

US EPA ARCHIVE DOCUMENT

(9-7-94)

DP Barcode : D185172
PC Code No : 060101
EEB Out :

To: Barbara Briscoe
Product Manager 52
Special Review and Reregistration Division (H7508W)

From: Anthony F. Maciorowski, Chief
Ecological Effects Branch/EFED (H7507C)

Attached, please find the EEB review of...

Reg./File # : 060101-000618
Chemical Name : Thiabendazole
Type Product : fungicide
Product Name :
Company Name : Merck & Co. Inc.
Purpose : Review fish early life stage toxicity study.

Action Code: 603
Reviewer: Regina Hirsch

Date Due: 04/01/93

EEB Guideline/MRID Summary Table: The review in this package contains an evaluation of the following:

GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT
71-1(A)			72-2(A)			72-7(A)		
71-1(B)			72-2(B)			72-7(B)		
71-2(A)			72-3(A)			122-1(A)		
71-2(B)			72-3(B)			122-1(B)		
71-3			72-3(C)			122-2		
71-4(A)			72-3(D)			123-1(A)		
71-4(B)			72-3(E)			123-1(B)		
71-5(A)			72-3(F)			123-2		
71-5(B)			72-4(A)	925089-D1	Conc.	124-1		
72-1(A)			72-4(B)			124-2		
72-1(B)			72-5			141-1		
72-1(C)			72-6			141-2		
72-1(D)						141-5		

Y=Acceptable (Study satisfied Guideline)/Concur
P=Partial (Study partially fulfilled Guideline but additional information is needed)
S=Supplemental (Study provided useful information but Guideline was not satisfied)
N=Unacceptable (Study was rejected)/Nonconcur

DATA EVALUATION RECORD

1. **CHEMICAL:** Thiabendazole.
Shaughnessey No. 060101.
2. **TEST MATERIAL:** Thiabendazole; I.D. No. L-585216-000S159;
98.5% active ingredient; a white powder.
3. **STUDY TYPE:** 72-4. Freshwater Fish, Early Life-Stage, Flow-
Through Toxicity Test. Species Tested: Fathead Minnow
(*Pimephales promelas*).
4. **CITATION:** Holmes, C.M. and J.P. Swigert. 1992.
Thiabendazole: An Early Life-Stage Toxicity Test with the
Fathead Minnow (*Pimephales promelas*). Project No. 105A-111.
Prepared by Wildlife International Ltd., Easton, MD.
Submitted by Merck Research Laboratories, Three Bridges, NJ.
EPA MRID No. 425089-01.
5. **REVIEWED BY:**

Louis M. Rifici, M.S.
Associate Scientist
KBN Engineering and
Applied Sciences, Inc. **Signature:** *Louis M Rifici*

Date: *1/8/93*
6. **APPROVED BY:**

Pim Kosalwat, Ph.D.
Senior Scientist
KBN Engineering and
Applied Sciences, Inc. **Signature:** *P. Kosalwat*

Date: *1/8/93*
- Henry T. Craven, M.S.
Supervisor, EEB/EFED
USEPA **Signature:** *Henry T Craven*

Date: *9 4 94*
7. **CONCLUSIONS:** This study is scientifically sound and meets
the guideline requirements for an early life-stage toxicity
test using fathead minnows. The MATC was >0.11 and <0.23 mg
a.i./l mean measured concentration (geometric mean MATC =
0.16 mg a.i./l), based on the most sensitive biological
parameter, wet weight.
8. **RECOMMENDATIONS:** N/A.
9. **BACKGROUND:**

10. DISCUSSION OF INDIVIDUAL TESTS: N/A.

11. MATERIALS AND METHODS:

- A. Test Animals: Fertilized fathead minnow (*Pimephales promelas*) embryos were obtained from in-house cultures. The embryos were 2- to 24-hours old at test initiation. Embryos (from a minimum of three spawns) were removed from the spawning substrates and microscopically examined to select healthy specimens in approximately the same stage of development.
- B. Test System: A continuous-flow diluter with a dilution factor of 50% was used. The test material was dissolved in dimethylformamide (DMF) resulting in a 0.02 g/ml stock. Aliquots of the stock were diluted with DMF to prepare four additional stocks. The stocks were injected into the diluter mixing chambers. The flow of test solution from the mixing/splitting chambers into the test chambers provided 12 volume additions per day. The diluter was allowed to run for approximately 5 days prior to test initiation and was visually checked at least twice daily.

The test chambers were 9-1 glass aquaria each containing 7.5 l of test solution with a solution depth of approximately 17.5 cm. The test chambers were indiscriminately positioned in a temperature-controlled environmental chamber ($25 \pm 1^\circ\text{C}$) and illuminated (280 lux) with fluorescent tubes on a 16-hour light photoperiod. Thirty-minute dawn and dusk simulations were used.

The egg incubation cups were glass cylinders (50-mm diameter) with 425- μm nylon screen bottoms. Renewal of the solution in the egg cups was ensured using a rocker-arm apparatus which gently oscillated (2 rpm) the cups.

The dilution water was filtered, aerated, medium-hard well water. Average water quality during the 4 week period immediately preceding the test was a hardness of 140-144 mg/l as CaCO_3 , an alkalinity of 182-194 mg/l as CaCO_3 , a pH of 8.0-8.2, and a conductivity of 320-340 $\mu\text{mhos/cm}$.

- C. Dosage: Thirty-three-day flow-through test. Based on the results of acute toxicity testing, five nominal concentrations (0.12, 0.25, 0.50, 1.0, and 2.0 mg a.i./l), a solvent control, and a dilution water

control were used. The solvent concentration in the treatment and solvent control solutions was ≤ 0.10 ml/l.

- D. **Design:** Twenty fertilized embryos were impartially distributed (in groups of 2) to each of two egg cups per replicate (40 embryos per replicate and 80 embryos per treatment).

Seventeen and 24 hours after test initiation, dead embryos and embryos with fungus were counted and removed from the cups. "Dead eggs and eggs with fungus removed during the first 24 hours of the test were considered to represent natural mortality. All eggs that remained were considered viable." Dead embryos and fungused embryos were removed twice daily until hatching began. Hatching success was calculated as the percentage of viable embryos that hatched successfully during the first five days of the study. After hatching, the larvae were counted and released into their respective chambers. Observations of mortality, appearance, and sublethal effects were made daily. At termination, the wet weight, dry weight, and total length of the surviving fish were determined.

