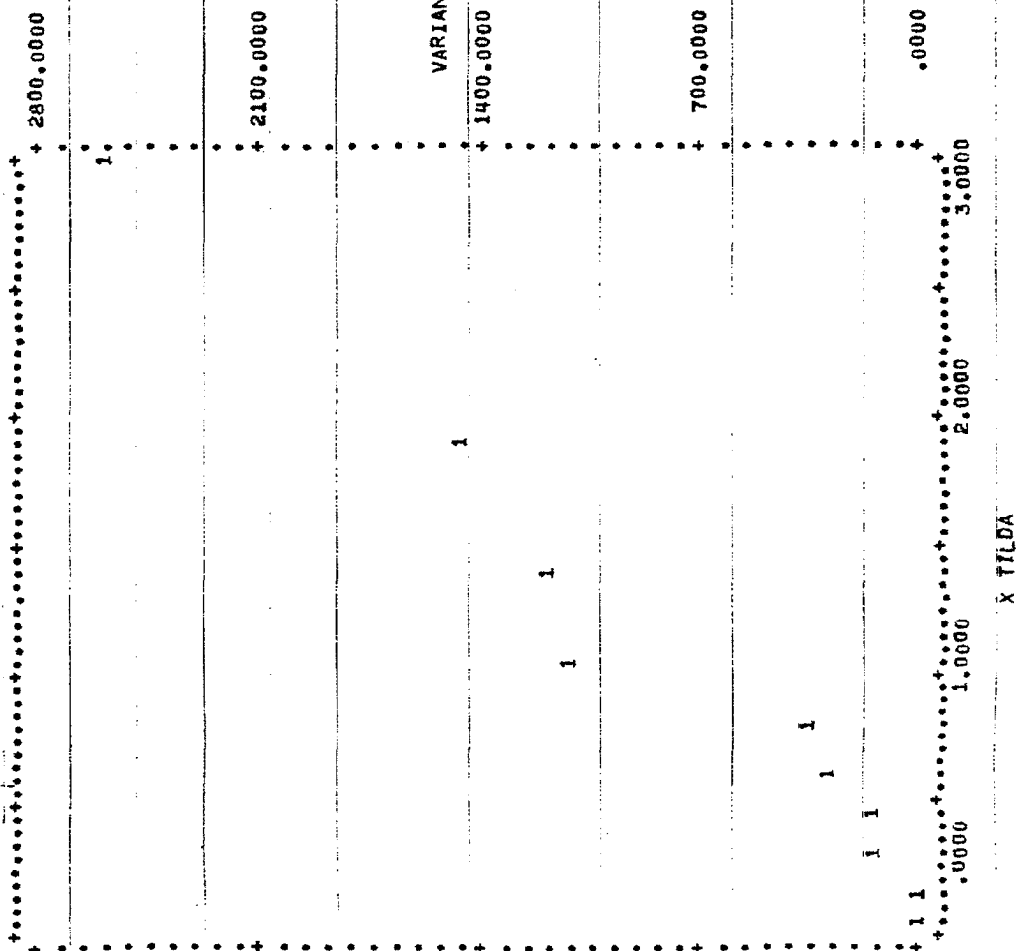
* DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 6.06 (NOT SIGNIFICANT)

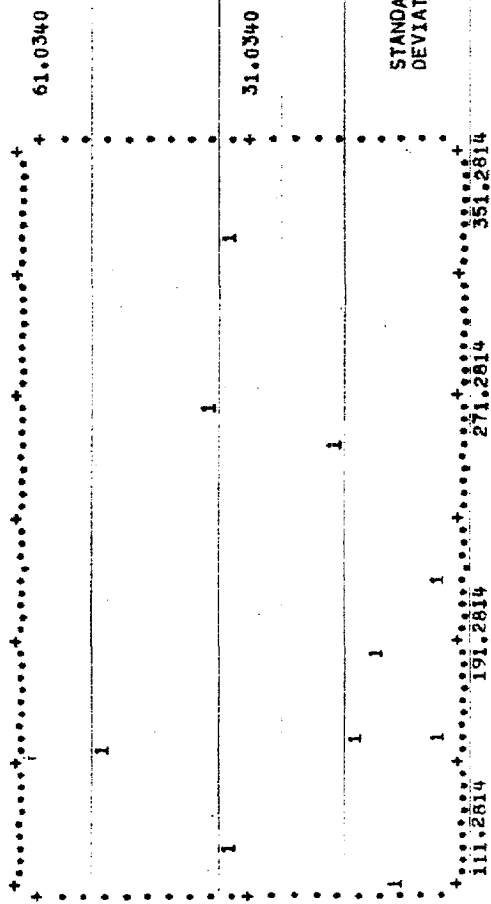
A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

THE GAMMA PLOT

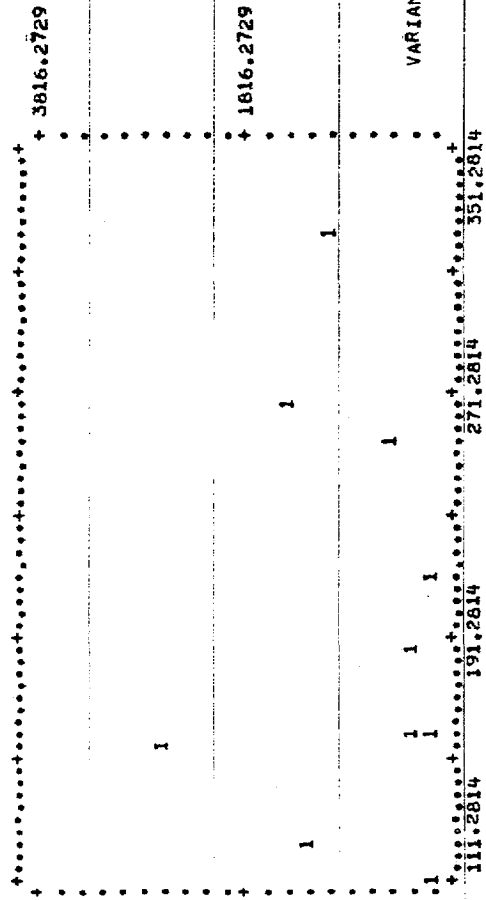


E(10) = .7854
 T FOR SLOPE = 17.7158
 T CRITICAL = 2.2618
 RESIDUAL FOR HIGHEST VALUE OF X TILDA
 STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
 T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



RESPONSE NUMBER 2 LOG KIDNEY PB UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	9	.41907+05		
A = PH LEVEL	4	.34929+05	8732.21313	54.80 **
B = SEX	1	.29135+04	2913.50015	18.28 **
AB	4	.40645+04	1016.13239	6.38 **
REPLICATES	43		159.38892	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RAT LEAD FEEDING STUDY STUDY I RESPONSE 11

PAGE 18

18

RESPONSE NUMBER 2 LOG KIDNEY PB

MEANS TABLES

PB LEVEL	MEANS				
	0	10	50	100	500
	133.1178	140.8450	184.8767	220.9757	294.6248

STANDARD ERROR OF A MEAN = 8.9263
 95% CONFIDENCE LIMITS = 18.0016
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 12.6237
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 25.4581

SEX

MEANS

MALE 177.8190 FEMALE 211.9570

STANDARD ERROR OF A MEAN = 5.6455
 95% CONFIDENCE LIMITS = 11.3852
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 7.9840
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 16.1011

PB LEVEL

* SEX

INTERACTION

PB LEVEL

SEX

	FEMALE DIFFERENCES	
0	MALE 154.9583	111.2814
10	122.3092	159.1809
50	158.7244	211.0291
100	185.9672	255.9842
500	266.9402	322.3095

STANDARD ERROR OF A MEAN = 12.6237
 95% CONFIDENCE LIMITS = 25.4581
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 17.8527
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 36.0032

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- * - REPEATED SYMBOLS

[illegible]

