

Simulation Results for the AOT425StatPgm Program

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Simulation Results for the AOT425StatPgm Program

**Prepared for the US Environmental Protection Agency
By Westat, June 2001**

1. Introduction

Westat developed the AOT425StatPgm program to perform the statistical calculations associated with the "OECD GUIDELINE FOR THE TESTING OF CHEMICALS, Section 4: Health Effects Test No. 425, Acute Oral Toxicity: Up-and-Down Procedure" referred to here as the OECD TG 425 procedure. The program recommended a dose for each animal, determined when dosing should stop, and calculated the LD50 estimate and a confidence interval.

AOT425StatPgm has a simulation component (that is not in the final user version). The simulation component generates simulated test results and calculates the LD50 and confidence intervals for those test results. The simulations are defined by a set of parameters called a simulation scenario. The scenario parameters include the following.

Test Type (Limit or Main)
Limit Dose (2000 or 5000)
True LD50
True Sigma
Assumed LD50
Assumed Sigma
Smallest Usable Dose
LogLD50 Standard Deviation
Number of Simulated Tests

The LogLD50 Standard Deviation parameter allows simulating actual doses that vary around the recommended dose. If the LogLD50 Standard Deviation is set to zero, the simulated doses are all equal to the recommended doses. If the standard deviation is greater than zero, the simulated doses have a normal distribution on the log scale, with mean at the recommended dose. When the LogLD50 Standard Deviation is zero, the doses are being referred to as the recommended doses. When the LogLD50 Standard Deviation is greater than zero, the doses are referred to as the actual doses.

The simulations serve two purposes:

- 1) To test the calculations performed by the program, and
- 2) To determine the statistical performance of the OECD TG 425 procedure.

This document discusses only the statistical performance of the OECD TG 425 procedure as implemented in the AOT425StatPgm program. This document assumes the reader is familiar with the OECD TG 425 guidelines and the AOT425StatPgm program. Because the results are presented, in large part, in plots that use color to distinguish different results, printing the document on a color printer or viewing the document on a computer screen is recommended.

The simulations assumed that the long-term and short-term outcomes (death or survival) were the same.

2. Simulation Scenarios

Two simulation sets, each with multiple scenarios, were used for testing the Main Test.

If X is a dose, define the relative dose as:

$$\text{Relative LD50} = (\text{Log}_{10}(X) - \text{Log}_{10}(\text{True LD50})) / \text{True Sigma}$$

By substituting different estimates of the LD50 for X in the equation above, the relative estimated LD50 (RLD50), relative assumed LD50 (RelALD50), the relative upper confidence bound (RelUCL) and the relative lower confidence bound (RelLCL) can be calculated.

Note that the relative LD50 is defined on the log scale, not the dose scale. Sigma is also defined on the log scale. Thus a value of 1.0 on the relative LD50 scale corresponds to 1) a dose is greater than the true LD50 by a factor of $10^{**}(\text{True Sigma})$, or 2) a log dose that is greater than the $\text{log}(\text{True LD50})$ by True Sigma.

Define the relative assumed sigma as $\text{Assumed Sigma} / \text{True Sigma}$. The statistical performance of the OECD TG 425 procedure can be summarized using the relative estimated LD50. With a few exceptions, the distribution of the relative estimated LD50 depends only on the relative assumed LD50 and the relative assumed sigma. The two exceptions to the generalization above are:

- 1) The calculations for the likelihood ratio stopping criteria use a fixed ratio for the LD50s (comparing LD50's greater and less than the dose averaging estimator by a factor of 2.5, the factor of 2.5 is not a function of the assumed sigma).
- 2) The performance near the Limit Dose (and the Smallest Usable Dose, if defined) affects the distribution in a manner that is unrelated to the relative assumed LD50 and sigma.

For the first set of scenarios, the relative estimated LD50 was analyzed as function of the relative assumed LD50 and relative assumed sigma, holding the true LD50 and true sigma fixed. For the second set of scenarios, the relative estimated LD50 was analyzed as a function of true LD50, true sigma, and starting dose, holding the assumed sigma fixed.

One thousand simulated tests were generated for each simulation scenario.

Set 1

The first set of scenarios tested the statistical performance by using the same true LD50 and true sigma for all scenarios and changing the assumed LD50 and assumed sigma. The true LD50 was set at $1e-60$ so that the Limit Dose was never reached. The true sigma was set to 0.5, the default assumed sigma in the program.

The first set of scenarios used all combinations of relative assumed LD50 from -4.0 to 4.0 (i.e., for a true sigma of 0.5, the assumed LD50 is within a factor of 100 of the true LD50) and relative sigma from 0.18 to 5.66, using the following values:

Relative LD50 = -4, -3.67, -3.34, -3, -2.67, -2.33, -2, -1.67, -1.34, -1, -0.67, -0.33, 0, 0.33, 0.66, 1, 1.33, 1.67, 2, 2.33, 2.66, 3, 3.33, 3.67, 4, and

Relative Sigma = 0.18, 0.25, 0.35, 0.50, 0.71, 1.00, 1.41, 2.00, 2.83, 4.00, 5.66

Because the true sigma was set to 0.5, the assumed sigma went from 0.09 to 2.83 (or assumed slope from 0.35 to 11.3). The results are presented in terms of the assumed sigma instead of the relative assumed sigma.

The first set of scenarios was run twice, once setting the standard deviation of the dose to zero to simulate the recommended dose and once setting the standard deviation to $0.1 \times \text{Assumed Sigma}$ to simulate the actual dose.

Set 2

The second set of scenarios simulated the performance when the Limit Dose and the Smallest Usable Dose were defined. These simulations used different values for the True LD50, True Sigma, and starting dose. The value for Assumed Sigma was set to 0.5, the default value.

This set of scenarios was run with four different values for the starting dose:

- 1) 175 mg/kg (the default value)
- 2) The true LD50
- 3) The true LD30, and
- 4) The true LD80

The scenarios used every combination of True LD50 from 1 to 10,000 and True Sigma from 0.125 to 2.0 (slopes from 0.5 to 8), using the following values:

True LD50 = 1, 1.3, 1.6, 2, 2.5, 3, 4, 5, 6.3, 8, 10, 13, 16, 20, 25, 30, 40, 50, 63, 80, 100, 130, 160, 200, 250, 300, 400, 500, 630, 800, 1000, 1300, 1600, 2000, 2500, 3000, 4000, 5000, 6300, 8000, and 10000. These values were selected to give approximately equally-spaced doses on the log scale and doses that coincide with the cut-points for the globally harmonized categories.

True sigma = 0.125, 0.25, 0.5, 1, and 2.

For these scenarios, the smallest usable dose was 1.0 and the Limit Dose was 5000. The simulation results are increasingly affected by the limit dose as the true LD50 approaches the limit dose. When the true LD50 is far from the limit dose, the limit dose has little effect on the simulation results. For true doses close to the limit dose, the patterns in the simulation results are expected to be the same regardless of the limit dose. Conclusions about the performance of the OECD TG 425 procedure are expected to be the same when using a limit dose of 2000 or 5000. Therefore, the simulations were not run using both a limit dose of 2000 and a limit dose of 5000.

Set 3

The third set of simulations was performed to evaluate the performance of the limit test.

The AOT425StatPgm program was used to simulate limit tests with the following values for the true LD50 and True Sigma:

True LD50 = 100, 130, 160, 200, 250, 300, 400, 500, 630, 800, 1000, 1300, 1600, 2000, 2500, 3000, 4000, 5000, 6300, 8000, 10000

True Sigma = 0.125, 0.25, 0.5, 1, and 2.

The limit test simulations were run using a limit dose of 2000 and a limit dose of 5000.

3. Summarizing the Simulation Results

The results from the simulations for the Main Test were summarized using:

- 1) The median 2.5% and 97.5% percentile of the relative LD50 and the median of the relative upper confidence bound and the relative lower confidence bound.
Medians were calculated across all confidence intervals (Cases 2 through 5). Infinite bounds were represented by large values.
- 2) The coverage, the percentage of 95% confidence intervals covering the True LD50.
That is, the number of confidence intervals as a percentage of the number of simulated tests where confidence intervals could be calculated (Cases 2 through 5). Infinite confidence intervals are assumed to cover the True LD50.
- 3) The average and range of the number of simulated animals used and the average and range of the number that died.
- 4) For Set 2, the proportion of simulations for which the predicted harmonized classification is equal to the true classification, more toxic than the true classification, or less toxic than the true classification.
- 5) The proportion of simulations falling into each of the five cases of data.

Because the simulations produced a lot of information for analysis and were performed using many different values for the scenario parameters, the data are summarized in a relatively compact graphical form. The plots have the disadvantage that they contain a lot of information and may be difficult to interpret. The plots have the advantage that they do not take up a lot of space. The first time the plots are presented they are discussed in detail.

For the limit test, the primary output measures are 1) the proportion of simulated tests for which the OECD 425 procedure says the LD50 is less than or greater than the limit dose, and 2) the number of animals. These output measures have been combined into one plot showing the proportion of tests for which the LD50 was judged to be greater than or less than the limit dose, and for each of these categories, the number of animals used.

For the second set of simulations, the summary statistics presented in the figures are also attached as appendices.

4. Summary of Simulation Results from Set 1

4.1 Set 1 Simulations Using Recommended Doses

An important consideration is whether the estimated LD50 is biased and whether the coverage of the 95% confidence interval is close to the nominal value of 95%. Using the relative LD50 units, Figure 1 shows:

- The median relative estimated LD50 as a thick black line,
- The 2.5 and 97.5 percentiles of the relative estimated LD50 as a thin black line,
- The median upper and lower confidence bounds as thick gray lines.

Assuming that the estimated LD50 is unbiased, the 2.5 and 97.5 percentiles can be considered as reasonable estimates for a 95% confidence interval. If the coverage of the 95% confidence intervals was close to 95%, the expected median of the confidence bounds would roughly correspond to the 2.5 or 97.5 percentiles.

Figure 1 shows the results for all combinations of relative assumed LD50 and assumed sigma by grouping the results by assumed sigma. The vertical dotted lines separate results (or panels) with different values of assumed sigma. The assumed sigma (and corresponding value for the assumed slope) is shown below the plot area. Within each panel with the same assumed sigma, the relative assumed LD50 increases from -4 on the left to 4 on the right.