Newly-hatched larvae were fed live brine shrimp nauplii 3 times per day during the first 7 days post-hatch. On days 8 through 25 post-hatch, the fish were fed live brine shrimp nauplii three times daily on weekdays and at least twice daily on weekends. The quantity of food used was adjusted weekly to account for mortality. The fish were not fed during the last 48 hours of the test. The biomass loading rate was determined at test termination to be 0.028 g/l/day or 0.34 g/l at any given time.

The hardness, alkalinity, and conductivity of the negative control water was measured weekly and at the beginning and end of the test. The pH was measured in one replicate of each treatment and control group at test initiation and weekly thereafter. The dissolved oxygen concentration in alternating replicates of each test level was measured daily during the first 7 days of the test and weekly thereafter. The temperature in one replicate of each test level was measured at the beginning and end of the test and weekly during the test. The temperature of a control replicate was also monitored continuously using an electronic recorder.

Samples of the test solutions were taken on test days 0, 7, 14, 21, 28, and 33 for determination of the

concentration of thiabendazole by fluorescence detection.

- E. **Statistics:** Hatching success, larval survival, fish length, and fish weight data were analyzed statistically. Hatching success and survival data were arcsine square-root transformed before the analysis. Dilution water control and solvent control data were compared using t-tests. Hatching success and survival data met the assumptions of normality (chi-square test) and homogeneity of variance (Bartlett's test) and were analyzed using analysis of variance (ANOVA) and Bonferroni's test. The length and weight data did not meet the assumptions underlying parametric statistical testing and were therefore analyzed using the Mann-Whitney test. The 28-day LC_{50} value was calculated using the computer program developed by Stephan.
12. **REPORTED RESULTS:** A detectable quantity (0.06 mg/l) of the test material was found in the control solutions on day 28. The mean measured concentrations for the 33-day test were 0.11, 0.23, 0.50, 0.98, and 1.9 mg a.i./l (Table 1, attached).

Embryo hatching success and fry survival data were summarized as percentages in Tables 6 and 7 (attached), respectively. Mean hatching success in the two control groups was 91%. "There was an apparent treatment related reduction in hatching success at the 1.9 mg a.i./l test concentration." There were no treatment-related effects upon survival of fathead minnow larvae at test concentrations ≤ 0.98 mg a.i./l when compared to the pooled control results. The 28-day LC_{50} and 95% confidence interval were 1.4 mg a.i./l and 0.98-1.9 mg a.i./l, respectively.

Mean lengths, wet weights, and dry weights of the solvent control fish were slightly lower than dilution water control fish suggesting that the solvent affected growth (Table 8, attached). Wet weights of fish exposed to 0.23 and 0.50 mg a.i./l were significantly lower than solvent control wet weights. The length and dry weight parameters at these two levels were not significantly affected, however. All parameters were significantly affected at 0.98 mg a.i./l. Data for surviving fish at 1.9 mg a.i./l were not analyzed because only 10% of the fish survived to the end of the test.

Dissolved oxygen concentration and pH ranged from 5.9 to 8.8 mg/l (>60% of saturation at 25°C) and 8.0 to 8.3, respectively. The temperature range during the test was

24.6 to 25.3°C. The dilution water had a hardness of 144-148 mg/l as CaCO₃, an alkalinity of 188-194 mg/l as CaCO₃, and a conductivity of 340-380 μmhos/cm during the test.

13. STUDY AUTHOR'S CONCLUSIONS/QUALITY ASSURANCE MEASURES:

Based on reduced larval wet weight, the maximum acceptable toxicant concentration (MATC) for fathead minnows was >0.11 mg a.i./l and <0.23 mg a.i./l. The geometric mean MATC was 0.16 mg a.i./l.

Quality Assurance and good laboratory practices statements were included in the report, indicating that the study was conducted in accordance with USEPA Good Laboratory Practice Standards set forth in 40 CFR Part 160. Characterization of the test substance was the responsibility of the sponsor.

14. REVIEWER'S DISCUSSION AND INTERPRETATION OF STUDY RESULTS:

A. Test Procedure: The test procedures were generally in accordance with protocols recommended by the guidelines, but deviated from the SEP or ASTM (1992) as follows:

The test material was detected in all replicates of the dilution water and solvent control on test day 28.

No chemical characterization of the brine shrimp cysts used as food was included in the report.

The time to hatch was not given in the report.

B. Statistical Analysis: The reviewer used one-way ANOVA and Dunnett's test (Toxstat Version 3.3) to compare embryo hatching success in the exposure concentrations to that of the solvent control. There was no significant effect on hatching success based on the concentration of the test material (see attached printout 1). Survival data were not analyzed because the significant effect on survival at 1.9 mg a.i./l and at no other concentration was clearly evident upon inspection of the data (Table 7, attached).

The length, wet weight and dry weight raw data were analyzed using two-way ANOVA and Bonferroni's test (Systat 5.0). For all endpoints, dilution water control and solvent control responses were statistically similar, though average growth in the dilution water control was always greater than the solvent control (Table 8, attached). Wet weight in the 0.23, 0.98, and 1.9 mg a.i./l test levels was

significantly lower than solvent control wet weight (printout 3, attached). Concentrations ≥ 0.23 mg a.i./l were significantly lower than the dilution water control. Decreases in wet weight appeared to follow a concentration gradient, therefore 0.23 mg a.i./l will be used as the lowest observed effect concentration (LOEC) for this parameter.

Dry weight and length of fish exposed to the two highest concentrations were significantly lower than the solvent control (printouts 5 and 7, attached). When comparisons are made to the dilution water control, the 0.23 mg a.i./l concentration is also significantly lower than the control.

- C. **Discussion/Results:** The authors did not attempt to explain the contamination of the control solutions on day 28 (Table 1, attached). Since all solutions were contaminated with exactly the same amount of thiabendazole (0.06 mg a.i./l) which was close to the limit of quantitation (0.05 mg a.i./l), it is likely to be an analytical error or background noise rather than actual control contamination during the test.

This study is scientifically sound and meets the guideline requirements for an early life-stage toxicity test using fathead minnows. The MATC was >0.11 and <0.23 mg a.i./l mean measured concentration (geometric mean MATC = 0.16 mg a.i./l), based on the most sensitive biological parameter, wet weight.

- D. **Adequacy of the Study:**

- (1) **Classification:** Core.
- (2) **Rationale:** N/A.
- (3) **Repairability:** N/A.