105,05142,30179,55216,80254,05291,30328,55

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 12 PAGE 1 1

*****MODEL NFAC=3,NOD=2,RF=7,DESIGN=C,NREP=28,EQUAL=F, /

*****FACTOR1 NAME=PB LEVEL,NLEV=5,LNAME=0,10,50,100,500 /

*****FACTOR2 NAME=SEX,NLEV=2,LNAME=MALE,FEMALE /

*****FACTOR3 NAME=TIME,NLEV=5,LNAME=3,6,12,16,24 /

*****RESPONSE LIVER PB,LOG LIVER PB /

*****MEANS 2

*****MEANS PLOT 2

*****CONST 100,1

*****OPCODES

OPCODES
ALB 1,902,1
MOV 1,902,1
MPY 1,901,801
LOG 801,802,10
MPY 802,901,802
OUT

*****FORMAT(16X,8F8.2/10F8.2/10F8.2)

*****DATA INOV=1

N36874.12

2.65

29	1	1	5	2,100
30	1	1	5	2,000
31	1	1	5	2,300
32	1	1	5	1,500
33	1	1	5	2,600
34	1	1	5	1,100
35	1	1	5	1,700
36	1	2	1	2,500
37	1	2	1	1,000
38	1	2	2	2,200
39	1	2	2	1,900
40	1	2	3	2,300
41	1	2	3	2,800
42	1	2	4	1,000
43	1	2	4	1,100
44	1	2	5	1,600
45	1	2	5	2,500
46	1	2	5	1,500
47	1	2	5	2,800
48	1	2	5	2,800
49	1	2	5	1,200
50	1	2	5	1,500
51	1	2	5	1,800
52	1	2	5	1,600
53	1	2	5	1,100
54	1	2	5	1,800
55	1	2	5	1,000
56	1	2	5	1,000
57	1	2	5	2,000

KAT LEAD FEEDING STUDY STUDY I RESPONSE 12

PAGE 5

87	2	1	5	5
88	2	1	5	
89	2	2	1	
90	2	2	2	
91	2	2	3	
92	2	2	4	
93	2	2	5	
94	2	2	5	
95	2	2	5	
96	2	2	5	
97	2	2	5	
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99	2	2	5	
100	2	2	5	
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105	2	2	5	
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107	2	2	5	
108	2	2	5	
109	3	1	1	
110	3	1	2	
111	3	1	3	
112	3	1	4	
113	3	1	5	
114	3	1	5	
115	3	1	5	

RAT LEAD FEEDING STUDY			STUDY 1	RESPONSE 12	PAGE 6	6
116	3	1	5	.36000		
117	3	1	5	.34000		
118	3	1	5	.27000		
119	3	1	5	.47000		
120	3	1	5	.20000		
121	3	1	5	.25000		
122	3	1	5	.09000		
123	3	1	5	.36000		
124	3	1	5	.39000		
125	3	2	1	.25000		
126	3	2	2	.36000		
127	3	2	3	.17000		
128	3	2	4	.55000		
129	3	2	5	.28000		
130	3	2	5	.21000		
131	3	2	5	.42000		
132	3	2	5	.30000		
133	3	2	5	.23000		
134	3	2	5	.27000		
135	3	2	5	.25000		
136	3	2	5	.21000		
137	3	2	5	.24000		
138	3	2	5	.27000		
139	3	2	5	.61000		
140	3	2	5	.23000		
141	3	2	5	.29000		
142	3	2	5	.20000		
143	3	2	5	.29000		
144	3	2	5	.58000		

RAT LEAD FEEDING STUDY STUDY I RESPONSE 12

PAGE 7

7

145	4	1	1	
146	4	1	2	.35000
147	4	1	3	.48000
148	4	1	4	.25000
149	4	1	5	.58000
150	4	1	5	.17000
151	4	1	5	.23000
152	4	1	5	.53000
153	4	1	5	.55000
154	4	1	5	.58000
155	4	1	5	.41000
156	4	1	5	.52000
157	4	1	5	.74000
158	4	1	5	1.00000
159	4	1	5	.79000
160	4	1	5	.46000
161	4	1	5	.21000
162	4	2	1	.18000
163	4	2	2	.50000
164	4	2	3	.90000
165	4	2	4	.36000
166	4	2	5	1.83000
167	4	2	5	.81000
168	4	2	5	.45000
169	4	2	5	.23000
170	4	2	5	.35000
171	4	2	5	.18000
172	4	2	5	1.02000
173	4	2	5	1.06000
				.55000

NAT LEAD FEEDING STUDY STUDY 1 RESPONSE 12

PAGE

8

8

174	4	2	5	00
175	4	2	5	00
176	4	2	5	00
177	4	2	5	00
178	4	2	5	00
179	4	2	5	00
180	4	2	5	00
181	4	2	5	00
182	4	2	5	00
183	5	1	1	00
184	5	1	2	00
185	5	1	3	00
186	5	1	4	00
187	5	1	5	00
188	5	1	5	00
189	5	1	5	00
190	5	1	5	00
191	5	1	5	00
192	5	1	5	00
193	5	2	1	00
194	5	2	2	00
195	5	2	3	00
196	5	2	4	00
197	5	2	5	00
198	5	2	5	00
199	5	2	5	00
200	5	2	5	00
201	5	2	5	00
202	5	2	5	00

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 12

PAGE

9

9

203	5	2	5
			1,15000
204	5	2	5
			1,54000
205	5	2	5
			2,14000
206	5	2	5
			2,23000
207	5	2	5
			1,55000
208	5	2	5
			,70000
209	5	2	5
			1,20000
210	5	2	5
			3,86000

EXPANDED DATA MATRIX (IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

LIVER PB	LOG LIVER PB
1	1
2	1
3	1
4	1
5	1
6	1
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83	1
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85	1
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87	1
88	1
89	1
90	1
91	1
92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1

NO. OF INPUT DATA ROWS = 210
 NO. OF ROWS DELETED BY LOGICAL TESTS = 0
 NO. OF ROWS DELETED FOR MISSING DATA = 0
 NO. OF EXPANDED DATA ROWS REMAINING = 210

*****ANOVA

RAT LEAD FEEDING STUDY STUDY I RESPONSE 12

PAGE 11

11

RESPONSE NUMBER 1 LIVER PB

CELL IDENTIFICATION

CELL MEAN CELL VARIANCE CELL STANDARD DEVIATION NUMBER OF OBSERVATIONS

1	1	1	10.0000	.0000	.0014 *	2
1	1	2	62.5000	1512.5001	38.8909 *	2
1	1	3	28.5000	4.5000	2.1213 *	2
1	1	4	20.0000	18.0000	4.2426	2
1	1	5	19.1481	72.0541	8.4885	27
1	2	1	17.5000	112.5000	10.6066 *	2
1	2	2	43.0000	1152.0001	33.9411 *	2
1	2	3	10.0000	.0000	.0014 *	2
1	2	4	13.5000	12.5000	3.5355 *	2
1	2	5	17.0357	52.3320	7.2341	28
2	1	1	10.0000	.0000	.0000 *	1
2	1	2	49.0000	.0000	.0000 *	1
2	1	3	17.0000	.0000	.0000 *	1
2	1	4	27.0000	.0000	.0000 *	1
2	1	5	17.6923	36.5641	6.0468	13
2	2	1	15.0000	.0000	.0000 *	1
2	2	2	10.0000	.0000	.0000 *	1
2	2	3	10.0000	.0000	.0000 *	1
2	2	4	32.0000	.0000	.0000 *	1
2	2	5	14.1875	20.0292	4.4754	16
3	1	1	15.0000	.0000	.0000 *	1
3	1	2	71.0000	.0000	.0000 *	1
3	1	3	27.0000	.0000	.0000 *	1
3	1	4	39.0000	.0000	.0000 *	1
3	1	5	30.7500	97.6592	9.8823 *	12
3	2	1	25.0000	.0000	.0000 *	1
3	2	2	36.0000	.0000	.0000 *	1
3	2	3	17.0000	.0000	.0000 *	1
3	2	4	55.0000	.0000	.0000 *	1
3	2	5	30.5000	155.3334	12.4633 *	16
4	1	1	35.0000	.0000	.0000 *	1
4	1	2	48.0000	.0000	.0000 *	1
4	1	3	25.0000	.0000	.0000 *	1
4	1	4	58.0000	.0000	.0000 *	1
4	1	5	49.0000	648.8335	25.4722 *	13
4	2	1	50.0000	.0000	.0000 *	1
4	2	2	90.0000	.0000	.0000 *	1
4	2	3	36.0000	.0000	.0000 *	1
4	2	4	183.0000	.0000	.0000 *	1
4	2	5	71.7647	1197.6917	34.6077 *	17
5	1	1	120.0000	.0000	.0000 *	1
5	1	2	116.0000	.0000	.0000 *	1
5	1	3	116.0000	.0000	.0000 *	1
5	1	4	124.0000	.0000	.0000 *	1
5	1	5	209.1667	4606.1676	67.8688 *	6
5	2	1	157.0000	.0000	.0000 *	1
5	2	2	167.0000	.0000	.0000 *	1
5	2	3	167.0000	.0000	.0000 *	1
5	2	4	188.0000	.0000	.0000 *	1
5	2	5	164.9286	6074.5352	77.9393 *	14