Thus, in the panel between the left side of the plot and the first dotted line are the simulation results for assumed sigma = 0.088. For these simulations, the median relative LD50 estimate increases from roughly -1.9 to 1.6 as the relative assumed LD50 increases from -4 to 4. So, the estimated LD50 on the log scale ranges from 1.9*True Sigma below the True LD50 to 1.6*True Sigma above the True LD50, as the assumed LD50 on the log scale increases from 4*True Sigma below the True LD50 to 4*True Sigma above the true LD50. In other words, since the assumed sigma is 0.088 and the true sigma is 0.5, as the LD50 goes from 0.1 to 100 times the true LD50, the median estimated LD50 goes from 0.11 to 6.3 times the true LD50.

When the assumed sigma is much smaller than the true sigma (the left side of figure 1), if the assumed LD50 is less than the true LD50, the estimated LD50 will generally be below the true LD50. Also, if the assumed LD50 is greater than the true LD50, the estimated LD50 will tend to be greater than the true LD50. To minimize the chance of overestimating the LD50 due to this bias, the OECD TG 425 procedure recommends a starting dose one step below the assumed LD50.

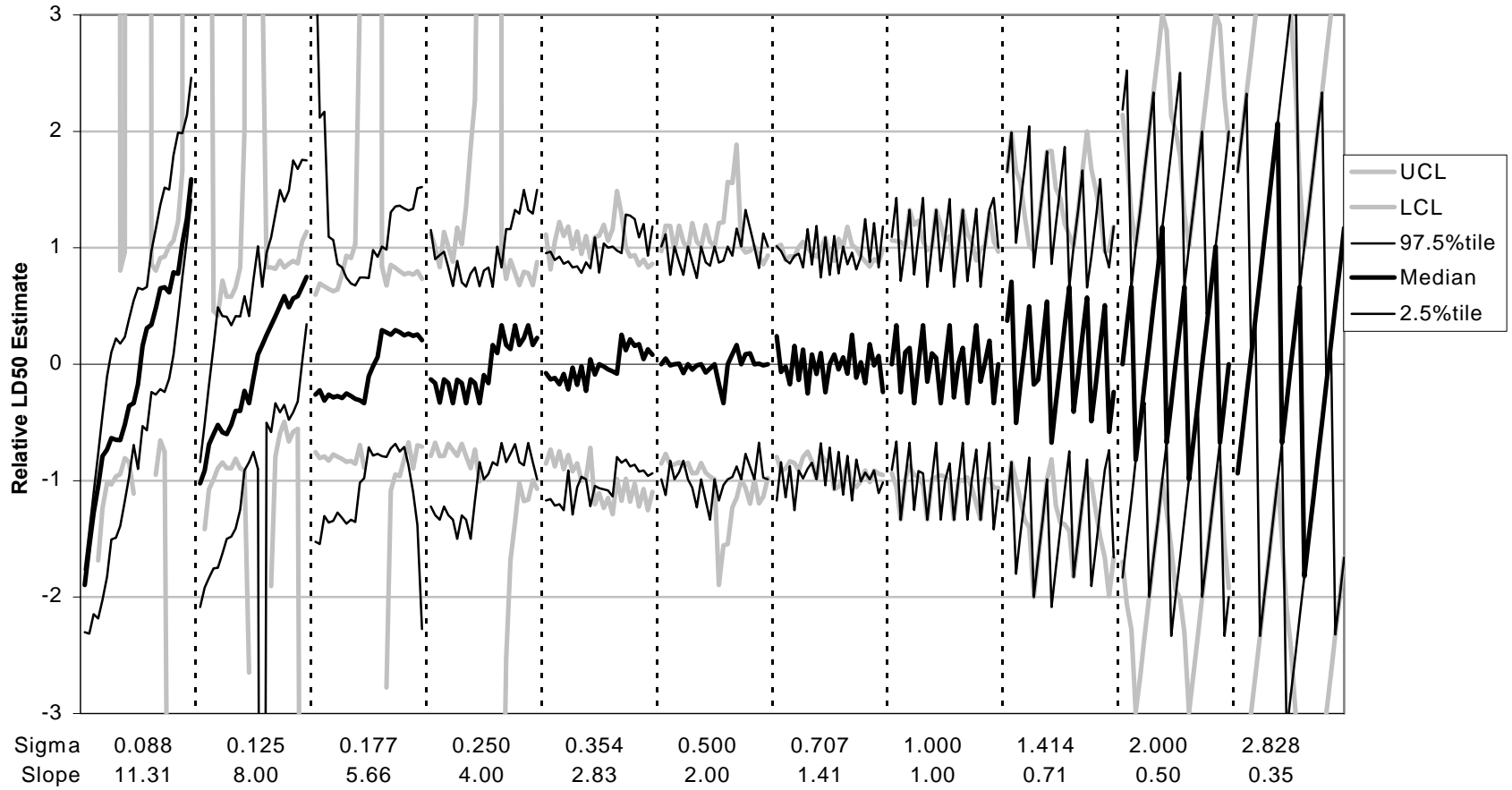
If the assumed sigma equals the true sigma (the panel in the middle of the plot with sigma = 0.5), the estimated LD50 is approximately equal to the true LD50 regardless of the assumed LD50.

If the assumed sigma is much larger than the true sigma (looking at the right side of the plot), the median estimated LD50 can be much larger or much smaller than the true LD50 depending on the assumed LD50. The variation in the median estimated LD50 is, in part, due to the discrete nature of the estimated LD50 distribution. Figure 2 shows the cumulative distribution of the relative estimated LD50 (as a dark line) for three values of the assumed sigma, 0.88, 0.5, and 2.83 (i.e., corresponding to the left, middle, and right of Figure 1). In all three cases, the assumed LD50 equals the true LD50. When the assumed sigma is much greater than the true sigma (the right in Figures 1 and 2), the estimated LD50 has only three discrete values. For smaller values of the assumed sigma, the number of discrete LD50 estimates increases. Using the mean instead of the median gives a similar, although not as jagged, pattern in the relative LD50.

The gray areas in Figure 2 are the 95% confidence intervals for the LD50 estimate. When the assumed sigma is much larger than the true sigma (right plot), all confidence intervals are finite. When the assumed sigma is much less than the true sigma (left plot) many of the confidence intervals extend off the plot (the lower bound is less than -6 and the upper bound is greater than 6) and are actually infinite. Note that the confidence bounds are also discrete; however, they generally have more discrete values than do the LD50 estimates.

Figure 1, Set 1

Relative LD50 Estimate as a Function of Relative Assumed LD50 and Assumed Sigma
 True sigma = 0.5, True LD50 = 1E-60



Relative assumed LD50 increases from -4 to 4 within constant sigma group

Figure 2 Cumulative distribution of the relative LD50 estimate for selected simulation scenarios (Set 1)