15. **COMPLETION OF ONE-LINER FOR STUDY:** Yes, 01-05-93.

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Pages 8 through 11 are not included in this copy.

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425089-01, THIABENDAZOLE, HATCHING SUCCESS
 File: A:42508901.DT1 Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro Wilks test for normality
 Data PASS normality test at P=0.01 level. Continue analysis.

Bartlett's test for homogeneity of variance
 Data PASS homogeneity test at 0.01 level. Continue analysis.

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	6	0.074	0.012	1.978
Within (Error)	7	0.044	0.006	
Total	13	0.118		

Critical F value = 3.87 (0.05,6,7)
 Since F < Critical F FAIL TO REJECT Ho:All groups equal

DUNNETTS TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	SOLVENT CONTROL	1.258	0.905		
2	DILUTION CONTRL	1.266	0.905	-0.100	
3	0.11	1.258	0.905	0.000	
4	0.23	1.413	0.975	-1.954	
5	0.5	1.243	0.895	0.195	
6	0.98	1.299	0.920	-0.518	
7	1.9	1.148	0.830	1.392	

Dunnnett table value = 2.82 (1 Tailed Value, P=0.05, df=7,6)

DUNNETTS TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	SOLVENT CONTROL	2			
2	DILUTION CONTRL	2	0.166	18.3	0.000
3	0.11	2	0.166	18.3	0.000
4	0.23	2	0.166	18.3	-0.070
5	0.5	2	0.166	18.3	0.010
6	0.98	2	0.166	18.3	-0.015
7	1.9	2	0.166	18.3	0.075

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THIABENDAZOLE : FATHEAD MINNOW EARLY LIFE STAGE

ANOVA on wet weights

LEVELS ENCOUNTERED DURING PROCESSING ARE:

TRT 1.000 2.000 3.000 4.000 5.000 6.000
7.000

REP 1.000 2.000

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
TRT	67343.962	6	11223.994	27.161	0.000
REP	111.738	1	111.738	0.270	0.603
TRT*REP	1024.985	6	170.831	0.413	0.870
ERROR	148764.878	360	413.236		

LEAST SQUARES MEANS.

		MEAN	SD	(N)
TRT	= 1.000	76.107	18.042	61
TRT	= 2.000	84.020	25.331	57
TRT	= 3.000	77.739	21.134	58
TRT	= 4.000	63.257	19.884	70
TRT	= 5.000	66.536	19.882	58
TRT	= 6.000	46.988	17.399	64
TRT	= 7.000	20.667	6.312	6
TRT	= 1.000			
REP	= 1.000	77.881	18.294	31
TRT	= 1.000			
REP	= 2.000	74.333	17.908	30
TRT	= 2.000			
REP	= 1.000	83.741	29.491	27
TRT	= 2.000			
REP	= 2.000	84.300	21.427	30
TRT	= 3.000			
REP	= 1.000	75.223	17.551	31
TRT	= 3.000			
REP	= 2.000	80.256	24.692	27
TRT	= 4.000			
REP	= 1.000	60.920	19.491	35
TRT	= 4.000			
REP	= 2.000	65.594	20.279	35
TRT	= 5.000			
REP	= 1.000	64.497	17.961	30
TRT	= 5.000			
REP	= 2.000	68.575	21.889	28
TRT	= 6.000			
REP	= 1.000	47.877	17.814	30

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TRT	=	6.000			
REP	=	2.000	46.100	17.249	34
TRT	=	7.000			
REP	=	1.000	19.733	7.617	3
TRT	=	7.000			
REP	=	2.000	21.600	6.243	3

Post-hoc pairwise comparison of wet weight/Bonferroni.

COL/

ROW	TRT
1	1.000
2	2.000
3	3.000
4	4.000
5	5.000
6	6.000
7	7.000

USING LEAST SQUARES MEANS.

POST HOC TEST OF WETWEIGH

MATRIX OF PAIRWISE MEAN DIFFERENCES:

	1	2	3	4	5
1	0.000				
2	-7.913	0.000			
3	1.632	-6.281	0.000		
4	-12.850	-20.763	-14.482	0.000	
5	-9.571	-17.485	-11.203	3.279	0.000
6	-29.119	-37.032	-30.751	-16.269	-19.548
7	-55.440	-63.354	-57.072	-42.590	-45.869
	6	7			
6	0.000				
7	-26.322	0.000			

BONFERRONI ADJUSTMENT.

MATRIX OF PAIRWISE COMPARISON PROBABILITIES:

	1	2	3	4	5
1	1.000				
2	0.744	1.000			
3	1.000	1.000	1.000		
4	0.007	0.000	0.002	1.000	
5	0.224	0.000	0.068	1.000	1.000
6	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000
	6	7			
6	1.000				
7	0.055	1.000			

ANOVA on dry weight

LEVELS ENCOUNTERED DURING PROCESSING ARE:

TRT	1.000	2.000	3.000	4.000	5.000	6.000
	7.000					
REP	1.000	2.000				

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
TRT	1700.511	6	283.419	16.291	0.000
REP	0.112	1	0.112	0.006	0.936
TRT*REP	112.191	6	18.699	1.075	0.377
ERROR	6263.119	360	17.398		

LEAST SQUARES MEANS.

		MEAN	SD	(N)
TRT	= 1.000	12.574	3.593	61
TRT	= 2.000	14.455	5.161	57
TRT	= 3.000	13.676	3.729	58
TRT	= 4.000	11.909	4.196	70
TRT	= 5.000	12.375	4.255	58
TRT	= 6.000	8.741	4.108	64
TRT	= 7.000	2.950	1.141	6
TRT	= 1.000			
REP	= 1.000	12.835	3.732	31
TRT	= 1.000			
REP	= 2.000	12.313	3.486	30
TRT	= 2.000			
REP	= 1.000	14.774	5.882	27
TRT	= 2.000			
REP	= 2.000	14.137	4.497	30
TRT	= 3.000			
REP	= 1.000	13.571	3.194	31
TRT	= 3.000			
REP	= 2.000	13.781	4.322	27
TRT	= 4.000			
REP	= 1.000	11.103	4.292	35
TRT	= 4.000			
REP	= 2.000	12.714	3.998	35
TRT	= 5.000			
REP	= 1.000	12.043	3.720	30
TRT	= 5.000			
REP	= 2.000	12.707	4.809	28
TRT	= 6.000			
REP	= 1.000	9.627	4.509	30
TRT	= 6.000			

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REP	=	2.000	7.856	3.583	34
TRT	=	7.000			
REP	=	1.000	2.900	1.136	3
TRT	=	7.000			
REP	=	2.000	3.000	1.400	3

post-hoc pairwise comparison of dry weight using Bonferroni

COL/ ROW	TRT
1	1.000
2	2.000
3	3.000
4	4.000
5	5.000
6	6.000
7	7.000

USING LEAST SQUARES MEANS.