MEAN OF THE CELL MEANS = 59.32347

WITHIN CELL VARIANCE = 869.94183
 WITHIN CELL STANDARD DEVIATION = 29.49478
 HARMONIC MEAN OF CELL SIZE = 1.36122
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .49719
 VARIANCE OF A CELL MEAN = 639.09143
 STANDARD ERROR OF A CELL MEAN = 25.28026

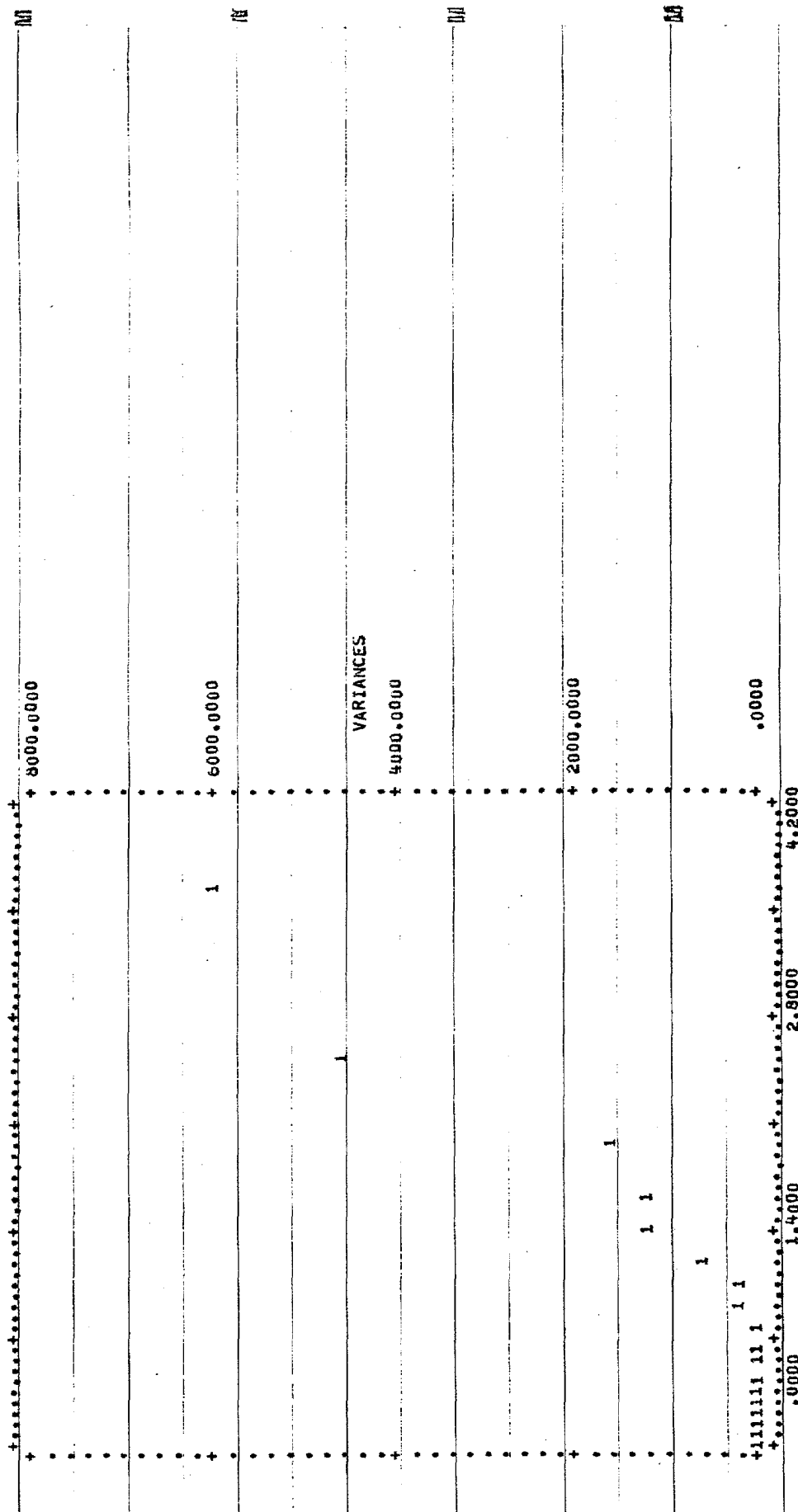
CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 9.80947
 LOWER CONTROL LIMIT = 4.10330
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 526.19 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)

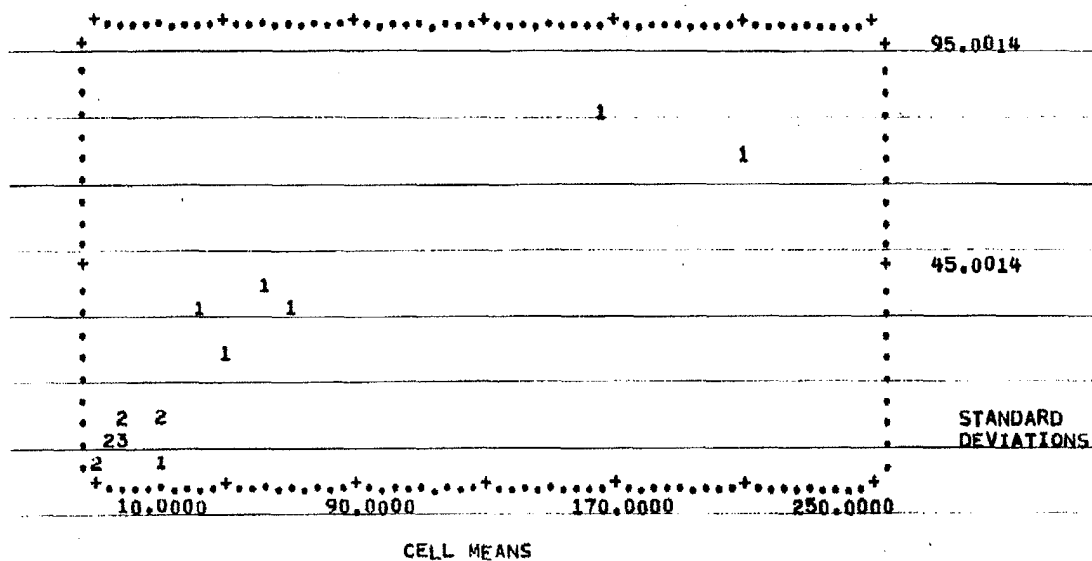
A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

THE GAMMA PLOT

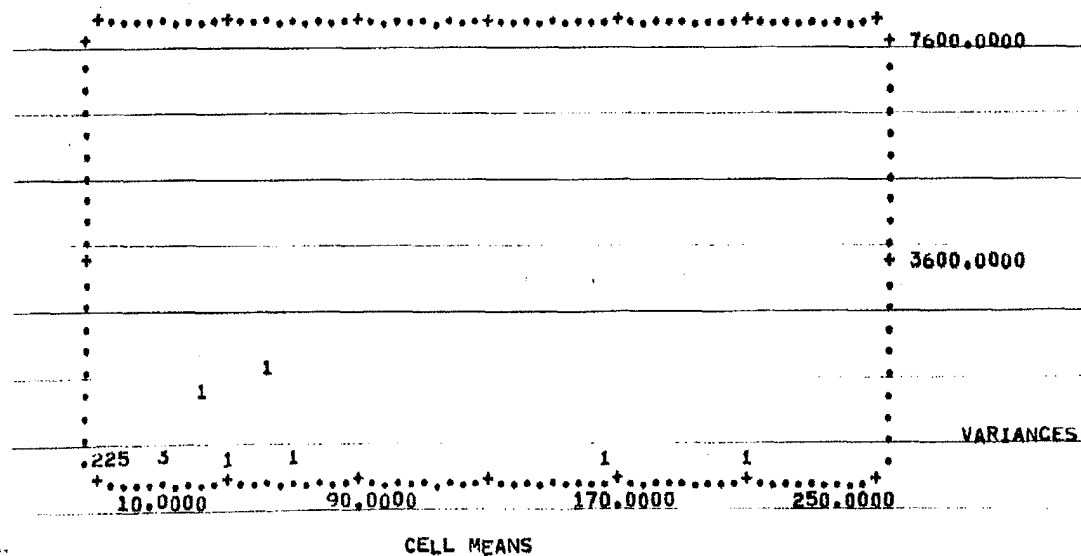


F(18) = 1.8410
 T FOR SLOPE = 8.5779
 T CRITICAL = 2.1099

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS



PLOT OF CELL MEANS VRS VARIANCES



DUP050310184

RAT LEAD FEEDING STUDY STUDY I RESPONSE 12 EXPECTED MEAN SQUARE TABLE

SOURCE OF VARIATION EXPECTED MEAN SQUARE

A = PU LEVEL
 B = SEX
 C = TIME
 AC
 BC
 ABC
 REPLICATES

REP + 10(A)
 REP + 25(B)
 REP + 5(AB)
 REP + 10(C)
 REP + 2(AC)
 REP + 5(BC)
 REP + 1(ABC)
 REP

UNWEIGHTED ANALYSIS OF CELL MEANS

RESPONSE NUMBER 1 LIVER PB

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	49	.15679+06		
A = PB LEVEL	4	.12204+06	.30511+05	47.74 **
B = SEX	1	.15088+04	.15088+04	2.36
AB	4	.59502+04	.14876+04	2.33
C = TIME	4	.71379+04	.17845+04	2.79 *
AC	16	.10202+05	.63760+03	1.00
BC	4	.33331+04	.83327+03	1.30
ABC	16	.66160+04	.41350+03	.65
REPLICATES	160		.63909+03	

*... SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 LIVER PB

MEANS TABLES

PB LEVEL	MEANS			
0	24.1184	20.1880	34.6250	64.5765
	10	50	100	500
				153.1095
STANDARD ERROR OF A MEAN = 7.9943				
95% CONFIDENCE LIMITS = 15.7882				
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 11.3057				
LEAST SIGNIFICANT DIFFERENCE (LSD) = 22.3278				

SEX	MEANS	
	MALE	FEMALE
	53.8303	64.8167
STANDARD ERROR OF A MEAN = 5.0561		
95% CONFIDENCE LIMITS = 9.9853		
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 7.1503		
LEAST SIGNIFICANT DIFFERENCE (LSD) = 14.1214		

PB LEVEL	* SEX	INTERACTION
PB LEVEL	SEX	

	MALE	FEMALE	DIFFERENCES
0	28.0296	20.2071	7.8225
10	24.1385	16.2375	7.9010
50	36.8500	32.7000	3.8500
100	43.0000	86.1529	-43.1529
500	137.4333	168.7857	-31.3524
STANDARD ERROR OF A MEAN = 11.3057			
95% CONFIDENCE LIMITS = 22.3278			
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 15.9886			
LEAST SIGNIFICANT DIFFERENCE (LSD) = 31.5763			

TIME	MEANS
3	45.4500 6 69.4500 12 45.3500 18 73.9500 24 62.4174
STANDARD ERROR OF A MEAN = 7.9943	
95% CONFIDENCE LIMITS = 15.7882	
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 11.3057	
LEAST SIGNIFICANT DIFFERENCE (LSD) = 22.3278	

PB LEVEL		* TIME	INTERACTION				
PB LEVEL		TIME					
	3	6	12	18	24		
0	13.7500	52.7500	19.2500	16.7500	18.0919		
10	12.5000	29.5000	13.5000	29.5000	15.9399		
50	20.0000	53.5000	22.0000	47.0000	30.6250		
100	42.5000	69.0000	30.5000	120.5000	60.3823		
500	138.5000	142.5000	141.5000	156.0000	187.0476		
STANDARD ERROR OF A MEAN = 17.8758							
95% CONFIDENCE LIMITS = 35.3034							
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 25.2803							
LEAST SIGNIFICANT DIFFERENCE (LSD) = 49.9265							

INTERACTION

* TIME

SEX

TIME

SEX

	3	6	12	18	24
MALE	38.0000	69.7000	42.7000	53.6000	65.1514
FEMALE	52.9000	69.2000	48.0000	94.3000	59.6833
DIFFERENCES	-14.9000	.5000	-5.3000	-40.7000	5.4681

STANDARD ERROR OF A MEAN =

11.3057

95% CONFIDENCE LIMITS =

22.3278

2	1	2	49.0000	.0000	.0000 *	1
2	1	3	17.0000	.0000	.0000 *	1
2	1	4	27.0000	.0000	.0000 *	1
2	1	5	17.6923	36.5641	6.0463	13
2	2	1	15.0000	.0000	.0000 *	1
2	2	2	10.0000	.0000	.0000 *	1
2	2	3	10.0000	.0000	.0000 *	1
2	2	4	32.0000	.0000	.0000 *	1
2	2	5	14.1875	20.0292	4.4754	16
3	1	1	15.0000	.0000	.0000 *	1
3	1	2	71.0000	.0000	.0000 *	1
3	1	3	27.0000	.0000	.0000 *	1
3	1	4	39.0000	.0000	.0000 *	1
3	1	5	30.7500	97.6592	9.8823 *	12
3	2	1	25.0000	.0000	.0000 *	1
3	2	2	36.0000	.0000	.0000 *	1
3	2	3	17.0000	.0000	.0000 *	1
3	2	4	55.0000	.0000	.0000 *	1
3	2	5	30.5000	155.3334	12.4633 *	16
4	1	1	35.0000	.0000	.0000 *	1
4	1	2	48.0000	.0000	.0000 *	1
4	1	3	25.0000	.0000	.0000 *	1
4	1	4	58.0000	.0000	.0000 *	1
4	1	5	49.0000	648.8335	25.4722 *	13
4	2	1	50.0000	.0000	.0000 *	1
4	2	2	90.0000	.0000	.0000 *	1
4	2	3	36.0000	.0000	.0000 *	1
4	2	4	183.0000	.0000	.0000 *	1
4	2	5	71.7647	1197.6917	34.6077 *	17
5	1	1	120.0000	.0000	.0000 *	1
5	1	2	118.0000	.0000	.0000 *	1
5	1	3	116.0000	.0000	.0000 *	1
5	1	4	124.0000	.0000	.0000 *	1
5	1	5	209.1667	4606.1676	67.8698 *	6
5	2	1	157.0000	.0000	.0000 *	1
5	2	2	167.0000	.0000	.0000 *	1
5	2	3	167.0000	.0000	.0000 *	1
5	2	4	188.0000	.0000	.0000 *	1
5	2	5	164.9286	6074.5352	77.9393 *	14

MEAN OF THE CELL MEANS = 59.32347

WITHIN CELL VARIANCE = 869.94183
 WITHIN CELL STANDARD DEVIATION = 29.49478
 HARMONIC MEAN OF CELL SIZE = 1.36122
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .49719
 VARIANCE OF A CELL MEAN = 639.09143
 STANDARD ERROR OF A CELL MEAN = 25.28026

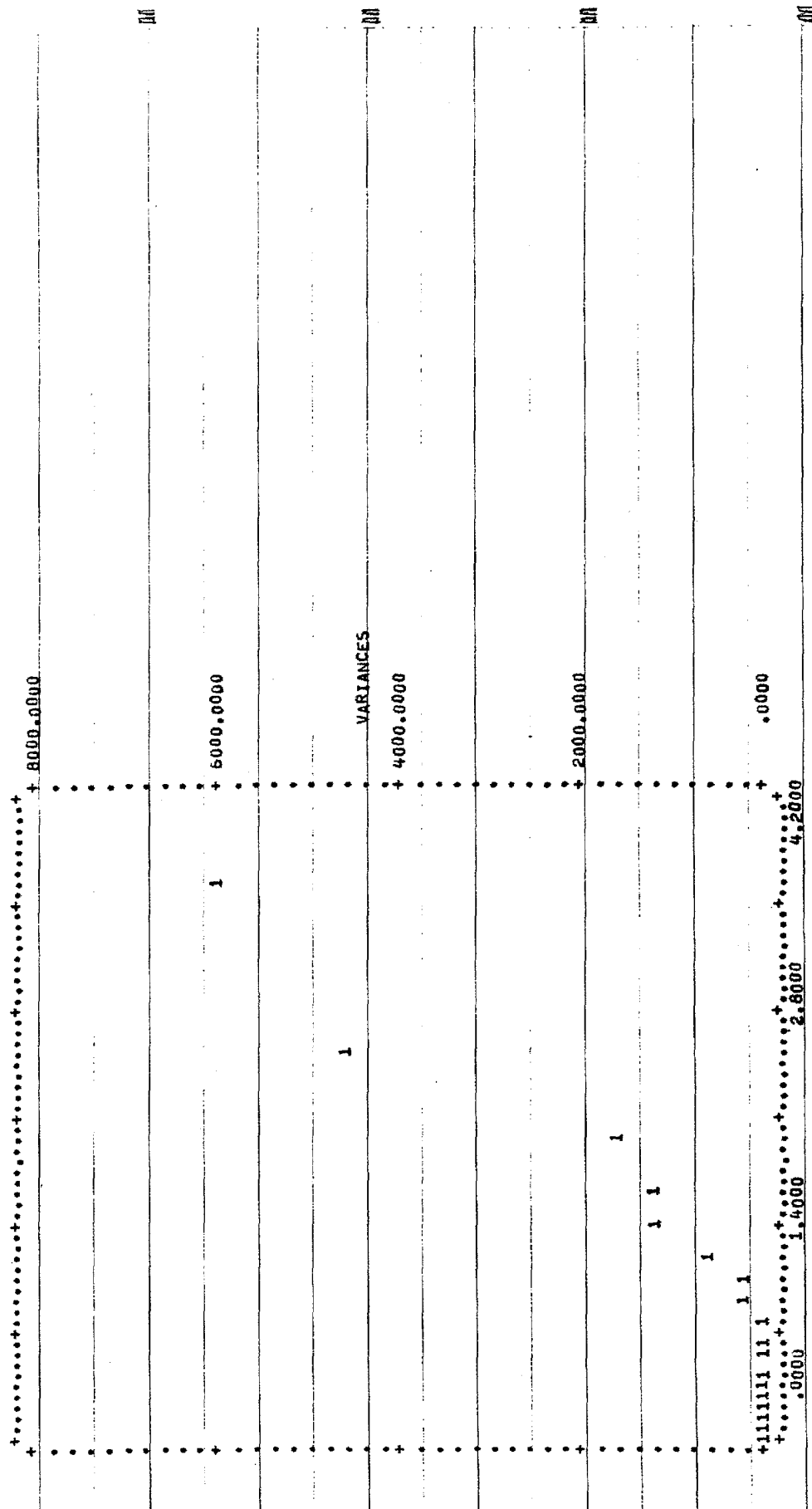
CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 9.80947
 LOWER CONTROL LIMIT = 4.10330
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 526.19 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