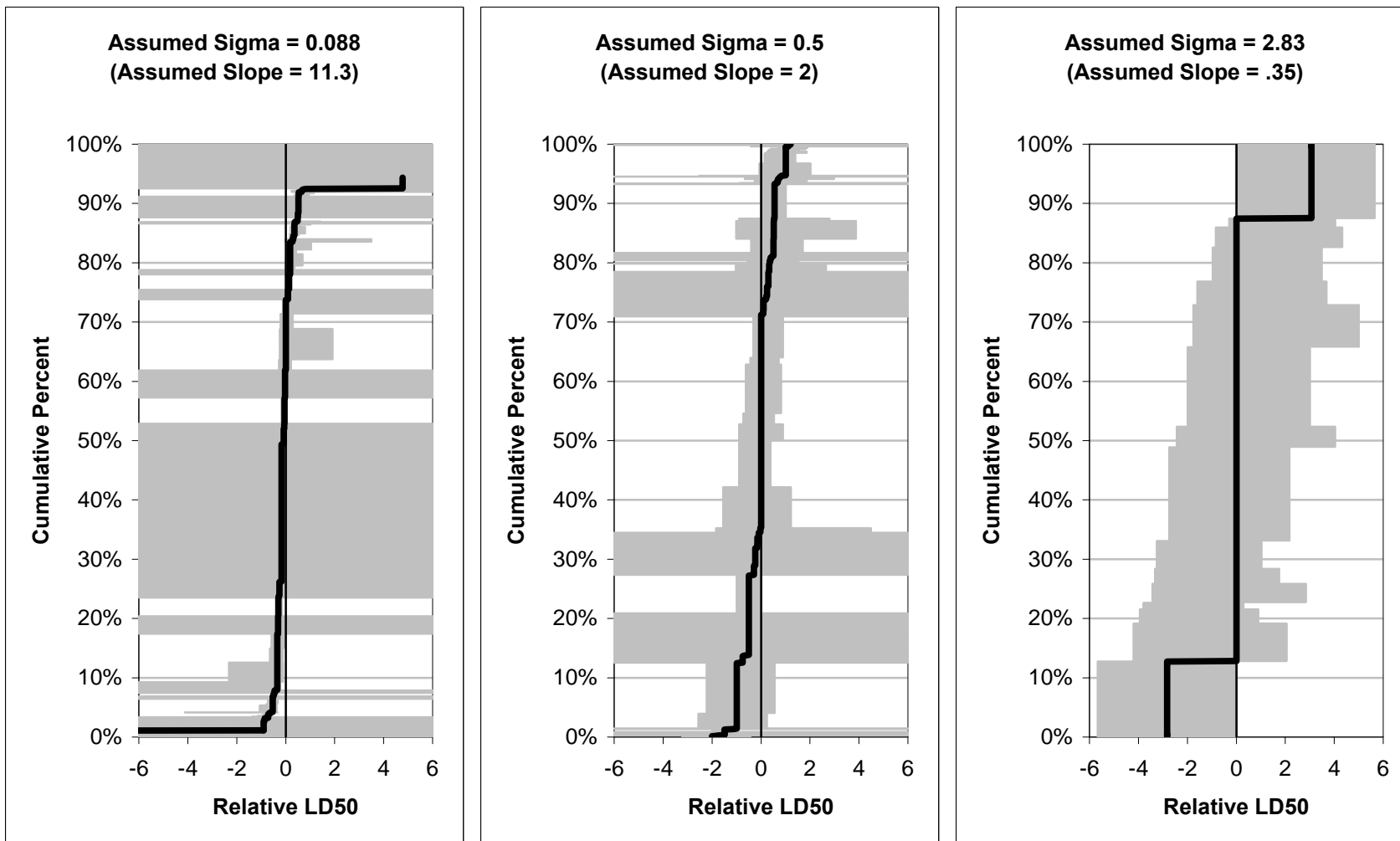


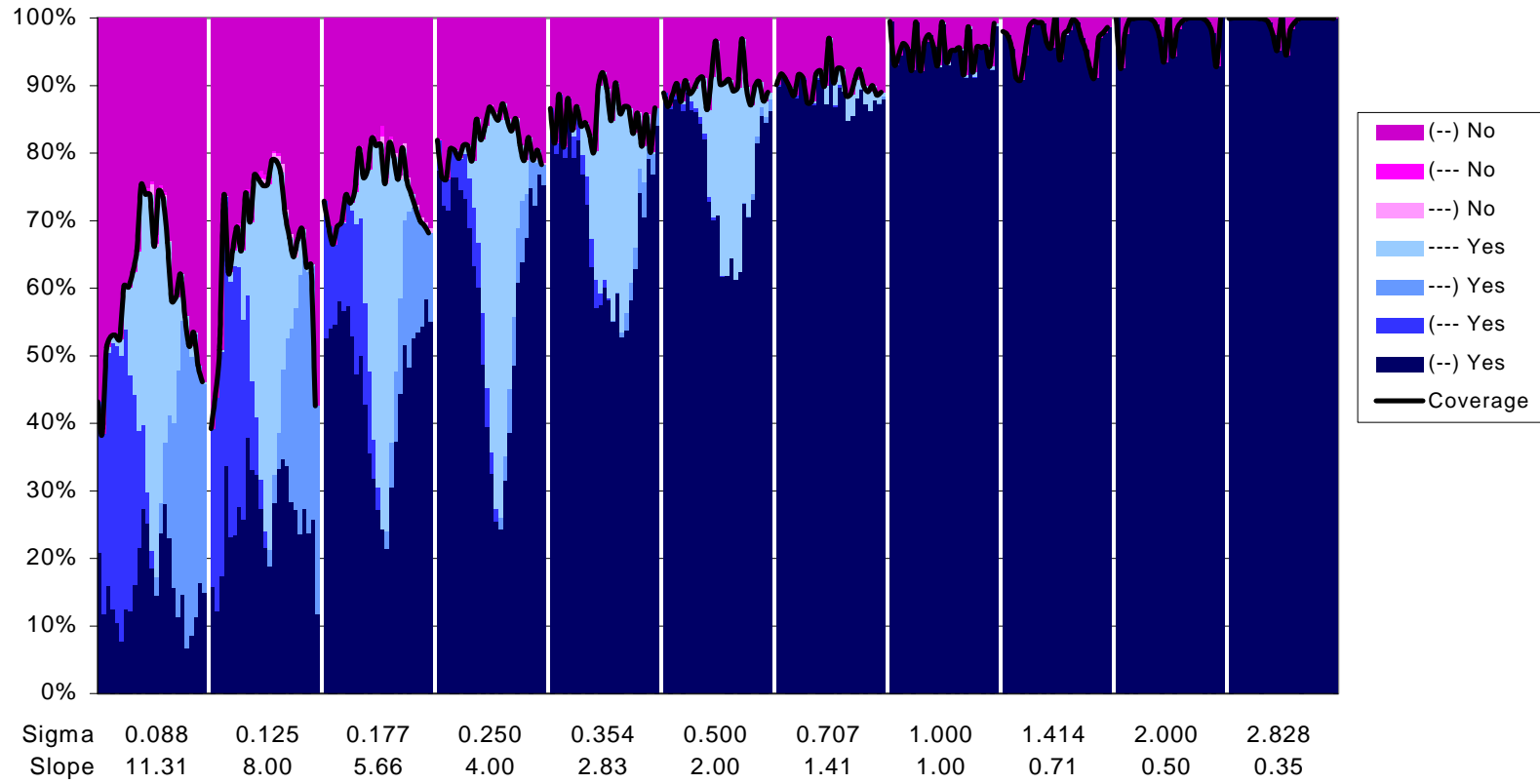
Figure 3 shows the percentage of the simulated 95% confidence intervals that include the true LD50. Intervals with infinite confidence bounds are assumed to cover the true LD50. The plot is organized the same way as in Figure 1, with results grouped by assumed sigma and assumed LD50 increasing within a group with a common assumed sigma value. Figure 3 uses color to distinguish confidence intervals that are finite, infinite on one end, or infinite on both ends. The legend shows the correspondence between the color and the type of confidence interval. The legend also shows whether the confidence interval includes the true LD50 (Yes) or not (No). In the legend, an open parenthesis indicates a finite lower confidence bound, and a closed parenthesis indicates a finite upper confidence bound. Dashes without a parenthesis indicate infinite bounds. The darkest area shows the percent of simulated tests with finite confidence bounds that cover the true LD50. Different shades of blue show confidence bounds that are infinite on one or both ends that also cover the true LD50. Areas with shades of pink are for confidence intervals that do not cover the true LD50. A black line separates the region representing confidence intervals that cover the true LD50 from those that do not.

Although the coverage depends somewhat on the assumed LD50, particularly for assumed sigma values below the true sigma, the major trend shown in the plot is an increase in the coverage as the assumed sigma increases from smaller than the true sigma to larger than the true sigma. Also, most confidence intervals are finite if the assumed sigma is larger than the true sigma.

Under ideal assumptions, where the assumed sigma is close to the true sigma and the assumed LD50 is close to the true LD50, the overall coverage for the 95% confidence interval is about 90%.

Figure 3, Set 1

95% CI Coverage as a Function of Assumed LD50 and Assumed Sigma
 True sigma = 0.5



Relative assumed LD50 increases from -4 to 4 within constant sigma group

Figure 4 shows the average number of animals used in the simulated tests (using a black line), and the average number that died (using a blue line). Figure 4 is organized as in the previous figures, with results grouped by assumed sigma. The figure also attempts to show the range in the number of animals and number that died. The range in the number of animals is shown as a blue area around the black line. The number of animals is always an integer, so the blue area may appear somewhat jagged. The range in the number of dead animals is shown in red. Where the two regions overlap, the color is purple. When reading the figure, the range in the number of animals goes from the bottom of the purple area (or blue area if there is no purple area) to the top of the blue area.

If the assumed sigma is greater than the true sigma (right side of Figure 4), the number of animals and number that died are relatively insensitive to the assumed LD50. On the right of the figure, the numbers tend to decrease, with the smallest number of animals overall and the smallest number that died occurring when the assumed sigma is much larger than the true sigma (or dose spacing is large compared to the true sigma). When the assumed sigma is similar to or less than the true sigma (on the left of the figure), the average number of animals and average number that died are very sensitive to the assumed LD50. If the assumed LD50 is much smaller than the true LD50, many animals were tested and few died. If the assumed LD50 is much larger than the true LD50, many animals were tested and many died. If the assumed sigma is less than the true sigma, the minimum number of animals is used when the assumed LD50 is roughly equal to the true LD50.

Figure 4, Set 1

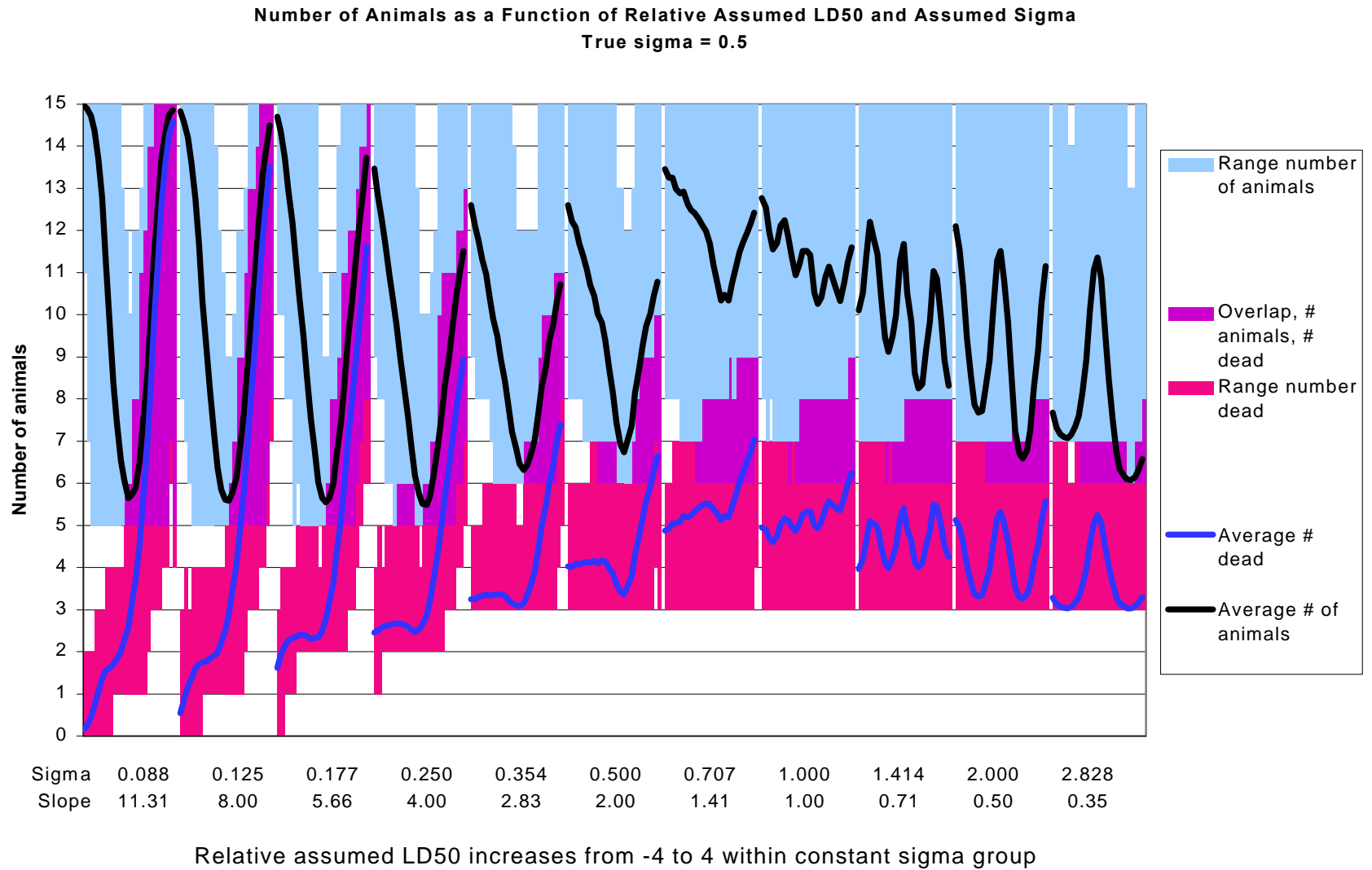


Figure 5 shows the proportion of simulated tests falling into each of the five cases.