POST HOC TEST OF DRYWEIGH

MATRIX OF PAIRWISE MEAN DIFFERENCES:

	1	2	3	4	5
1	0.000				
2	1.881	0.000			
3	1.102	-0.779	0.000		
4	-0.666	-2.547	-1.768	0.000	
5	-0.199	-2.080	-1.301	0.467	0.000
6	-3.833	-5.714	-4.935	-3.167	-3.634
7	-9.624	-11.505	-10.726	-8.959	-9.425
	6	7			
6	0.000				
7	-5.791	0.000			

BONFERRONI ADJUSTMENT.

MATRIX OF PAIRWISE COMPARISON PROBABILITIES:

	1	2	3	4	5
1	1.000				
2	0.313	1.000			
3	1.000	1.000	1.000		
4	1.000	0.015	0.371	1.000	
5	1.000	0.166	1.000	1.000	1.000
6	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000
	6	7			
6	1.000				
7	0.026	1.000			

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THIABENDAZOLE : FATHEAD MINNOW EARLY LIFE STAGE
ANOVA on Lengths

LEVELS ENCOUNTERED DURING PROCESSING ARE:

TRT	1.000	2.000	3.000	4.000	5.000	6.000
	7.000					
REP	1.000	2.000				

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
TRT	358.074	6	59.679	14.471	0.000
REP	0.032	1	0.032	0.008	0.930
TRT*REP	40.057	6	6.676	1.619	0.141
ERROR	1484.637	360	4.124		

LEAST SQUARES MEANS.

		MEAN	SD	(N)
TRT	= 1.000	17.817	1.522	61
TRT	= 2.000	18.872	2.133	57
TRT	= 3.000	17.961	1.716	58
TRT	= 4.000	17.086	2.125	70
TRT	= 5.000	18.193	2.407	58
TRT	= 6.000	16.413	2.201	64
TRT	= 7.000	13.000	1.789	6
TRT	= 1.000			
REP	= 1.000	17.968	1.602	31
TRT	= 1.000			
REP	= 2.000	17.667	1.446	30
TRT	= 2.000			
REP	= 1.000	19.111	2.607	27
TRT	= 2.000			
REP	= 2.000	18.633	1.608	30
TRT	= 3.000			
REP	= 1.000	18.032	1.378	31
TRT	= 3.000			
REP	= 2.000	17.889	2.063	27
TRT	= 4.000			
REP	= 1.000	16.771	2.129	35
TRT	= 4.000			
REP	= 2.000	17.400	2.103	35
TRT	= 5.000			
REP	= 1.000	17.600	2.222	30
TRT	= 5.000			
REP	= 2.000	18.786	2.485	28
TRT	= 6.000			
REP	= 1.000	16.767	2.388	30

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TRT	=	6.000			
REP	=	2.000	16.059	1.999	34
TRT	=	7.000			
REP	=	1.000	13.000	2.000	3
TRT	=	7.000			
REP	=	2.000	13.000	2.000	3

Post-hoc pairwise comparison of length/Bonferroni.

COL/ ROW	TRT
1	1.000
2	2.000
3	3.000
4	4.000
5	5.000
6	6.000
7	7.000

USING LEAST SQUARES MEANS.

POST HOC TEST OF LENGTH

MATRIX OF PAIRWISE MEAN DIFFERENCES:

	1	2	3	4	5
1	0.000				
2	1.055	0.000			
3	0.143	-0.912	0.000		
4	-0.731	-1.787	-0.875	0.000	
5	0.376	-0.679	0.232	1.107	0.000
6	-1.404	-2.459	-1.548	-0.673	-1.780
7	-4.817	-5.872	-4.961	-4.086	-5.193
	6	7			
6	0.000				
7	-3.413	0.000			

BONFERRONI ADJUSTMENT.

MATRIX OF PAIRWISE COMPARISON PROBABILITIES:

	1	2	3	4	5
1	1.000				
2	0.107	1.000			
3	1.000	0.353	1.000		
4	0.850	0.000	0.334	1.000	
5	1.000	1.000	1.000	0.048	1.000
6	0.003	0.000	0.001	1.000	0.000
7	0.000	0.000	0.000	0.000	0.000
	6	7			
6	1.000				
7	0.002	1.000			

TOTAL OBSERVATIONS: 58

	REP	WETWEIGH	DRYWEIGH	LENGTH
N OF CASES	58	58	58	58
MINIMUM	1.000	3.700	0.900	11.000
MAXIMUM	2.000	102.700	20.400	22.000
MEAN	1.483	66.466	12.364	18.172
STANDARD DEV	0.504	19.882	4.255	2.407

THE FOLLOWING RESULTS ARE FOR:

TRT = 6.000

TOTAL OBSERVATIONS: 64

	REP	WETWEIGH	DRYWEIGH	LENGTH
N OF CASES	64	64	64	64
MINIMUM	1.000	16.100	1.500	12.000
MAXIMUM	2.000	93.900	25.000	21.000
MEAN	1.531	46.933	8.686	16.391
STANDARD DEV	0.503	17.399	4.108	2.201

THE FOLLOWING RESULTS ARE FOR:

TRT = 7.000

TOTAL OBSERVATIONS: 6

	REP	WETWEIGH	DRYWEIGH	LENGTH
N OF CASES	6	6	6	6
MINIMUM	1.000	14.100	2.000	11.000
MAXIMUM	2.000	28.800	4.600	15.000
MEAN	1.500	20.667	2.950	13.000
STANDARD DEV	0.548	6.312	1.141	1.789

KOLMOGOROV-SMIRNOV ONE SAMPLE TEST USING STANDARD NORMAL DISTRIBUTION

VARIABLE	N-OF-CASES	MAXDIF	PROBABILITY (2-TAIL)
REP	374.000	0.841	0.000
LENGTH	374.000	1.000	0.000
WETWEIGH	374.000	1.000	0.000
DRYWEIGH	374.000	0.976	0.000