THE GAMMA PLOT



	RESIDUAL FOR HIGHEST VALUE OF X TILDA
E (18)	1.8410
T FOR SLOPE =	9.5779
T CRITICAL =	2.1099

STUDENTIZED SLOPE: Y=BX. (INTERCEPT=0)
 T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

SOURCE OF VARIATION EXPECTED MEAN SQUARE

A = PB LEVEL REP + 10(A)
 B = SEX REP + 25(B)
 AB REP + 5(AB)
 C = TIME REP + 10(C)
 AC REP + 2(AC)
 BC REP + 5(BC)
 ABC REP + 1(ABC)
 REPLICATES REP

UNWEIGHTED ANALYSIS OF CELL MEANS

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	49	.15679+06		
A = PB LEVEL	4	.12204+06	.30511+05	47.74 **
B = SEX	1	.15088+04	.15088+04	2.36
AB	4	.59502+04	.14876+04	2.33
C = TIME	4	.71379+04	.17845+04	2.79 *
AC	16	.10202+03	.63760+03	1.00
UC	4	.33351+04	.83327+03	1.30
ABC	16	.66160+04	.41350+03	.65
REPLICATES	160	.63909+03		

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 LIVER PB

MEANS TABLES

PB LEVEL MEANS

PB LEVEL	MEANS
0	24.1184
10	20.1880
50	34.6250
100	64.5765
500	153.1095

STANDARD ERROR OF A MEAN = 7.9943
 95% CONFIDENCE LIMITS = 15.7882
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 11.3057
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 22.3278

SEX MEANS

SEX	MEANS
MALE	53.8303
FEMALE	64.8167

STANDARD ERROR OF A MEAN = 5.0561
 95% CONFIDENCE LIMITS = 9.9853
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 7.1503
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 14.1214

PB LEVEL * SEX INTERACTION

PB LEVEL SEX

PB LEVEL	SEX	INTERACTION
0	MALE	28.0296
10	MALE	24.1385
50	MALE	36.5500
100	MALE	43.0000
500	MALE	137.4333
0	FEMALE	20.2071
10	FEMALE	16.2375
50	FEMALE	32.7000
100	FEMALE	86.1529
500	FEMALE	168.7857

STANDARD ERROR OF A MEAN = 11.3057
 95% CONFIDENCE LIMITS = 22.3278
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 15.9886
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 31.5763

TIME MEANS

3 45.4500 6 69.4500 12 45.3500 18 73.9500 24 62.4174

STANDARD ERROR OF A MEAN = 7.9943

95% CONFIDENCE LIMITS = 15.7882

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 11.3057

LEAST SIGNIFICANT DIFFERENCE (LSD) = 22.3278

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

3 6 12 18 24

0 13.7500 52.7500 19.2500 16.7500 18.0919

10 12.5000 29.5000 13.5000 29.5000 15.9329

50 20.0000 53.5000 22.0000 47.0000 30.6250

100 42.5000 69.0000 30.5000 120.5000 60.3823

500 138.5000 142.5000 141.5000 156.0000 167.0476

STANDARD ERROR OF A MEAN = 17.8758

95% CONFIDENCE LIMITS = 35.3034

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 25.2803

LEAST SIGNIFICANT DIFFERENCE (LSD) = 49.9265

INTERACTION

* TIME

SEX

TIME

SEX

	3	6	12	18	24
MALE	38.0000	69.7000	42.7000	53.6000	65.1514
FEMALE	52.9000	69.2000	48.0000	94.3000	59.6833
DIFFERENCES	-14.9000	.5000	-5.3000	-40.7000	5.4681

STANDARD ERROR OF A MEAN =

11.3057

95% CONFIDENCE LIMITS =

22.3278

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

15.9886

LEAST SIGNIFICANT DIFFERENCE (LSD) =

31.5763

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

TEA31 96

MEANS

STUDY 1

RESPONSE 12

X35

MEANS

21

21

1	I	+	*	I	+
2	I	+	*	I	+
3	I	+	*	I	+
4	I	+	*	I	+
5	I	+	*	I	+
	I	+		I	+

7.35 38.20 69.05 99.90130.75161.60192.45

[illegible]

7.35 38.20 69.05 99.90130.75161.60192.45

1

[illegible]

7.35 38.20 69.05 99.90 130.75 161.60 192.45

2126

RAT LEAD FEEDING STUDY STUDY I RESPONSE 12						PAGE	23
PB LEVEL	* TIME	TIME				* SEX	
		+-----+-----+-----+-----+-----+-----+				+-----+-----+-----+	
	I					I	
	1 +1* 2					1 + 1 2	
	I					I	
	2 ++5 *					2 + *	
PB LEVEL	I				TIME	I	
	3 + 13 5 42					3 + 12	
	I					I	
	4 + 3 1 5 2 4					4 + 1	
	I					I	
	5 + * 4 5+					5 + 21	
	I					I	
		+-----+-----+-----+-----+-----+				+-----+-----+-----+	
	7.35 38.20 69.05 99.90130.75161.60192.45					7.35 38.20 69.05	

RESPONSE NUMBER 2 LOG LIVER PB

CELL IDENTIFICATION

CELL MEAN CELL VARIANCE CELL STANDARD DEVIATION NUMBER OF OBSERVATIONS

1	1	1	100.0000	.0002	.0156 *	2
1	1	2	174.9155	841.2158	29.0037 *	2
1	1	3	145.4242	10.4587	3.2355 *	2
1	1	4	129.6088	86.1707	9.2828 *	2
1	1	5	124.3418	344.7584	18.5677 *	27
1	2	1	119.8970	791.7812	28.1386 *	2
1	2	2	155.2414	1497.8027	38.7015 *	2
1	2	3	100.0000	.0002	.0156 *	2
1	2	4	112.2756	132.4009	11.5066 *	2
1	2	5	119.9257	271.1622	16.4670 *	28
2	1	1	100.0000	.0000	.0000 *	1
2	1	2	169.0196	.0000	.0000 *	1
2	1	3	123.0449	.0000	.0000 *	1
2	1	4	143.1364	.0000	.0000 *	1
2	1	5	122.6979	186.4977	13.6554 *	13
2	2	1	117.6091	.0000	.0000 *	1
2	2	2	100.0000	.0000	.0000 *	1
2	2	3	100.0000	.0000	.0000 *	1
2	2	4	150.5150	.0000	.0000 *	1
2	2	5	113.3376	164.8536	12.8396 *	16
3	1	1	117.6091	.0000	.0000 *	1
3	1	2	185.1258	.0000	.0000 *	1
3	1	3	143.1364	.0000	.0000 *	1
3	1	4	152.1065	.0000	.0000 *	1
3	2	1	146.0247	313.5194	17.7065 *	12
3	2	2	139.7940	.0000	.0000 *	1
3	2	3	155.6302	.0000	.0000 *	1
3	2	4	123.0449	.0000	.0000 *	1
3	2	5	174.0363	.0000	.0000 *	1
4	1	1	145.8180	212.9246	14.5919 *	16
4	1	2	154.4068	.0000	.0000 *	1
4	1	3	168.1241	.0000	.0000 *	1
4	1	4	139.7940	.0000	.0000 *	1
4	1	5	176.3428	.0000	.0000 *	1
4	2	1	162.7395	650.0552	25.4962 *	13
4	2	2	169.8970	.0000	.0000 *	1
4	2	3	195.4242	.0000	.0000 *	1
4	2	4	155.6302	.0000	.0000 *	1
4	2	5	226.2451	.0000	.0000 *	1
5	1	1	179.4873	657.6063	25.6438 *	17
5	1	2	207.9181	.0000	.0000 *	1
5	1	3	207.1882	.0000	.0000 *	1
5	1	4	206.4458	.0000	.0000 *	1
5	1	5	209.3422	.0000	.0000 *	1
5	2	1	229.9369	232.8657	15.2599 *	6
5	2	2	219.5900	.0000	.0000 *	1
5	2	3	222.2716	.0000	.0000 *	1
5	2	4	222.2716	.0000	.0000 *	1
5	2	5	227.4158	.0000	.0000 *	1
5	2	5	217.9827	333.9006	18.2730 *	14