The definition of the cases is:

Case 1, No positive dose-response relationship.

Case 2, Lowest dose with a death is below the highest dose with survival.

Case 3, Lowest dose with a death is above the highest dose with survival.

Case 4, Lowest dose with a death is the highest dose with survival and there are both lower and higher doses.

Case 5, Lowest dose with a death is the highest dose with survival and there is either a lower dose with survival or a higher dose with death, but not both.

When the dose sequence is unaffected by either the limit dose or the smallest usable dose, case 1 data can occur in one of two ways:

- When the starting dose is so low or so high and the assumed sigma (related to dose spacing) is so small that the administered dose never gets close to the true LD50 before dosing 15 animals (such as response sequences: OOOOOOOOOOOOOOOO, or OOOXOOOOOOOOOO).
- If the assumed sigma is small and the dosing stops by the likelihood ratio criterion (paragraph 33(c)) at a point where there is no positive dose response. In the first set of simulations, this only occurred when the assumed sigma was 0.125 or smaller. Example response sequences are: OXXXX or XXOOOO.

Similarly, Case 5 data can occur when the doses are far from the limit dose or smallest usable dose and the assumed sigma is 0.25 or smaller (example outcome sequences are: OOOOOOOOOOOOXOO or XOXOO).

Case 3 data are more likely when the dose spacing is large compared to the true sigma. Thus, in Figure 5, Case 3 data occurred in all simulated conditions but are more common when the assumed sigma is large compared to the true sigma (right half of Figure 5).

Figure 6 shows the percentage of cases meeting each of the stopping criteria. Tests that stopped based on both five reversals in six tests and the likelihood ratio criterion are shown as having stopped based on five reversals in six tests. Tests classified as stopping after 15 animals met none of the other stopping criteria.

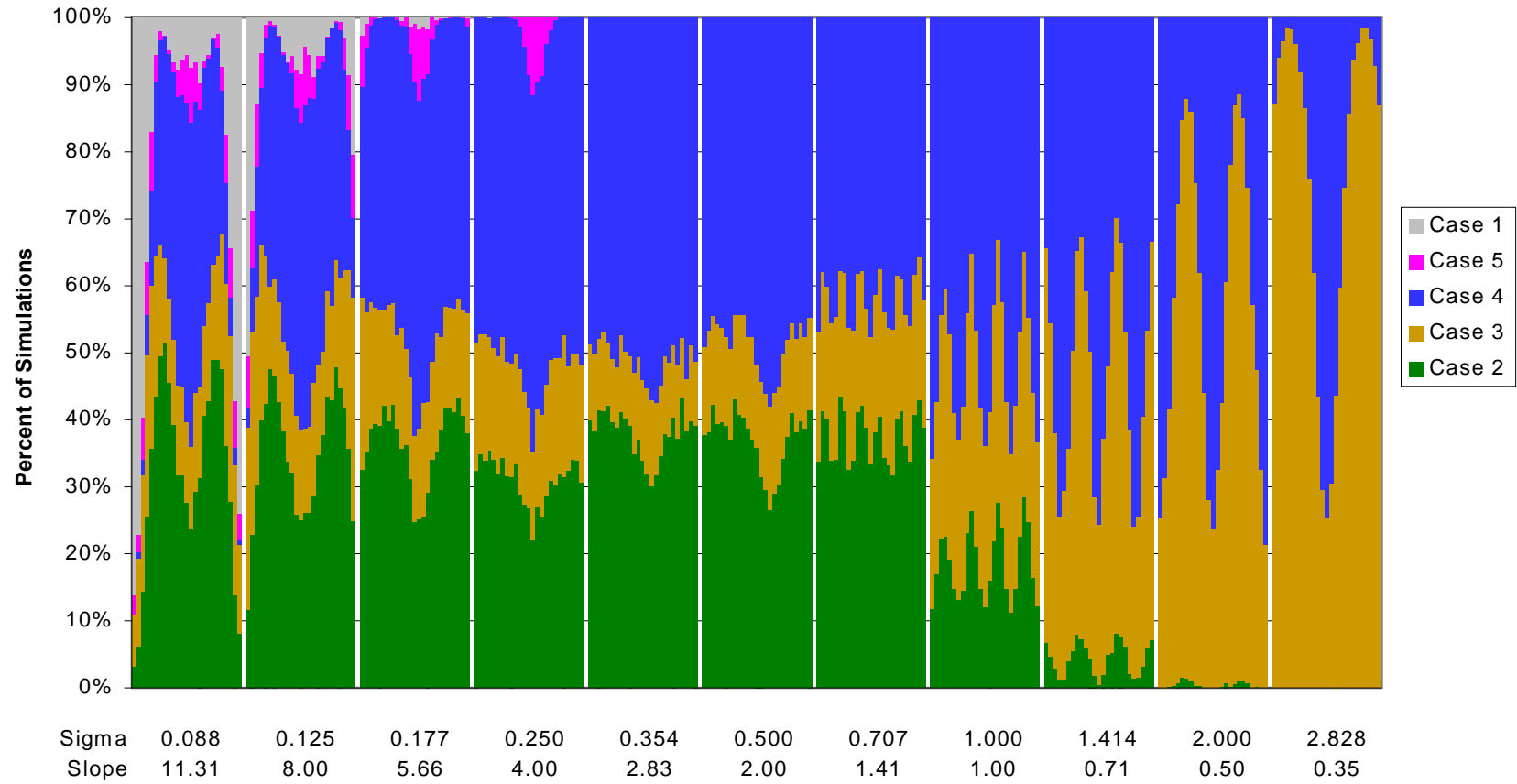
Case 1 and Case 5 data are only seen when the assumed sigma is smaller than the default sigma (0.5).

When the assumed sigma is small, the likelihood ratio criterion tends to stop tests for which the dose is close to the true LD50. Tests stop after 15 animals when the starting dose is far from the true LD50.

When the assumed sigma is larger than the true sigma, most tests stop after five reversals in six animals.

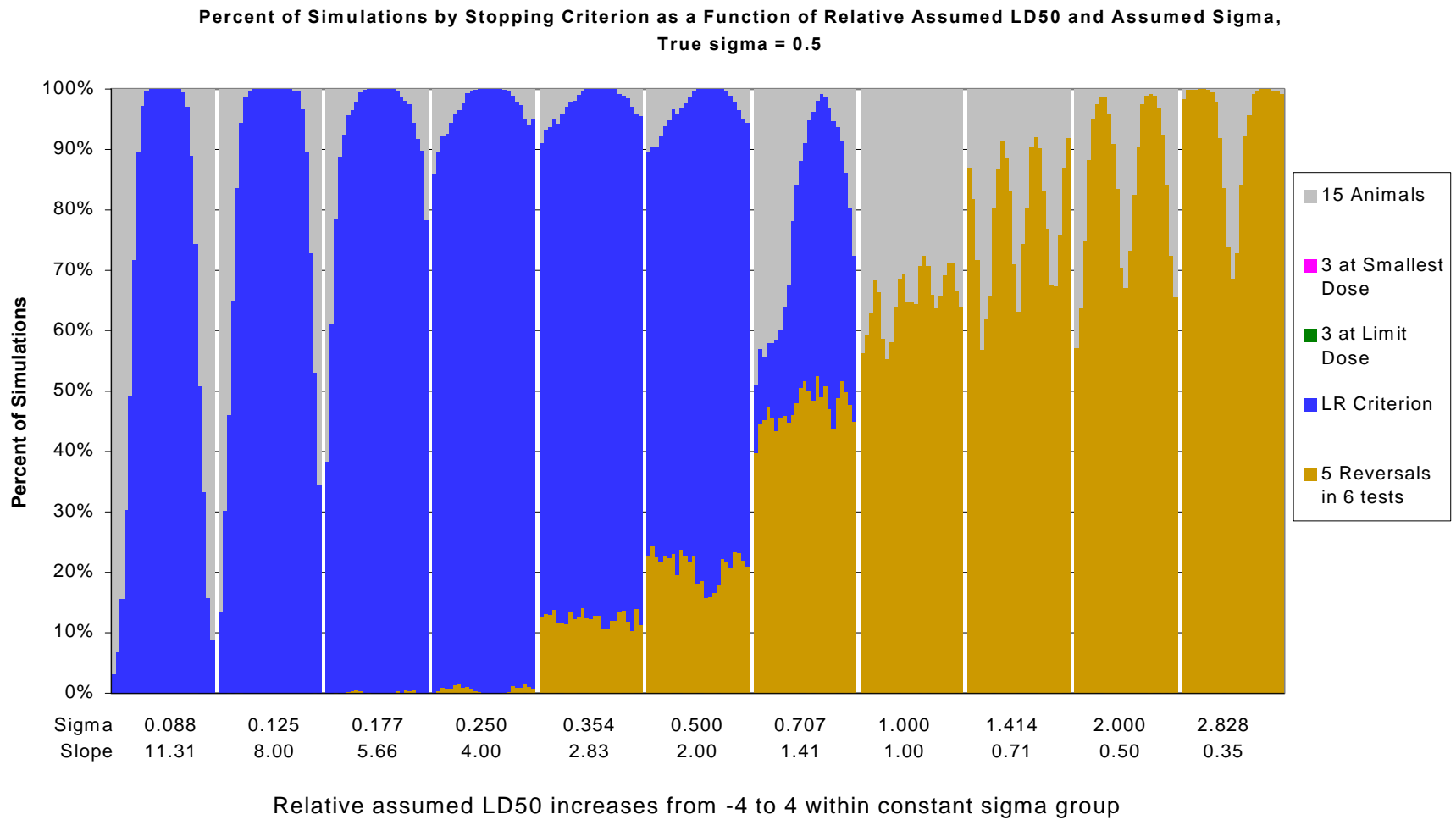
Figure 5, Set 1

Percent of Simulations by Case as a Function of Relative Assumed LD50 and Assumed Sigma,
True sigma = 0.5



Relative assumed LD50 increases from -4 to 4 within constant sigma group

Figure 6, Set 1



4.2 Set 1 Simulations Using Actual Doses

The simulations described in the last section were performed under the assumption that the actual dose was equal to the recommended dose. These simulations were repeated under the assumption that the actual dose had a normal distribution around the recommended dose. On the log scale, the standard deviation of the actual dose was assumed to be one tenth of the assumed sigma. The primary effect of varying the actual dose around the recommended dose is to create Case 2 or Case 3 data from Case 4 and Case 5 data.