TRT 1 = solvent control

TRT 2 = dilution water control

TRT 3 = 0.11 mg a.i./l

TRT 4 = 0.23

TRT 5 = 0.50

TRT 6 = 0.98

TRT 7 = 1.9

	TRT	REP	LENGTH	WETWEIGH	DRYWEIGH	
CASE	1	1.000	1.000	18.000	64.000	10.200
CASE	2	1.000	1.000	18.000	89.000	17.700
CASE	3	1.000	1.000	20.000	82.200	13.400
CASE	4	1.000	1.000	20.000	112.400	19.700
CASE	5	1.000	1.000	17.000	60.200	10.500
CASE	6	1.000	1.000	16.000	65.900	10.700
CASE	7	1.000	1.000	15.000	47.500	6.100
CASE	8	1.000	1.000	18.000	92.900	13.900
CASE	9	1.000	1.000	17.000	63.300	8.900
CASE	10	1.000	1.000	20.000	114.100	21.100
CASE	11	1.000	1.000	19.000	92.200	14.800
CASE	12	1.000	1.000	16.000	62.300	10.300
CASE	13	1.000	1.000	16.000	48.300	7.100
CASE	14	1.000	1.000	18.000	92.200	14.200
CASE	15	1.000	1.000	18.000	96.700	17.000
CASE	16	1.000	1.000	18.000	82.100	12.200
CASE	17	1.000	1.000	15.000	47.600	5.900
CASE	18	1.000	1.000	19.000	79.700	13.000
CASE	19	1.000	1.000	19.000	79.900	14.300
CASE	20	1.000	1.000	18.000	87.200	14.600
CASE	21	1.000	1.000	22.000	100.600	17.900
CASE	22	1.000	1.000	18.000	58.700	9.900
CASE	23	1.000	1.000	19.000	95.200	16.700
CASE	24	1.000	1.000	18.000	71.000	11.400
CASE	25	1.000	1.000	19.000	70.400	10.900
CASE	26	1.000	1.000	18.000	89.200	14.300
CASE	27	1.000	1.000	16.000	62.700	10.100
CASE	28	1.000	1.000	18.000	83.100	12.000
CASE	29	1.000	1.000	18.000	83.600	14.400
CASE	30	1.000	1.000	16.000	52.100	9.600
CASE	31	1.000	1.000	20.000	88.000	15.100
CASE	32	1.000	2.000	18.000	66.100	10.200
CASE	33	1.000	2.000	16.000	65.800	9.400
CASE	34	1.000	2.000	17.000	72.800	11.400
CASE	35	1.000	2.000	19.000	66.300	10.600
CASE	36	1.000	2.000	19.000	60.600	8.200
CASE	37	1.000	2.000	17.000	65.400	10.300
CASE	38	1.000	2.000	17.000	68.300	12.200
CASE	39	1.000	2.000	16.000	54.300	6.900
CASE	40	1.000	2.000	18.000	74.000	12.200
CASE	41	1.000	2.000	18.000	65.600	10.700
CASE	42	1.000	2.000	16.000	80.100	13.100
CASE	43	1.000	2.000	18.000	83.500	14.900
CASE	44	1.000	2.000	18.000	101.400	16.400
CASE	45	1.000	2.000	16.000	49.900	8.800
CASE	46	1.000	2.000	19.000	88.100	14.400
CASE	47	1.000	2.000	16.000	52.700	7.700
CASE	48	1.000	2.000	18.000	83.000	14.900
CASE	49	1.000	2.000	18.000	81.200	14.200
CASE	50	1.000	2.000	19.000	96.600	17.400
CASE	51	1.000	2.000	20.000	99.100	17.200
CASE	52	1.000	2.000	16.000	51.100	10.100
CASE	53	1.000	2.000	20.000	117.400	21.100
CASE	54	1.000	2.000	19.000	88.000	13.600

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CASE 55	1.000	2.000	17.000	56.600	8.600
CASE 56	1.000	2.000	18.000	82.700	14.100
CASE 57	1.000	2.000	17.000	67.400	11.100
CASE 58	1.000	2.000	14.000	36.500	6.300
CASE 59	1.000	2.000	17.000	90.300	15.600
CASE 60	1.000	2.000	19.000	74.300	12.100
CASE 61	1.000	2.000	20.000	90.900	15.700
CASE 62	2.000	1.000	21.000	79.200	13.900
CASE 63	2.000	1.000	19.000	62.200	10.600
CASE 64	2.000	1.000	21.000	104.400	18.800
CASE 65	2.000	1.000	17.000	65.600	11.000
CASE 66	2.000	1.000	16.000	47.100	7.900
CASE 67	2.000	1.000	19.000	75.600	13.300
CASE 68	2.000	1.000	23.000	131.500	24.100
CASE 69	2.000	1.000	11.000	19.500	2.600
CASE 70	2.000	1.000	16.000	41.300	5.400
CASE 71	2.000	1.000	19.000	82.400	15.300
CASE 72	2.000	1.000	18.000	77.700	14.000
CASE 73	2.000	1.000	22.000	90.100	14.700
CASE 74	2.000	1.000	17.000	52.600	8.600
CASE 75	2.000	1.000	19.000	103.000	18.900
CASE 76	2.000	1.000	18.000	74.300	12.800
CASE 77	2.000	1.000	19.000	72.800	11.800
CASE 78	2.000	1.000	22.000	120.600	22.000
CASE 79	2.000	1.000	21.000	123.000	23.000
CASE 80	2.000	1.000	22.000	117.400	21.100
CASE 81	2.000	1.000	21.000	104.400	19.300
CASE 82	2.000	1.000	16.000	61.000	9.300
CASE 83	2.000	1.000	21.000	93.400	16.700
CASE 84	2.000	1.000	21.000	150.600	28.000
CASE 85	2.000	1.000	17.000	63.500	11.300
CASE 86	2.000	1.000	19.000	76.600	13.900
CASE 87	2.000	1.000	21.000	93.300	17.200
CASE 88	2.000	1.000	20.000	77.900	13.400
CASE 89	2.000	2.000	18.000	73.400	12.400
CASE 90	2.000	2.000	17.000	62.600	10.200
CASE 91	2.000	2.000	20.000	92.100	16.000
CASE 92	2.000	2.000	19.000	72.700	11.400
CASE 93	2.000	2.000	21.000	116.700	19.800
CASE 94	2.000	2.000	20.000	98.000	17.900
CASE 95	2.000	2.000	18.000	79.300	13.400
CASE 96	2.000	2.000	21.000	104.900	18.200
CASE 97	2.000	2.000	19.000	80.600	13.500
CASE 98	2.000	2.000	15.000	39.800	5.600
CASE 99	2.000	2.000	18.000	70.200	10.700
CASE 100	2.000	2.000	17.000	68.500	11.200
CASE 101	2.000	2.000	18.000	80.600	13.700
CASE 102	2.000	2.000	17.000	80.300	13.000
CASE 103	2.000	2.000	20.000	114.200	19.400
CASE 104	2.000	2.000	19.000	73.700	12.600
CASE 105	2.000	2.000	18.000	63.800	11.300
CASE 106	2.000	2.000	21.000	128.500	23.900
CASE 107	2.000	2.000	16.000	53.900	8.800
CASE 108	2.000	2.000	19.000	107.400	18.200
CASE 109	2.000	2.000	20.000	106.100	17.900
CASE 110	2.000	2.000	18.000	99.800	17.500
CASE 111	2.000	2.000	19.000	70.500	11.600
CASE 112	2.000	2.000	19.000	60.500	9.800
CASE 113	2.000	2.000	20.000	115.900	20.300
CASE 114	2.000	2.000	18.000	96.300	15.800
CASE 115	2.000	2.000	20.000	97.700	16.500
CASE 116	2.000	2.000	21.000	89.600	18.800
CASE 117	2.000	2.000	16.000	62.700	5.200
CASE 118	2.000	2.000	17.000	68.700	9.500
CASE 119	3.000	1.000	19.000	93.900	16.900
CASE 120	3.000	1.000	17.000	66.000	11.700
CASE 121	3.000	1.000	19.000	83.600	14.500
CASE 122	3.000	1.000	19.000	65.100	11.800
CASE 123	3.000	1.000	20.000	90.700	16.400