MEAN OF THE CELL MEANS = 158.17539

WITHIN CELL VARIANCE = 342.66080
 WITHIN CELL STANDARD DEVIATION = 18.51110
 HARMONIC MEAN OF CELL SIZE = 1.36122
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .11703
 VARIANCE OF A CELL MEAN = 251.73129
 STANDARD ERROR OF A CELL MEAN = 15.86604

CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 8.41577
 LOWER CONTROL LIMIT = 3.52031
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 526.19 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

THE GAMMA PLOT.

[illegible]

X YILDA

E(16)	=	1.5550	RESIDUAL FOR HIGHEST VALUE OF X YILDA
T FOR SLOPE	=	16.6879	STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T CRITICAL	=	2.1099	T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

PLOT OF CELL MEANS VRS STANDARD DEVIATIONS

57.0156

27.0156

STANDARD
DEVIATIONS

CELL MEANS

PLOT OF CELL MEANS VRS VARIANCES

1520.0000

720.0000

VARIANCES

CELL MEANS

UNWEIGHTED ANALYSIS OF CELL MEANS

RESPONSE NUMBER 2 LOG LIVER PB

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	49	.78405+05		
A = PB LEVEL	4	.58373+05	.14593+05	57.97 **
B = SEX	1	.64157+01	.64157+01	.03
AB	4	.28488+04	.71219+03	2.83 *
C = TIME	4	.72534+04	.18133+04	7.20 **
AC	16	.47826+04	.29891+03	1.19
BC	4	.21870+04	.54674+03	2.17
ABC	16	.29541+04	.18463+03	.75
REPLICATES	160	.25173+03		

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 2 LOG LIVER PB

MEANS TABLES

PB LEVEL MEANS

0	10	50	100	500
128.1630	123.9360	148.9326	172.8091	217.0363

STANDARD ERROR OF A MEAN = 5.0173
 95% CONFIDENCE LIMITS = 9.9087
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 7.0955
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 14.0131

SEX MEANS

MALE	FEMALE
157.8172	158.5336

STANDARD ERROR OF A MEAN = 3.1732
 95% CONFIDENCE LIMITS = 6.2668
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 4.4876
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 8.8626

PB LEVEL * SEX INTERACTION

PB LEVEL SEX

	MALE	FEMALE	DIFFERENCES
0	134.8581	121.4679	13.3901
10	131.5798	116.2923	15.2874
50	150.2005	147.6647	2.5358
100	160.2814	185.3368	-25.0553
500	212.1662	221.9063	-9.7401

STANDARD ERROR OF A MEAN = 7.0955
 95% CONFIDENCE LIMITS = 14.0131
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 10.0346
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 19.8175

RAT LEAD FEEDING STUDY STUDY I RESPONSE 12

PAGE 30 30

TIME MEANS

3 144.6721 6 173.2941 12 145.8792 18 170.8024 24 156.2292

STANDARD ERROR OF A MEAN = 5.0173
 95% CONFIDENCE LIMITS = 9.9087
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 7.0955
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 14.0131

PB LEVEL * TIME INTERACTION

PB LEVEL TIME

	3	6	12	18	24
0	109.9485	165.0785	122.7121	120.9422	122.1337
10	108.8046	134.5098	111.5224	146.8257	118.0178
50	128.7016	170.3780	133.0906	166.5714	145.9213
100	162.1519	181.7742	147.7121	201.2940	171.1134
500	213.7540	214.7299	214.3587	218.3790	223.9598

STANDARD ERROR OF A MEAN = 11.2190
 95% CONFIDENCE LIMITS = 22.1566
 STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 15.8660
 LEAST SIGNIFICANT DIFFERENCE (LSD) = 31.3342

INTERACTION

* TIME

SEX

TIME

	3	6	12	18	24
MALE	135.9868	180.8747	151.5691	163.5073	157.1481
FEMALE	153.3574	165.7135	140.1894	178.0976	155.3103
DIFFERENCES	-17.3706	15.1611	11.3797	-14.5902	1.8379

STANDARD ERROR OF A MEAN =

7.0955

95% CONFIDENCE LIMITS =

14.0131

STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =

10.0346

LEAST SIGNIFICANT DIFFERENCE (LSD) =

19.8175

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- 3 - LEVEL 3
- 4 - LEVEL 4
- 5 - LEVEL 5
- * - REPEATED SYMBOLS

PAGE 33
MEANS

[illegible]

105.40125.75146.10166.45186.80207.15227.50

105.40125,75146,10166,45186,80207,15227,50

TIME

MEANS

43

[illegible]

105.40125.75146.10166.45186.80207.15227.50

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 12

PAGE 35

PB LEVEL

*** TIME ***

TIME

35

X35 *

35

1	1	*	2	1	1
2	13	5	2	4	1
3	+	13	5	42	1
4	1	+	3	1	1
5	1	+	2	4	1
					4
					5
					+

PB LEVEL

TIME

105.40125.75146.10166.45186.80207.15227.50

105.40125.75146.10166.45186.80207.15227.50

*****ENDKUN

得黃黃黃黃黃

STOP

C

LOG NO 05380

DATE 080372 PAGE 285

DATE 08 MAR 72 PRIORITY D MAN/SEC 752701/55800 CARDS IN 1610 MAX PAGES 300 END TIME 15:02:4

IDENT YEATMAN SNEE CHARGE J6469 / CARDS OUT 0 PAGES 285 START TIME 15:01:1

DUP050310217

[illegible][illegible]

L6PDPA FOR23 L81B15 L80C22

L6UPDAL6P\$A-4

DOCA L6PMDA-5

L6ABSA L6ELTA=22

21/57/20-287

SY625F-SIGMA

1

1

PAGE

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 12

24 MONTH DATA

ONLY

*****CONST 100...1

*****OPCODES

OPCODES

ALB 1,902,1

MOV 1,902,1

MPY 1,901,801

LOG 801,802,10

MPY 802,901,802

OUT

40	1	902	1	0	1
9	1	902	1	0	2
3	1	901	801	0	3
8	801	802	10	0	4
3	802	901	802	0	5
999	0	0	0	0	6

*****FORMAT(16X,8F8.2/10F8.2)

*****DATA INOV=1

INPUT DATA MATRIX (DOES NOT INCLUDE TRANSFORMATIONS)

1	1	1	.09000
2	1	1	.22000
3	1	1	.09000
4	1	1	.17000
5	1	1	.15000
6	1	1	.28000
7	1	1	.00000
8	1	1	.08000
9	1	1	.16000
10	1	1	.26000
11	1	1	.05000
12	1	1	.17000
13	1	1	.14000
14	1	1	.22000
15	1	1	.33000
16	1	1	.14000
17	1	1	.21000
18	1	1	.39000
19	1	1	.21000
20	1	1	.39000
21	1	1	.21000
22	1	1	.06000
23	1	1	.23000
24	1	1	.15000
25	1	1	.26000
26	1	1	.11000
27	1	1	.17000
28	1	2	.17000

RAT LEAD FEEDING STUDY STUDY I RESPONSE 12

PAGE 3

29	1	2	.25000
30	1	2	.15000
31	1	2	.28000
32	1	2	.28000
33	1	2	.12000
34	1	2	.15000
35	1	2	.12000
36	1	2	.16000
37	1	2	.11000
38	1	2	.18000
39	1	2	.10000
40	1	2	.10000
41	1	2	.40000
42	1	2	.00000
43	1	2	.19000
44	1	2	.08000
45	1	2	.13000
46	1	2	.19000
47	1	2	.12000
48	1	2	.12000
49	1	2	.15000
50	1	2	.13000
51	1	2	.26000
52	1	2	.23000
53	1	2	.16000
54	1	2	.22000
55	1	2	.03000
56	2	1	.07000
57	2	1	.23000