Plots for results using the simulated actual dose instead of the recommended dose are labeled as "Using Actual Doses."

Figure 7 shows the statistics for the relative LD50. The general patterns in Figure 7 are similar to those in Figure 1, suggesting that the performance of the OECD TG 425 procedure was not greatly affected by whether the users entered the recommended dose or the actual dose (as long as the actual dose was relatively close to the recommended dose).

Figure 8 shows the coverage of the 95% confidence intervals when the actual doses were used. Compared to using only the recommended doses (see Figure 3), using actual doses provides confidence intervals with lower coverage. In either case, the confidence interval coverage was well below the nominal level when the assumed sigma was small compared to the true sigma (in the left half of Figure 8).

Finally, Figure 9 shows the percentage of simulated tests by Cases 1 to 5 when using actual doses. Note that using actual doses converted Case 4 and 5 data (with multiple animals at the same dose) to Case 3 or 2 data.

The number of animals, number of animals that died, and the number of simulated tests stopping based on different stopping criteria were essentially the same whether using actual or recommended doses. As a result, figures for the number of animals and stopping criteria are not shown for the simulations using the actual dose.

Figure 7, Set 1

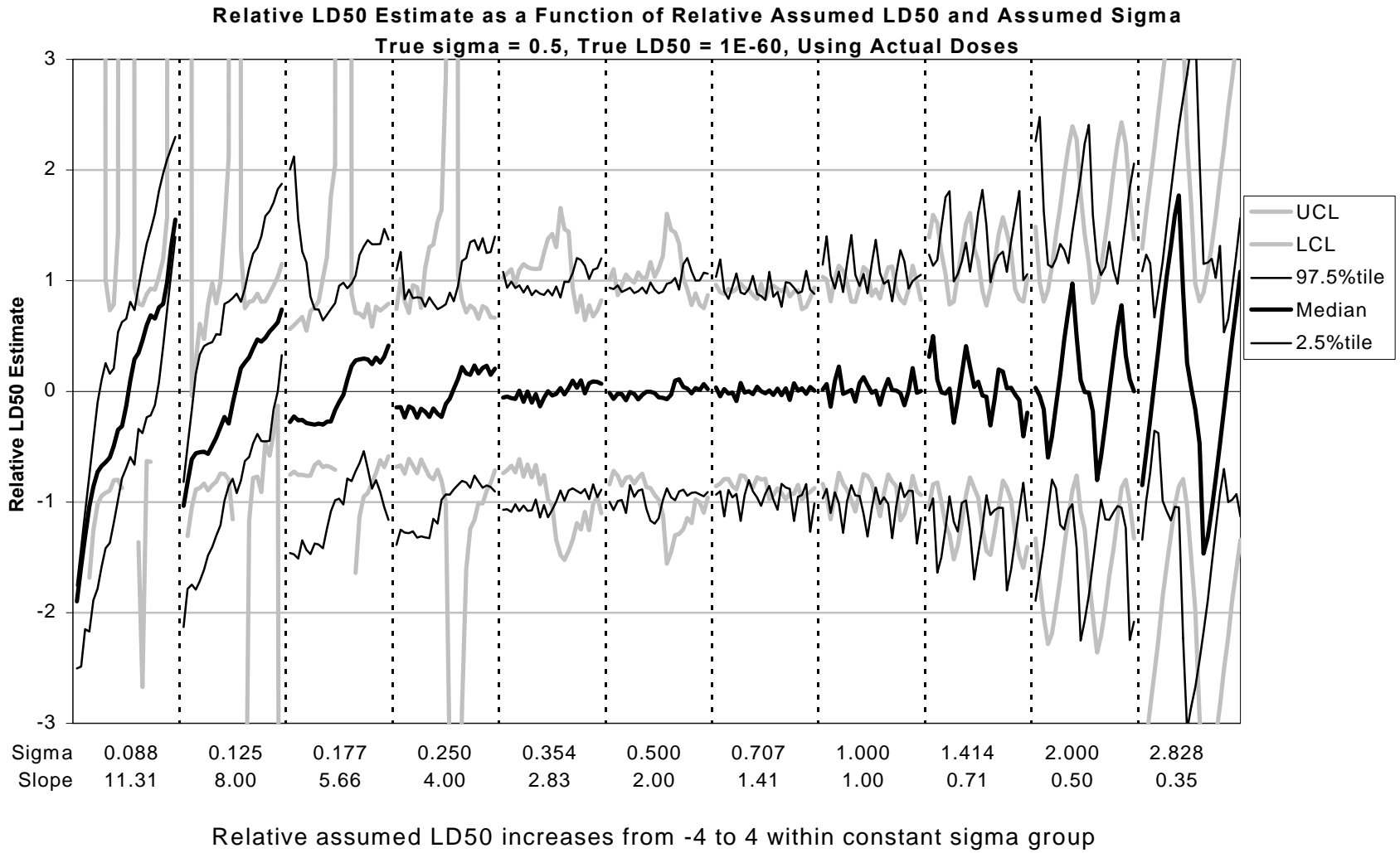
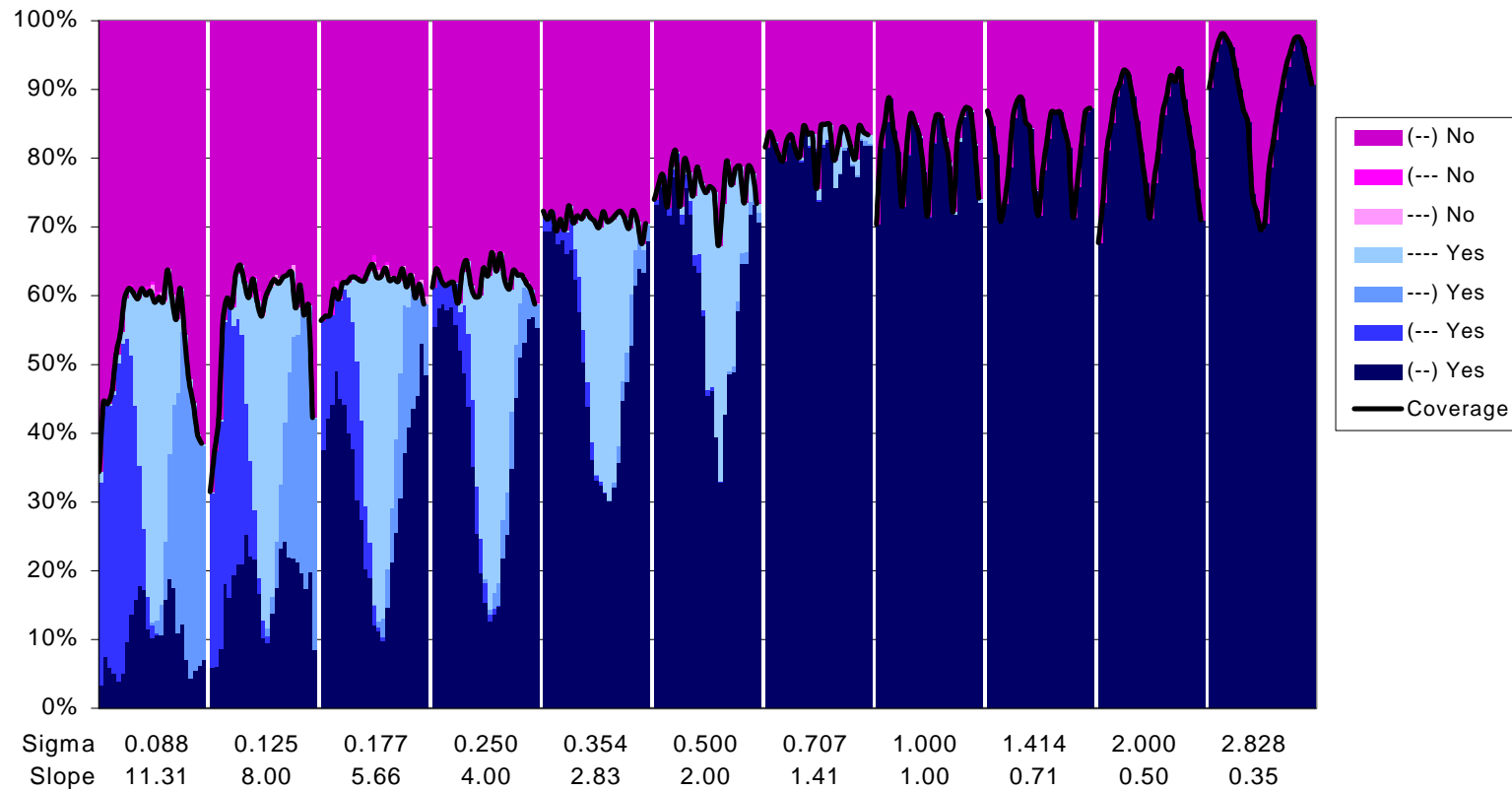