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CASE 124	3.000	1.000	19.000	90.300	17.300
CASE 125	3.000	1.000	20.000	79.900	15.300
CASE 126	3.000	1.000	18.000	78.600	14.600
CASE 127	3.000	1.000	19.000	104.500	20.200
CASE 128	3.000	1.000	18.000	77.800	13.300
CASE 129	3.000	1.000	21.000	101.100	17.400
CASE 130	3.000	1.000	17.000	49.500	9.600
CASE 131	3.000	1.000	16.000	61.600	10.400
CASE 132	3.000	1.000	17.000	56.100	9.900
CASE 133	3.000	1.000	18.000	79.400	14.700
CASE 134	3.000	1.000	17.000	65.700	11.900
CASE 135	3.000	1.000	18.000	68.600	11.700
CASE 136	3.000	1.000	18.000	81.000	14.400
CASE 137	3.000	1.000	17.000	57.700	9.500
CASE 138	3.000	1.000	18.000	83.200	13.700
CASE 139	3.000	1.000	17.000	58.600	10.400
CASE 140	3.000	1.000	20.000	96.500	16.700
CASE 141	3.000	1.000	18.000	73.600	14.300
CASE 142	3.000	1.000	16.000	48.000	9.000
CASE 143	3.000	1.000	19.000	97.900	16.900
CASE 144	3.000	1.000	19.000	73.900	14.300
CASE 145	3.000	1.000	18.000	50.300	8.100
CASE 146	3.000	1.000	16.000	65.600	12.400
CASE 147	3.000	1.000	17.000	84.200	15.900
CASE 148	3.000	1.000	19.000	106.500	18.700
CASE 149	3.000	1.000	15.000	42.500	8.800
CASE 150	3.000	2.000	18.000	96.600	18.200
CASE 151	3.000	2.000	17.000	96.100	17.700
CASE 152	3.000	2.000	19.000	83.600	14.800
CASE 153	3.000	2.000	20.000	115.800	19.500
CASE 154	3.000	2.000	16.000	60.700	11.800
CASE 155	3.000	2.000	15.000	42.100	6.300
CASE 156	3.000	2.000	17.000	68.200	12.900
CASE 157	3.000	2.000	21.000	127.800	19.200
CASE 158	3.000	2.000	14.000	33.800	6.400
CASE 159	3.000	2.000	20.000	103.900	18.900
CASE 160	3.000	2.000	20.000	101.400	19.700
CASE 161	3.000	2.000	19.000	102.200	16.800
CASE 162	3.000	2.000	19.000	107.900	18.200
CASE 163	3.000	2.000	20.000	88.300	14.000
CASE 164	3.000	2.000	15.000	35.400	6.400
CASE 165	3.000	2.000	16.000	52.100	8.600
CASE 166	3.000	2.000	16.000	65.700	10.600
CASE 167	3.000	2.000	15.000	43.900	7.400
CASE 168	3.000	2.000	17.000	73.900	13.400
CASE 169	3.000	2.000	20.000	89.500	15.100
CASE 170	3.000	2.000	19.000	84.300	13.800
CASE 171	3.000	2.000	22.000	106.900	19.600
CASE 172	3.000	2.000	19.000	78.000	14.600
CASE 173	3.000	2.000	17.000	78.000	11.000
CASE 174	3.000	2.000	17.000	70.800	11.800
CASE 175	3.000	2.000	18.000	85.000	12.500
CASE 176	3.000	2.000	17.000	75.000	12.900
CASE 177	4.000	1.000	20.000	110.700	20.200
CASE 178	4.000	1.000	16.000	57.700	11.400
CASE 179	4.000	1.000	17.000	52.800	9.300
CASE 180	4.000	1.000	20.000	82.200	14.700
CASE 181	4.000	1.000	16.000	48.200	8.800
CASE 182	4.000	1.000	15.000	45.700	8.400
CASE 183	4.000	1.000	19.000	73.500	13.100
CASE 184	4.000	1.000	16.000	51.300	10.000
CASE 185	4.000	1.000	17.000	54.300	10.800
CASE 186	4.000	1.000	17.000	60.200	11.300
CASE 187	4.000	1.000	17.000	70.200	12.400
CASE 188	4.000	1.000	19.000	76.500	13.400
CASE 189	4.000	1.000	15.000	46.700	8.800
CASE 190	4.000	1.000	16.000	56.100	7.600
CASE 191	4.000	1.000	18.000	81.500	12.400
CASE 192	4.000	1.000	18.000	58.400	10.700