DUP050310221

RAT LEAD FEEDING STUDY STUDY I RESPONSE 12

PAGE

4

4

58	2	1	.15000
59	2	1	.15000
60	2	1	.18000
61	2	1	.12000
62	2	1	.30000
63	2	1	.29000
64	2	1	.17000
65	2	1	.15000
66	2	1	.15000
67	2	1	.15000
68	2	1	.16000
69	2	2	.00000
70	2	2	.10000
71	2	2	.22000
72	2	2	.12000
73	2	2	.15000
74	2	2	.24000
75	2	2	.15000
76	2	2	.16000
77	2	2	.10000
78	2	2	.17000
79	2	2	.14000
80	2	2	.12000
81	2	2	.11000
82	2	2	.19000
83	2	2	.04000
84	2	2	.10000
85	3	1	.28000
86	3	1	.28000

RAT LEAD FEEDING STUDY STUDY I RESPONSE 12

PAGE

5

5

87	3	1	.39000
88	3	1	.36000
89	3	1	.34000
90	3	1	.27000
91	3	1	.47000
92	3	1	.20000
93	3	1	.25000
94	3	1	.09000
95	3	1	.36000
96	3	1	.39000
97	3	2	.28000
98	3	2	.21000
99	3	2	.42000
100	3	2	.30000
101	3	2	.23000
102	3	2	.27000
103	3	2	.25000
104	3	2	.21000
105	3	2	.24000
106	3	2	.27000
107	3	2	.61000
108	3	2	.25000
109	3	2	.29000
110	3	2	.20000
111	3	2	.29000
112	3	2	.58000
113	4	1	.17000
114	4	1	.23000
115	4	1	.53000

RAT LEAD FEEDING STUDY STUDY I RESPONSE 12

6

6

DUP050310223

115 4 1
.53000

RAT LEAD FEEDING STUDY STUDY I RESPONSE 12

PAGE 6

6

116 4 1
.55000

117 4 1
.58000

118 4 1
.41000

119 4 1
.52000

120 4 1
.74000

121 4 1
1.00000

122 4 1
.79000

123 4 1
.46000

124 4 1
.21000

125 4 1
.18000

126 4 2
.81000

127 4 2
.45000

128 4 2
.23000

129 4 2
.35000

130 4 2
.18000

131 4 2
1.02000

132 4 2
1.06000

133 4 2
.55000

134 4 2
.63000

135 4 2
.89000

136 4 2
.30000

137 4 2
1.26000

138 4 2
.66000

139 4 2
.90000

140 4 2
.72000

141 4 2
1.33000

142 4 2
.87000

143 5 1
1.17000

144 5 1
.48000

145	5	1	1.99000
146	5	1	3.01000
147	5	1	2.50000
148	5	1	1.50000
149	5	2	.92000
150	5	2	1.19000
151	5	2	1.82000
152	5	2	1.60000
153	5	2	1.28000
154	5	2	1.89000
155	5	2	1.15000
156	5	2	1.54000
157	5	2	2.14000
158	5	2	2.23000
159	5	2	1.55000
160	5	2	.70000
161	5	2	1.20000
162	5	2	3.88000

EXPANDED DATA MATRIX (IDENTIFICATION: INPUT DATA ROW NUMBER, EXPANDED DATA ROW NUMBER, FACTOR LEVELS)

LIVER PB	LOG LIVER PB
1 1	1 1
2 2	1 1
3 3	1 1
4 4	1 1
5 5	1 1

NO. OF INPUT DATA ROWS = 162
 NO. OF ROWS DELETED BY LOGICAL TESTS = 0
 NO. OF ROWS DELETED FOR MISSING DATA = 0
 NO. OF EXPANDED DATA ROWS REMAINING = 162

*****ANOVA

CELL IDENTIFICATION

CELL MEAN CELL VARIANCE CELL STANDARD DEVIATION NUMBER OF OBSERVATIONS

1 1	19.1481	72.0541	8.4885 *	27
1 2	17.0357	52.3320	7.2341 *	28
2 1	17.6923	36.5641	6.0468 *	13
2 2	14.1875	20.0292	4.4754 *	16
3 1	30.7500	97.6592	9.8823 *	12
3 2	30.5000	155.3334	12.4633 *	16
4 1	49.0000	648.8335	25.4722	13
4 2	71.7647	1197.6917	34.6077	17
5 1	209.1667	4606.1676	67.8688 *	6
5 2	164.9286	6074.5352	77.9393 *	14

MEAN OF THE CELL MEANS = 62.41736

WITHIN CELL VARIANCE = 897.22824
 WITHIN CELL STANDARD DEVIATION = 29.95377
 HARMONIC MEAN OF CELL SIZE = 13.66401
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .47989
 VARIANCE OF A CELL MEAN = 65.66361
 STANDARD ERROR OF A CELL MEAN = 8.10331

CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 35.88498
 LOWER CONTROL LIMIT = 15.01068
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 24.91 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

.....+ 8000.0000

1

1. 6000.0000

1

VARIANCES

4000-0000

2000.0000

3

1

1

1

• • •

1

X TILDA

E(10)	=	.8733	RESIDUAL FOR HIGHEST VALUE OF X YILDA
T FOR SLOPE	=	7.1677	STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T CRITICAL	=	2.2618	T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

80.4754

1

1

40,4754

7

11
21

STANDARD DEVIATIONS

[illegible]

CELL MEANS

7620.0291

1

3620.0291

1

VARIANČES

15

	+ + + +	
	<u>14.1875</u>	94.1875
		<u>174.1875</u>
		254.1875

CELL MEANS

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 12 EXPECTED MEAN SQUARE TABLE

SOURCE OF VARIATION EXPECTED MEAN SQUARE

A = PB LEVEL
B = SEX
AB
REPLICATES

REP + 2(A)
REP + 5(B)
REP + 1(AB)
REP

UNWEIGHTED ANALYSIS OF CELL MEANS

RESPONSE NUMBER 1

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	9	.42591+05		
A = PB LEVEL	4	.41345+05	.10336+05	157.41 **
B = SEX	1	.74751+02	.74751+02	1.14
AB	4	.11713+04	.29282+03	4.46 **
REPLICATES	152		.65664+02	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 1 LIVER PR

MEANS TABLES

PB LEVEL	MEANS				
0	18.0919	10	15.9399	50	30.6250
				100	60.3823
				500	187.0476
STANDARD ERROR OF A MEAN = 5.7299					
95% CONFIDENCE LIMITS = 11.3206					
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 8.1033					
LEAST SIGNIFICANT DIFFERENCE (LSD) = 16.0098					

SEX	MEANS				
MALE	65.1514	FEMALE	59.6833		
STANDARD ERROR OF A MEAN = 3.6239					
95% CONFIDENCE LIMITS = 7.1598					
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 5.1250					
LEAST SIGNIFICANT DIFFERENCE (LSD) = 10.1255					

PB LEVEL	* SEX	INTERACTION
----------	-------	-------------

PB LEVEL	SEX				
0	MALE	19.1481	FEMALE	17.0357	DIFFERENCES 2.1124
10		17.6923		14.1875	3.5048
50		30.7500		30.5000	.2500
100		49.0000		71.7647	-22.7647
500		209.1667		164.9286	44.2381

STANDARD ERROR OF A MEAN = 8.1033					
95% CONFIDENCE LIMITS = 16.0098					
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 11.4598					
LEAST SIGNIFICANT DIFFERENCE (LSD) = 22.6413					

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- * - REPEATED SYMBOLS

RAT LEAD FEEDING STUDY		STUDY 1		RESPONSE 12		SEX		PAGE		16		16	
PB LEVEL		MEANS		MEANS		MEANS		MEANS		MEANS		MEANS	
1	+	1	+	1	+	1	+	1	+	1	+	1	+
2	+	1	+	1	+	1	+	1	+	1	+	1	+
3	+	1	+	1	+	1	+	1	+	1	+	1	+
4	+	1	+	1	+	1	+	1	+	1	+	1	+
5	+	1	+	1	+	1	+	1	+	1	+	1	+
		8.40 42.85 77.30111.75146.20180.65215.10		8.40 42.85 77.30111.75146.20180.65215.10									