Figure 8, Set 1

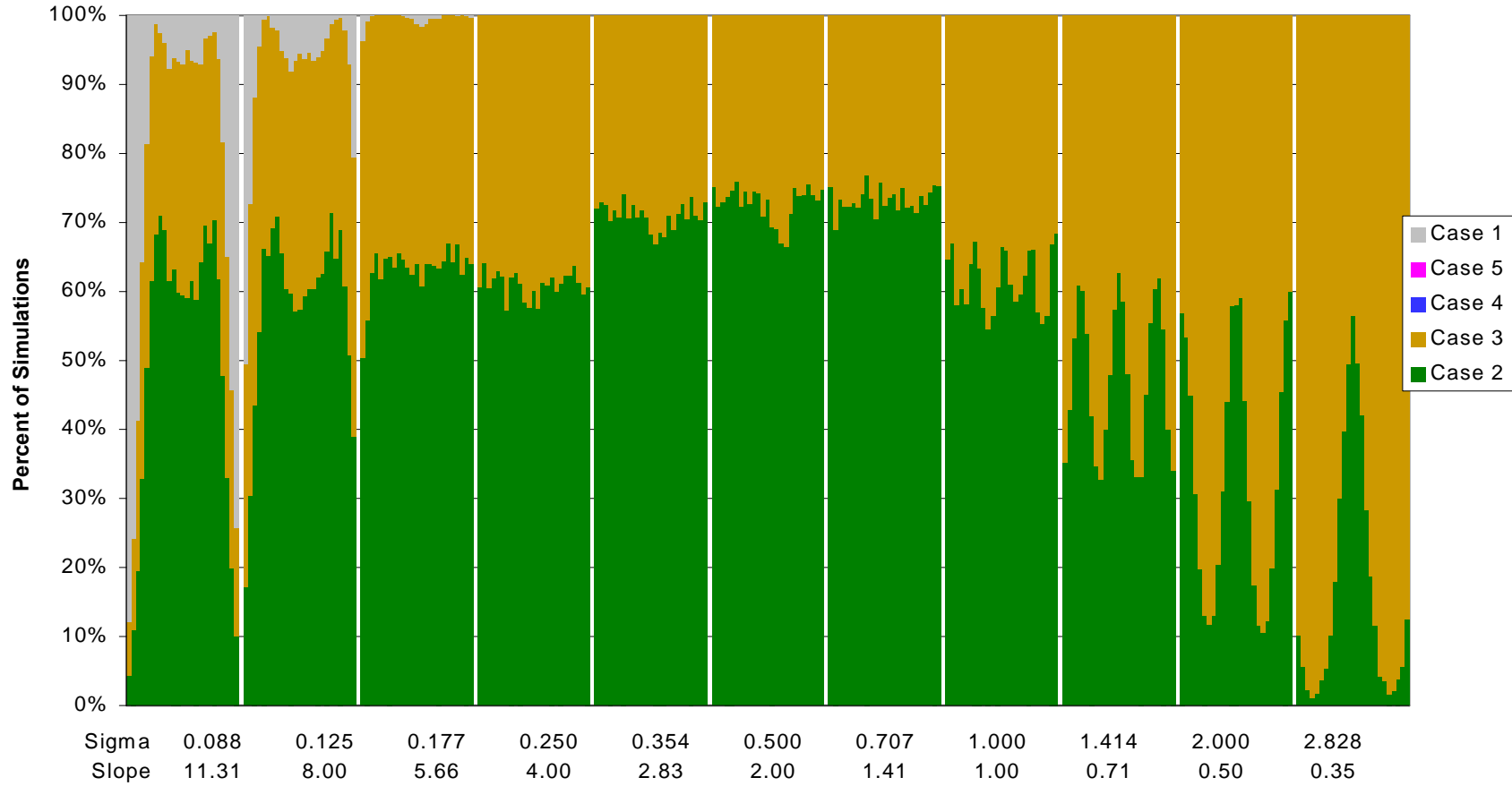
95% CI Coverage as a Function of Assumed LD50 and Assumed Sigma
 True sigma = 0.5, Using Actual Doses



Relative assumed LD50 increases from -4 to 4 within constant sigma group

Figure 9, Set 1

Percent of Simulations by Case as a Function of Relative Assumed LD50 and Assumed Sigma,
True sigma = 0.5, Using Actual Doses



Relative assumed LD50 increases from -4 to 4 within constant sigma group

5. Simulation Set 2

For the first set of simulations, the true LD50 and sigma were held constant while the assumed values were changed. For the second set of simulations, the assumed sigma and starting dose (similar to the assumed LD50) were held constant and the true LD50 and sigma were changed. In addition, the limit dose and smallest usable dose were used for the second set of simulations. Because of the change in what was changed and what was held constant, and because of how the data were plotted, the results from the first set of simulations may appear to be reversed compared to the results for the second set. However, the two sets of results are consistent. The plots in this section have only five difference levels for the true sigma compared to 11 different levels for the assumed sigma in the plots in the last section.

Sections 5.1 through 5.4 present the results of the simulations with starting doses equal to the LD50, DL30, LD80, and 175 mg/kg (the default starting dose) respectively. Each section shows charts with the 1) relative LD50, 2) coverage of the 95% confidence interval, 3) number of animals, 4) proportion of simulations by case, 5) proportion of simulations by stopping criteria, and 6) classification of the estimated LD50 with respect to the harmonized categories. Plots similar to the plots in the last section are used to present the results.

5.1 Starting Dose = LD50

Figure 10 shows the relative LD50 as a function of true sigma (going from .125 to 2) and true LD50 going from 1 to 10,000 within groups of simulations with the same true sigma. For many of the simulated conditions, there is remarkable consistency among the simulated results. For the simulations where the true sigma = 0.5 (the middle fifth of Figure 10), the starting dose is always equal to the true LD50 and the simulated sequence of outcomes have almost the same distribution regardless of starting dose. The distribution is different only for LD50s close to the limit dose (5000 mg/kg) or the smallest usable dose (1 mg/kg).

Moving from the left panel to the right panel, the true sigma increases. In the left panel, the true sigma is small compared to the dose spacing and the doses for different animals within a test vary slightly. In the right panel, the true sigma is large relative to the dose spacing such that the probability of survival does not change greatly as the dose changes. In this case, the doses may vary considerably and are more likely to equal the limit dose or the smallest usable dose.

The fact that the 2.5 and 97.5 percentiles and the median confidence bounds generally fell on relative LD50 values of 0.5, 1.0, 1.5, 2.0, 2.5, etc. (particularly for small values of true sigma) appears to be due to the discrete nature of the distributions (see Figure 2).

Figure 10, Set 2

Relative LD50 Estimate as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD50

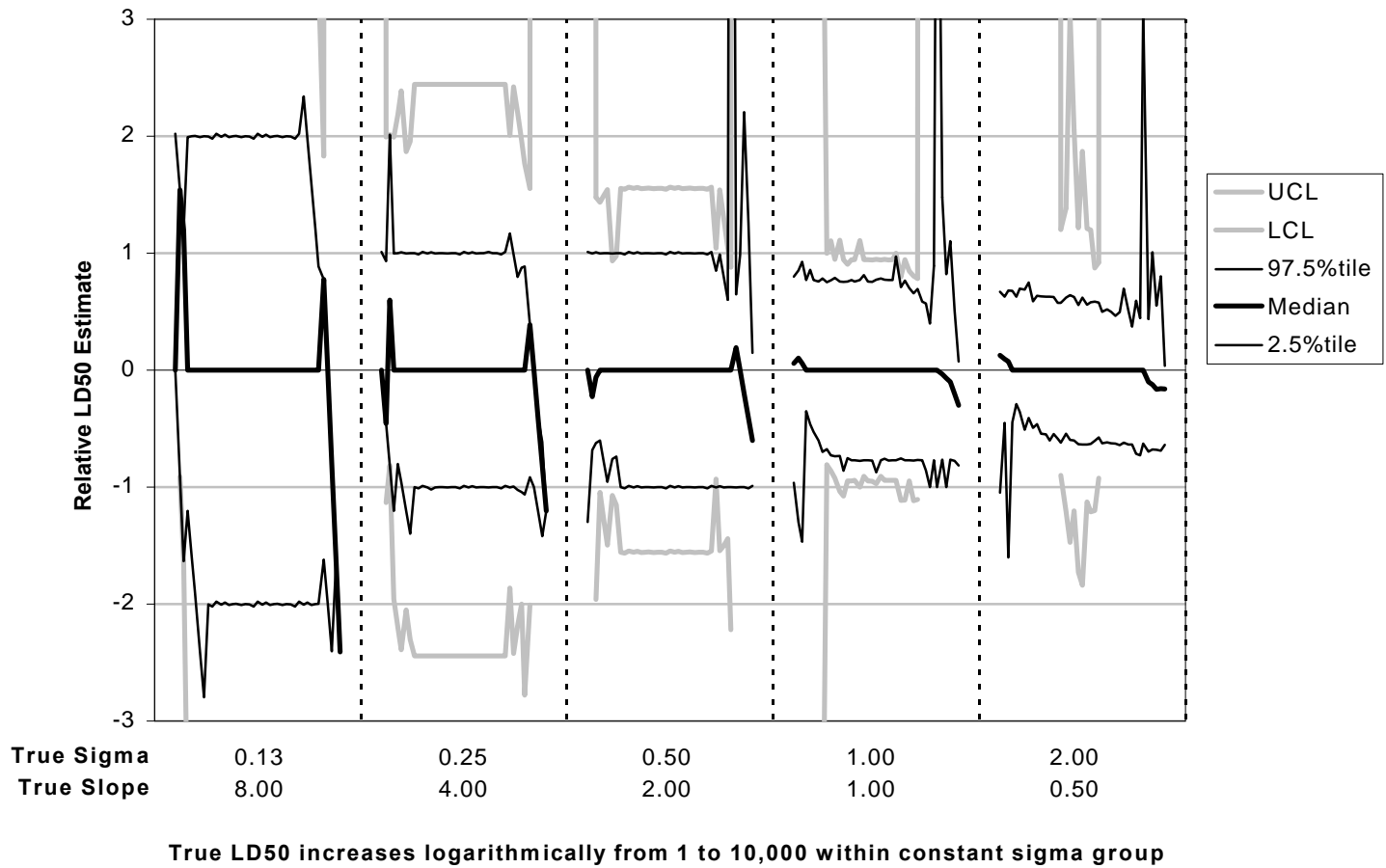


Figure 11 shows the coverage when the starting dose is equal to the true LD50. The coverage is close to 100% when the true sigma is less than the assumed sigma and about 80% when the true sigma is twice the assumed sigma.

Figure 12 shows the number of animals (average and range) used in the simulated tests and the number that died (average and range). By starting the dosing at the true LD50, the number of animals was minimized and only increased slightly from six to about eight as the true sigma increased from .125 to 2.