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CASE 193	4.000	1.000	15.000	46.800	6.600
CASE 194	4.000	1.000	15.000	39.700	6.700
CASE 195	4.000	1.000	14.000	29.200	4.900
CASE 196	4.000	1.000	16.000	54.500	9.700
CASE 197	4.000	1.000	18.000	74.500	13.700
CASE 198	4.000	1.000	21.000	107.400	20.200
CASE 199	4.000	1.000	18.000	71.300	14.400
CASE 200	4.000	1.000	19.000	79.400	13.500
CASE 201	4.000	1.000	17.000	56.100	10.000
CASE 202	4.000	1.000	19.000	77.000	23.500
CASE 203	4.000	1.000	14.000	41.200	5.700
CASE 204	4.000	1.000	19.000	75.900	13.200
CASE 205	4.000	1.000	14.000	39.000	6.600
CASE 206	4.000	1.000	19.000	86.100	16.300
CASE 207	4.000	1.000	17.000	58.400	10.600
CASE 208	4.000	1.000	12.000	28.700	6.400
CASE 209	4.000	1.000	16.000	49.000	6.700
CASE 210	4.000	1.000	15.000	53.200	9.600
CASE 211	4.000	1.000	13.000	38.800	7.000
CASE 212	4.000	2.000	13.000	34.300	6.100
CASE 213	4.000	2.000	17.000	58.700	11.000
CASE 214	4.000	2.000	17.000	55.600	9.400
CASE 215	4.000	2.000	19.000	87.300	16.700
CASE 216	4.000	2.000	18.000	78.400	13.400
CASE 217	4.000	2.000	16.000	47.600	9.100
CASE 218	4.000	2.000	20.000	76.700	13.700
CASE 219	4.000	2.000	19.000	73.600	15.100
CASE 220	4.000	2.000	20.000	97.800	19.100
CASE 221	4.000	2.000	18.000	60.100	13.200
CASE 222	4.000	2.000	20.000	90.700	16.900
CASE 223	4.000	2.000	16.000	52.800	10.300
CASE 224	4.000	2.000	13.000	21.800	3.700
CASE 225	4.000	2.000	17.000	78.700	14.800
CASE 226	4.000	2.000	18.000	65.000	13.200
CASE 227	4.000	2.000	18.000	61.900	11.400
CASE 228	4.000	2.000	19.000	73.000	13.600
CASE 229	4.000	2.000	20.000	89.700	16.200
CASE 230	4.000	2.000	12.000	17.200	3.200
CASE 231	4.000	2.000	19.000	68.300	13.400
CASE 232	4.000	2.000	18.000	66.200	12.000
CASE 233	4.000	2.000	19.000	88.200	17.000
CASE 234	4.000	2.000	17.000	64.900	13.300
CASE 235	4.000	2.000	19.000	103.200	21.400
CASE 236	4.000	2.000	17.000	70.900	13.300
CASE 237	4.000	2.000	16.000	43.100	8.900
CASE 238	4.000	2.000	14.000	43.400	9.700
CASE 239	4.000	2.000	16.000	61.200	12.000
CASE 240	4.000	2.000	20.000	83.600	17.200
CASE 241	4.000	2.000	18.000	89.900	17.900
CASE 242	4.000	2.000	16.000	46.800	9.100
CASE 243	4.000	2.000	19.000	70.600	14.100
CASE 244	4.000	2.000	18.000	65.800	12.300
CASE 245	4.000	2.000	18.000	65.400	13.900
CASE 246	4.000	2.000	15.000	43.400	9.400
CASE 247	5.000	1.000	15.000	56.300	10.600
CASE 248	5.000	1.000	18.000	53.500	8.900
CASE 249	5.000	1.000	20.000	85.300	15.700
CASE 250	5.000	1.000	17.000	57.500	10.000
CASE 251	5.000	1.000	18.000	64.500	10.500
CASE 252	5.000	1.000	11.000	27.400	4.000
CASE 253	5.000	1.000	17.000	56.400	11.200
CASE 254	5.000	1.000	17.000	73.200	15.000
CASE 255	5.000	1.000	16.000	51.500	10.300
CASE 256	5.000	1.000	19.000	79.900	15.300
CASE 257	5.000	1.000	20.000	89.900	17.700
CASE 258	5.000	1.000	22.000	89.800	18.000
CASE 259	5.000	1.000	17.000	42.900	8.000
CASE 260	5.000	1.000	18.000	65.500	12.700
CASE 261	5.000	1.000	16.000	40.300	7.400