PB LEVEL						
2	+21	I	I	+	+	+
3	+	*	I	I	I	I
4	+	+	+	+	+	+
5	+	+	+	+	+	+
	2	I	I	I	I	I

RAT LEAD FEEDING STUDY STUDY 1 RESPONSE 12

PAGE 18

18

RESPONSE NUMBER 2 LOG LIVER PB

CELL IDENTIFICATION

CELL IDENTIFICATION	CELL MEAN	CELL VARIANCE	STANDARD DEVIATION	CELL DEVIATION	NUMBER OF OBSERVATIONS
1 1	124.3418	344.7584	18.5677	18.5677	27
1 2	119.9257	271.1622	16.4670	16.4670	28
2 1	122.6979	186.4977	13.6564	13.6564	13
2 2	113.3376	164.8556	12.8396	12.8396	16
3 1	146.0247	313.5194	17.7065	17.7065	12
3 2	145.8180	212.9246	14.5919	14.5919	16
4 1	162.7395	650.0552	25.4962 *	25.4962 *	13
4 2	179.4873	657.6863	25.6438 *	25.6438 *	17
5 1	229.9369	232.8657	15.2599	15.2599	6
5 2	217.9827	333.9008	18.2730	18.2730	14

MEAN OF THE CELL MEANS = 156.22920

WITHIN CELL VARIANCE = 338.59137
 WITHIN CELL STANDARD DEVIATION = 18.40085
 HARMONIC MEAN OF CELL SIZE = 13.66401
 COEFFICIENT OF VARIATION (STANDARD DEVIATION/GRAND MEAN) = .11778
 VARIANCE OF A CELL MEAN = 24.77979
 STANDARD ERROR OF A CELL MEAN = 4.97793

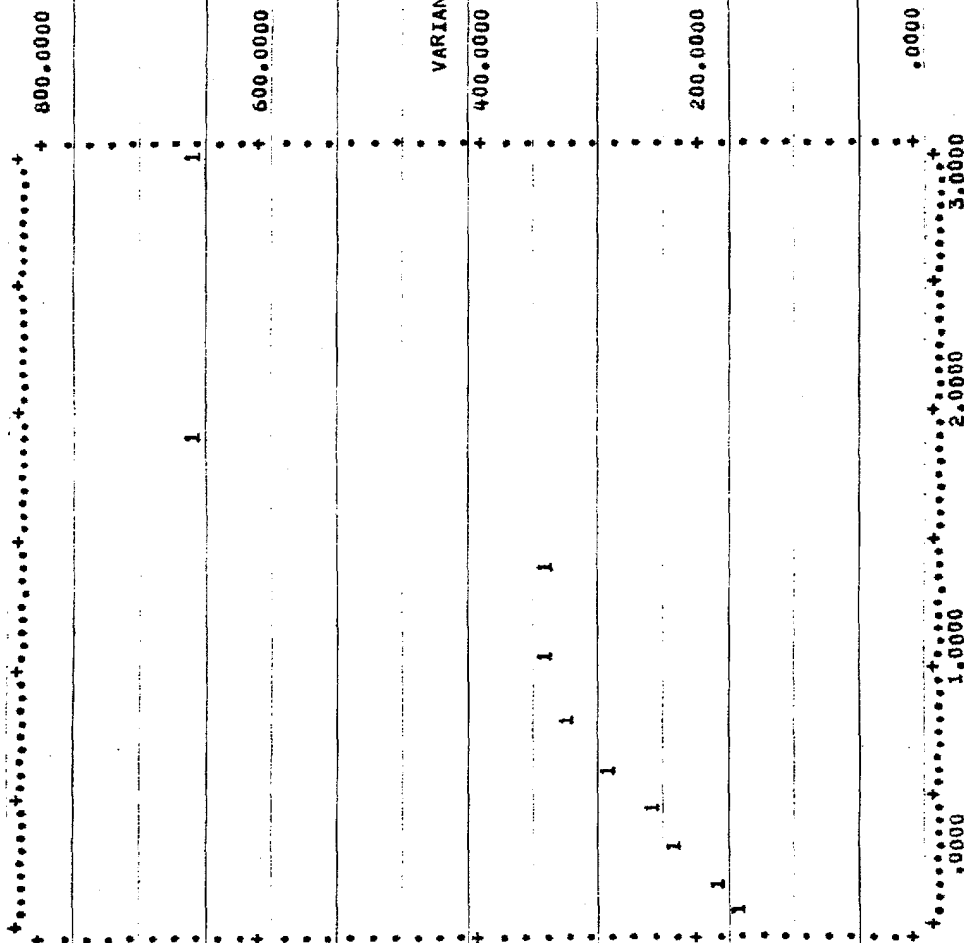
CONTROL LIMITS FOR THE STANDARD DEVIATION
 UPPER CONTROL LIMIT = 25.17127
 LOWER CONTROL LIMIT = 10.52913
 * DENOTES STANDARD DEVIATION OUTSIDE OF LIMITS

TEST FOR HOMOGENEITY OF WITHIN CELL SAMPLE SIZES

CHI SQUARE = 24.91 (SIGNIFICANT AT THE .05 PROBABILITY LEVEL)

A SIGNIFICANT CHI SQUARE STATISTIC INDICATES THAT THE ACCURACY OF THE UNWEIGHTED ANALYSIS OF MEANS MAY BE QUESTIONED.

THE GAMMA PLOT



X TILDA

RESIDUAL FOR HIGHEST VALUE OF X TILDA
STUDENTIZED SLOPE, Y=BX, (INTERCEPT=0)
T FOR ALPHA=.05, N-1 DEGREES OF FREEDOM

E(10) = -1.3249
T FOR SLOPE = 9.0477
T CRITICAL = 2.2618

.....+
+ 26.1396

[illegible]STANDARD
DEVIATIONS

734.8556

[illegible]

VARIANCES

1	113.3376	153.3376	193.3376	233.3376
+	+	+	+	+
1	113.3376	153.3376	193.3376	233.3376

UNWEIGHTED ANALYSIS OF CELL MEANS

RESPONSE NUMBER 2 LOG LIVER PB

ANOVA TABLE

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F RATIO
TOTAL	9	.15341+05		
A = PB LEVEL	4	.15076+05	3768.92047	152.10 **
B = SEX	1	.84446+01	8.44457	.34
AB	4	.25683+03	64.20751	2.59 *
REPLICATES	152		24.77979	

* SIGNIFICANT AT THE .05 PROBABILITY LEVEL (ONE-TAIL TEST)

** SIGNIFICANT AT THE .01 PROBABILITY LEVEL (ONE-TAIL TEST)

RESPONSE NUMBER 2 LOG LIVER PB

MEANS TABLES

PB LEVEL	MEANS				
0	122.1337	10	50	100	500
			118.0178	145.9213	171.1134
					223.9598
STANDARD ERROR OF A MEAN =					
95% CONFIDENCE LIMITS =					
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS =					
LEAST SIGNIFICANT DIFFERENCE (LSD) =					
					3.5199
					6.9544
					4.9779
					9.8350

SEX

MEANS

MALE FEMALE
157.1461 155.3103

STANDARD ERROR OF A MEAN = 2.2262
95% CONFIDENCE LIMITS = 4.3983
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 3.1483
LEAST SIGNIFICANT DIFFERENCE (LSD) = 6.2202

INTERACTION

* SEX

PB LEVEL

SEX

	MALE FEMALE DIFFERENCES	
0	129.3418	119.9257
10	122.6979	113.3376
50	146.0247	145.8180
100	162.7395	179.4873
500	229.9369	217.9827

STANDARD ERROR OF A MEAN = 4.9779
95% CONFIDENCE LIMITS = 9.8350
STANDARD ERROR OF THE DIFFERENCE BETWEEN TWO MEANS = 7.0399
LEAST SIGNIFICANT DIFFERENCE (LSD) = 13.9087

SYMBOLS USED IN 2- AND 3-WAY MEANS PLOTS

- 1 - LEVEL 1
- 2 - LEVEL 2
- * - REPEATED SYMBOLS

1	I + *	I +	I +	I +	1	I +	I +
2	I + *	I +	I +	I +	2	I +	I +
3	I + *	I +	I +	I +		I +	I +
4	I + *	I +	I +	I +		I +	I +
5	I + *	I +	I +	I +		I +	I +

109.90130.50151.10171.70192.30212.90233.50

	I	+	2I		I	+
	I				I	+
PB LEVEL	2	+2	I			+
	I			2I		+
	3	+				+
	I					+
	4	+		1	2	+
	I					+
	5	+				+
					2	+
	I					+

109,90180.50151.16171.70192.30212.90233.50

*****ENDRUN

◆◆◆◆◆

STOP

DUP050310244

LOG NO 00659

DATE 090372 PAGE 101

DATE 09 MAR 72 PRIORITY D MAN/SEC 752701/55800 CARDS IN 460 MAX PAGES 300 END TIME 17:49:34 MAX TIME 00:05:00

IDENT YEATMAN SNEE CHARGE JB469 / CARDS OUT 0 PAGES 101 START TIME 17:49:01 LILLED TIME 00:00:31