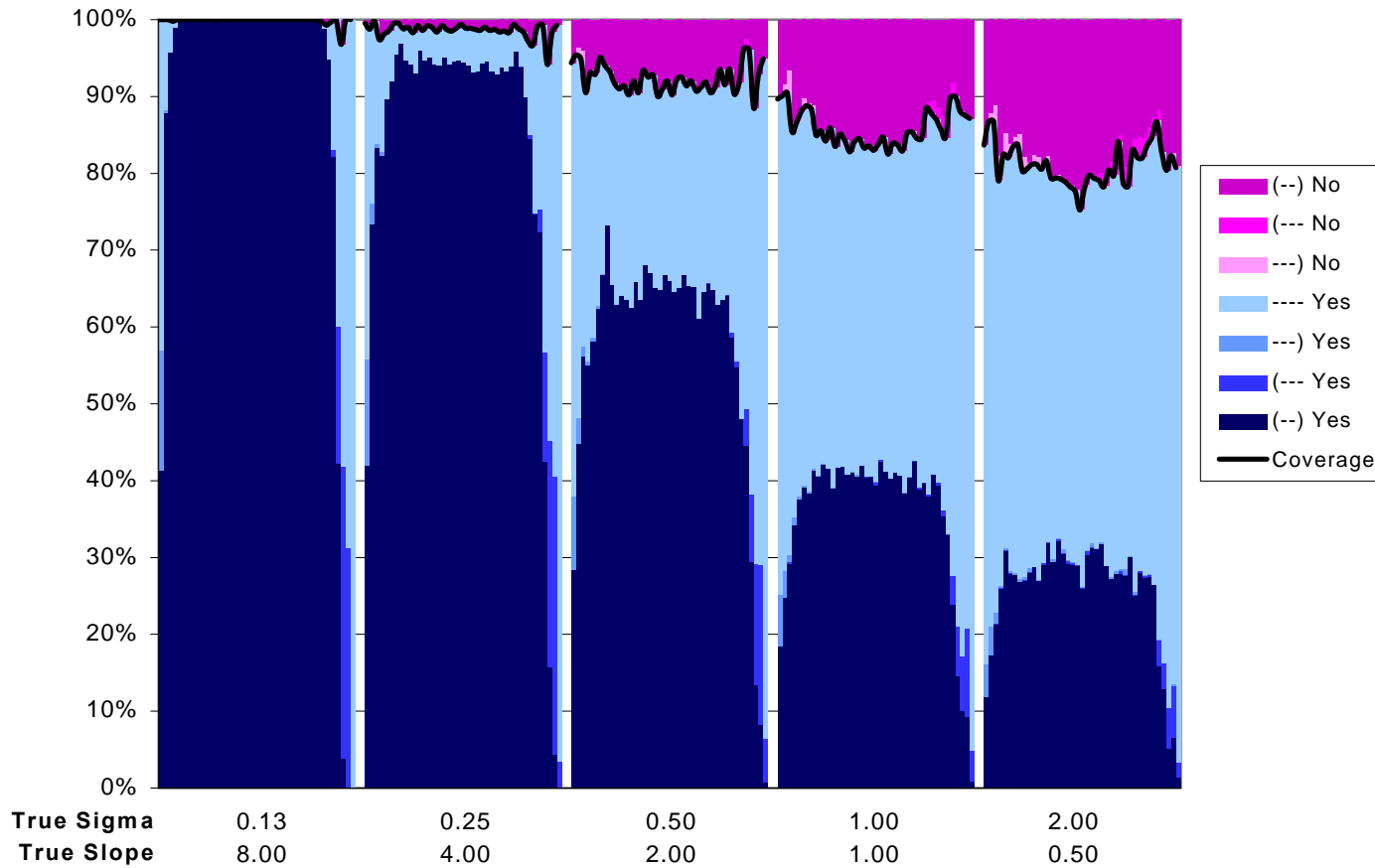
Figure 13 shows the percent of simulated tests in cases 1 to 5. Figure 14 shows the percent of simulated tests by stopping criterion.

Figure 15 show the proportion of cases for which the estimated LD50 is in the true harmonized category, is less toxic than the true harmonized category, or is more toxic than the true harmonized category. As might be expected, a test/substance is more likely to be correctly classified if the true sigma is small.

If the data do not show a positive dose response relationship (Case 1 data) and the dosing stopped at the fifteenth animal or at three consecutive survivals at the limit dose, or three consecutive deaths at the smallest usable dose (1.0 in these simulations), the substance was classified as having an LD50 in the highest or lowest harmonized category, respectively. Figure 15 shows some simulations for which the harmonized category is unknown. These are cases where the data do not show a positive dose response relationship and testing stopped based on the likelihood ratio criterion and the last dose was not the limit dose or the smallest usable dose. As noted above, this situation is more likely when the true sigma is much larger than the assumed sigma (or the assumed sigma is much smaller than the true sigma). The occurrence of these cases is greater than in the first set of simulations due to the presence of the limit dose and the smallest usable dose. An example of data for which the harmonized classification could not be determined follows Figure 15.

Figure 11, Set 2

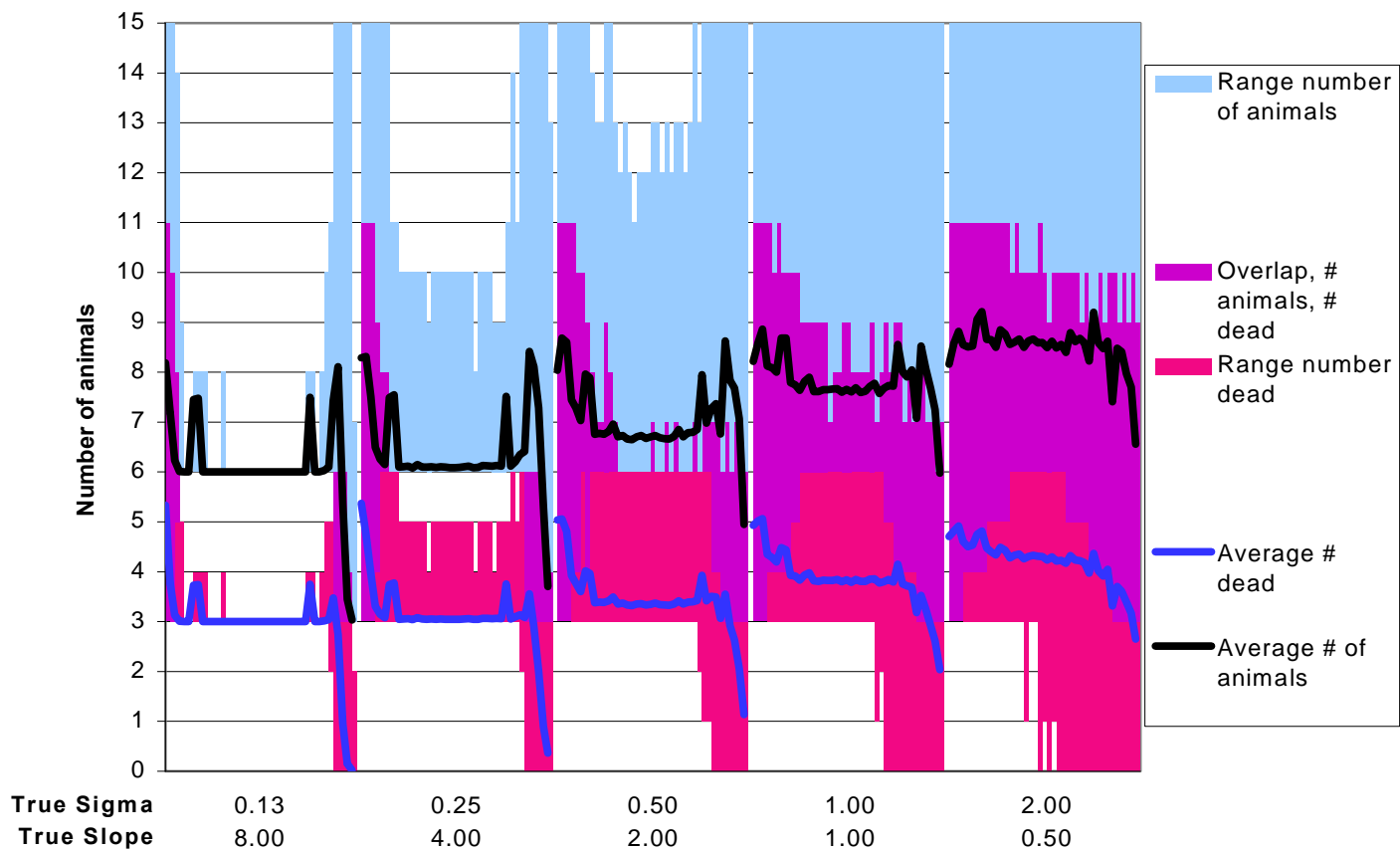
95% CI Coverage as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD50