CASE 262	5.000	1.000	16.000	55.500	10.300
CASE 263	5.000	1.000	17.000	56.900	10.000
CASE 264	5.000	1.000	19.000	87.200	17.000
CASE 265	5.000	1.000	19.000	67.200	12.600
CASE 266	5.000	1.000	17.000	49.600	8.600
CASE 267	5.000	1.000	17.000	59.300	10.600
CASE 268	5.000	1.000	14.000	40.400	6.500
CASE 269	5.000	1.000	19.000	70.200	13.600
CASE 270	5.000	1.000	22.000	102.700	18.800
CASE 271	5.000	1.000	18.000	67.500	13.100
CASE 272	5.000	1.000	20.000	91.600	16.700
CASE 273	5.000	1.000	17.000	58.400	10.600
CASE 274	5.000	1.000	17.000	52.000	10.000
CASE 275	5.000	1.000	19.000	85.600	16.600
CASE 276	5.000	1.000	16.000	56.900	11.000
CASE 277	5.000	2.000	21.000	101.200	20.200
CASE 278	5.000	2.000	15.000	42.800	7.400
CASE 279	5.000	2.000	18.000	75.800	13.000
CASE 280	5.000	2.000	13.000	32.700	1.800
CASE 281	5.000	2.000	18.000	70.200	11.000
CASE 282	5.000	2.000	20.000	82.800	14.300
CASE 283	5.000	2.000	22.000	95.400	18.800
CASE 284	5.000	2.000	17.000	52.500	8.800
CASE 285	5.000	2.000	20.000	101.200	18.800
CASE 286	5.000	2.000	21.000	88.700	17.100
CASE 287	5.000	2.000	17.000	54.800	7.200
CASE 288	5.000	2.000	21.000	75.200	14.800
CASE 289	5.000	2.000	11.000	3.700	0.900
CASE 290	5.000	2.000	19.000	58.900	13.200
CASE 291	5.000	2.000	21.000	86.500	17.000
CASE 292	5.000	2.000	18.000	58.800	10.200
CASE 293	5.000	2.000	20.000	65.200	12.900
CASE 294	5.000	2.000	18.000	62.800	11.800
CASE 295	5.000	2.000	19.000	68.500	13.000
CASE 296	5.000	2.000	21.000	102.400	20.400
CASE 297	5.000	2.000	20.000	68.300	13.400
CASE 298	5.000	2.000	20.000	82.000	15.400
CASE 299	5.000	2.000	20.000	77.500	14.700
CASE 300	5.000	2.000	19.000	68.800	13.800
CASE 301	5.000	2.000	18.000	51.200	9.500
CASE 302	5.000	2.000	19.000	50.500	9.200
CASE 303	5.000	2.000	19.000	61.500	11.300
CASE 304	5.000	2.000	21.000	80.200	15.900
CASE 305	6.000	1.000	16.000	40.200	7.700
CASE 306	6.000	1.000	14.000	43.600	7.700
CASE 307	6.000	1.000	15.000	31.500	6.700
CASE 308	6.000	1.000	16.000	55.400	11.100
CASE 309	6.000	1.000	20.000	66.500	12.900
CASE 310	6.000	1.000	15.000	34.300	6.200
CASE 311	6.000	1.000	17.000	43.900	8.100
CASE 312	6.000	1.000	12.000	16.100	25.000
CASE 313	6.000	1.000	14.000	24.500	3.600
CASE 314	6.000	1.000	14.000	32.100	5.500
CASE 315	6.000	1.000	17.000	45.000	6.600
CASE 316	6.000	1.000	15.000	33.700	5.500
CASE 317	6.000	1.000	17.000	53.600	9.800
CASE 318	6.000	1.000	17.000	43.000	8.000
CASE 319	6.000	1.000	14.000	27.000	4.600
CASE 320	6.000	1.000	17.000	45.300	9.300
CASE 321	6.000	1.000	20.000	69.200	13.400
CASE 322	6.000	1.000	17.000	57.500	11.900
CASE 323	6.000	1.000	15.000	36.200	7.100
CASE 324	6.000	1.000	21.000	93.900	18.400
CASE 325	6.000	1.000	17.000	52.600	9.800
CASE 326	6.000	1.000	16.000	42.600	8.400
CASE 327	6.000	1.000	16.000	40.600	8.300
CASE 328	6.000	1.000	18.000	55.100	6.500
CASE 329	6.000	1.000	16.000	41.400	9.600
CASE 330	6.000	1.000	21.000	80.200	15.100

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CASE	331	6.000	1.000	16.000	32.100	6.000
CASE	332	6.000	1.000	21.000	69.600	13.600
CASE	333	6.000	1.000	18.000	50.600	7.800
CASE	334	6.000	1.000	21.000	79.000	14.600
CASE	335	6.000	2.000	18.000	68.900	12.000
CASE	336	6.000	2.000	17.000	46.800	9.200
CASE	337	6.000	2.000	14.000	30.000	4.100
CASE	338	6.000	2.000	18.000	54.100	9.700
CASE	339	6.000	2.000	19.000	77.900	14.800
CASE	340	6.000	2.000	19.000	62.800	10.200
CASE	341	6.000	2.000	13.000	22.700	3.800
CASE	342	6.000	2.000	16.000	39.200	7.200
CASE	343	6.000	2.000	14.000	27.900	3.600
CASE	344	6.000	2.000	15.000	36.700	5.700
CASE	345	6.000	2.000	17.000	67.100	12.600
CASE	346	6.000	2.000	18.000	76.200	13.800
CASE	347	6.000	2.000	13.000	18.500	1.500
CASE	348	6.000	2.000	17.000	67.300	12.200
CASE	349	6.000	2.000	17.000	50.200	8.800
CASE	350	6.000	2.000	18.000	54.100	10.300
CASE	351	6.000	2.000	17.000	60.000	10.200
CASE	352	6.000	2.000	14.000	28.000	5.200
CASE	353	6.000	2.000	19.000	60.400	10.900
CASE	354	6.000	2.000	14.000	19.200	2.300
CASE	355	6.000	2.000	13.000	33.100	4.800
CASE	356	6.000	2.000	15.000	45.600	8.100
CASE	357	6.000	2.000	14.000	27.000	3.000
CASE	358	6.000	2.000	15.000	33.400	4.800
CASE	359	6.000	2.000	19.000	63.400	10.900
CASE	360	6.000	2.000	15.000	36.300	4.900
CASE	361	6.000	2.000	16.000	42.200	6.800
CASE	362	6.000	2.000	17.000	56.800	11.000
CASE	363	6.000	2.000	18.000	59.800	10.300
CASE	364	6.000	2.000	13.000	19.400	2.400
CASE	365	6.000	2.000	17.000	49.300	7.500
CASE	366	6.000	2.000	15.000	42.200	8.100
CASE	367	6.000	2.000	18.000	60.200	10.400
CASE	368	6.000	2.000	14.000	30.700	6.000
CASE	369	7.000	1.000	13.000	16.700	2.400
CASE	370	7.000	1.000	15.000	28.400	4.200
CASE	371	7.000	1.000	11.000	14.100	2.100
CASE	372	7.000	2.000	13.000	17.700	2.400
CASE	373	7.000	2.000	11.000	18.300	2.000
CASE	374	7.000	2.000	15.000	28.800	4.600

TITLE: 425089-01, THIABENDAZOLE, HATCHING SUCCESS

FILE: A:42508901.DT1

TRANSFORM: ARC SINE(SQUARE ROOT(Y))

NUMBER OF GROUPS: 7

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	SOLVENT CONTROL	1	0.9200	1.2840
1	SOLVENT CONTROL	2	0.8900	1.2327
2	DILUTION CONTROL	1	0.8600	1.1873
2	DILUTION CONTRL	2	0.9500	1.3453
3	0.11	1	0.9200	1.2840
3	0.11	2	0.8900	1.2327
4	0.23	1	0.9800	1.4289
4	0.23	2	0.9700	1.3967
5	0.5	1	0.9200	1.2840
5	0.5	2	0.8700	1.2019
6	0.98	1	0.8700	1.2019
6	0.98	2	0.9700	1.3967
7	1.9	1	0.7900	1.0948
7	1.9	2	0.8700	1.2019

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