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 12, Set 2

Number of Animals as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD50



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 13, Set 2

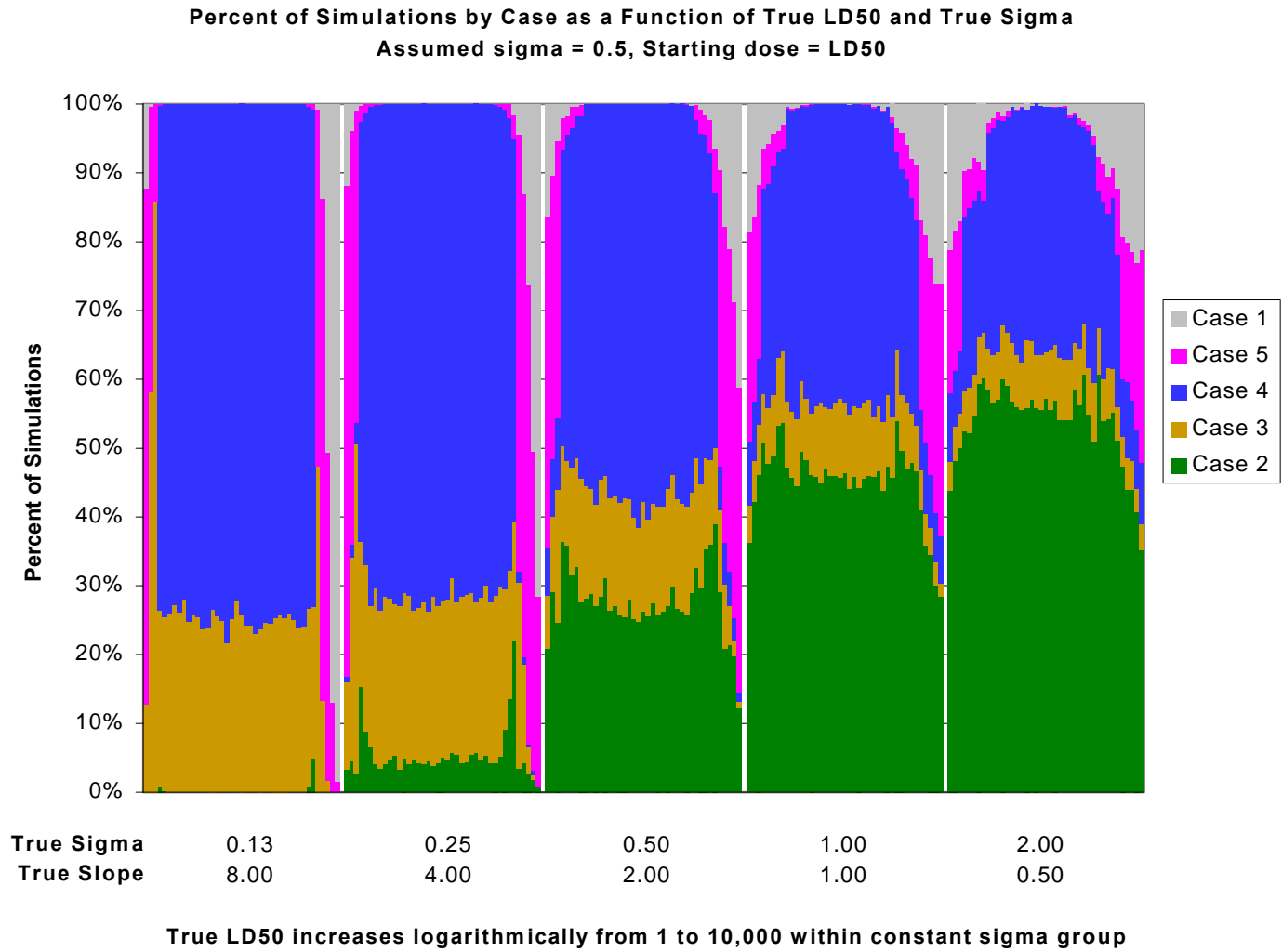
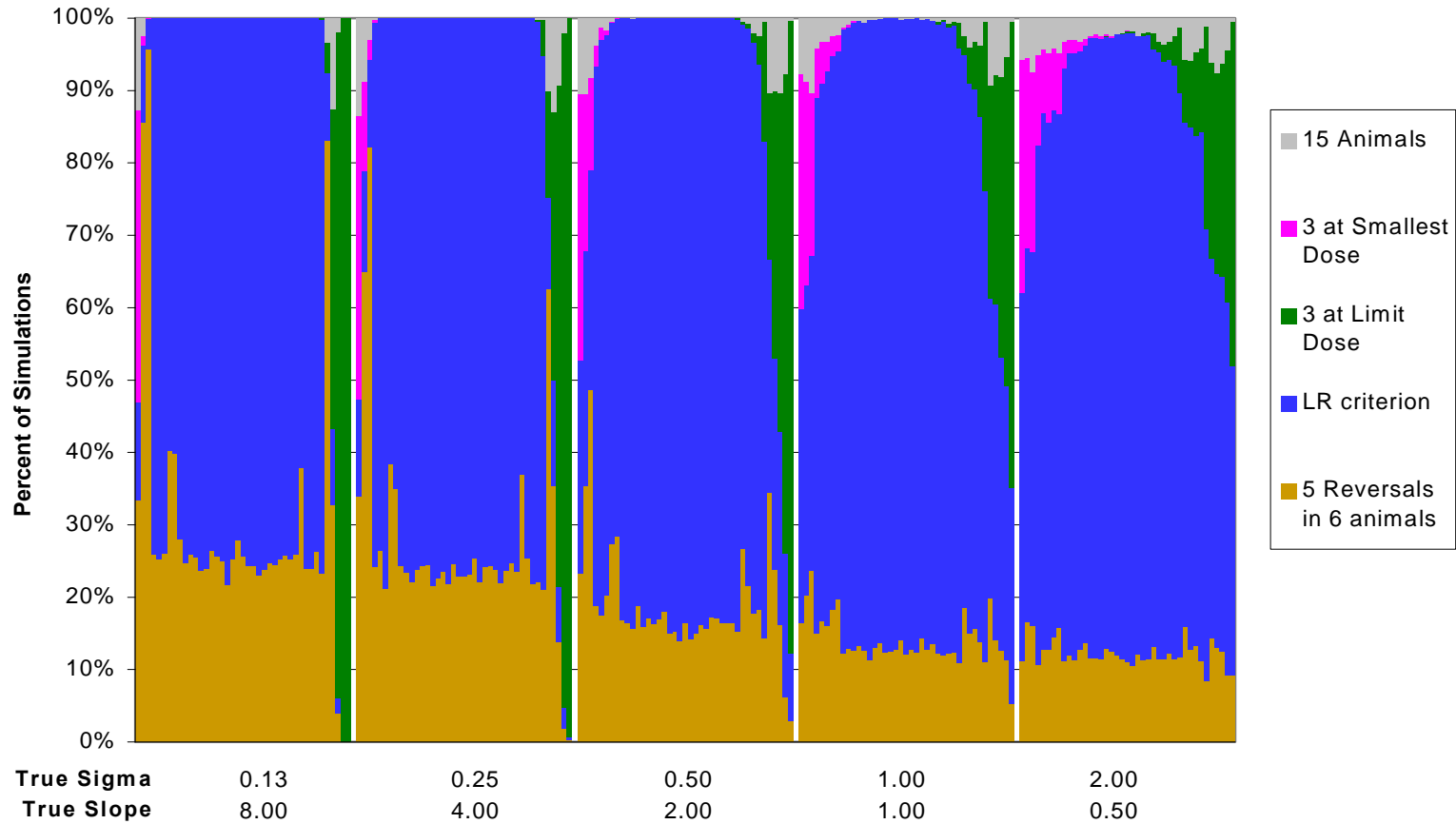


Figure 14, Set 2

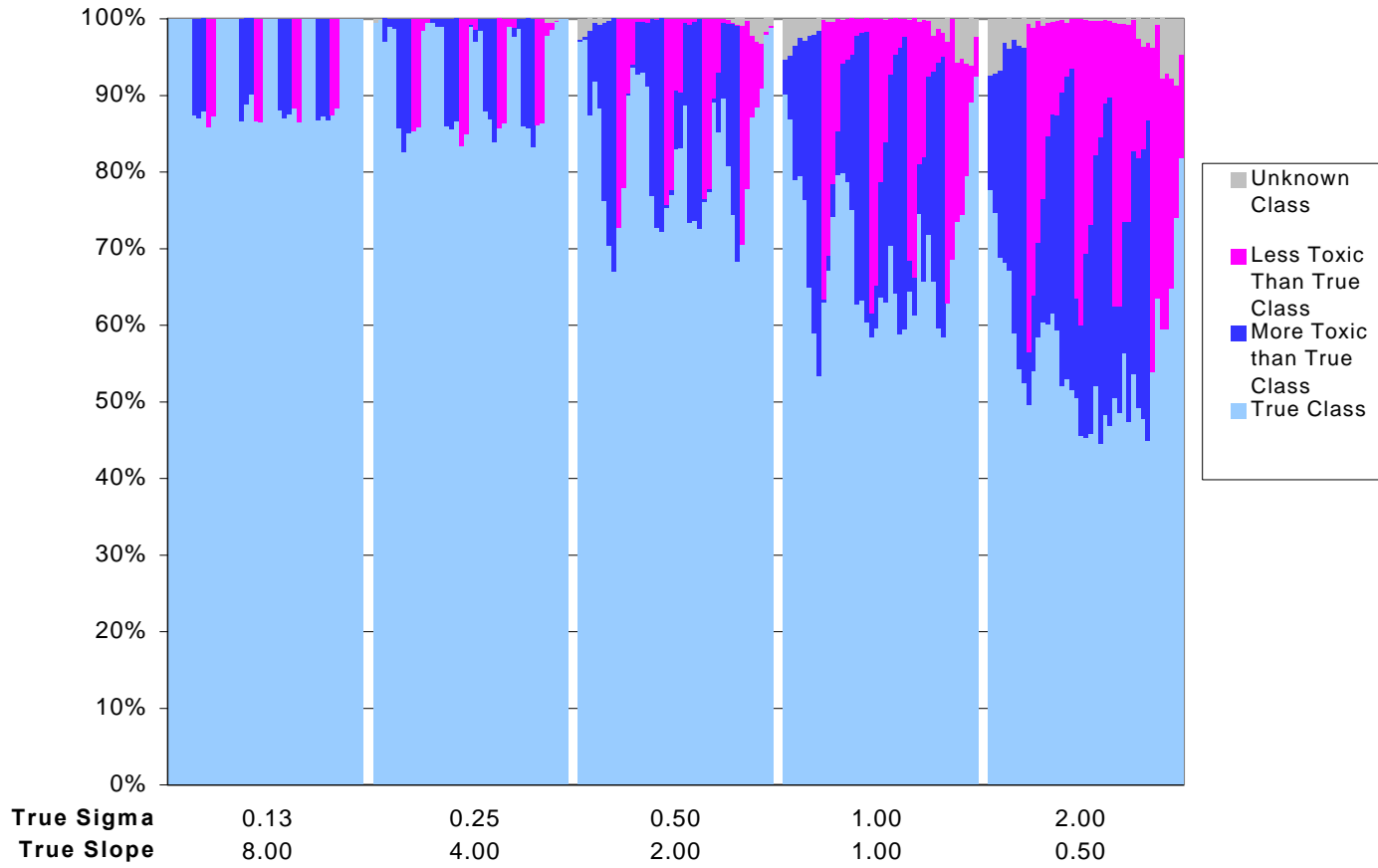
Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD50



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 15, Set 2

Predicted Classification as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD50



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

The following is the AOT425StatPgm report for the situation where the harmonized category cannot be determined using the OECD TG 425 procedure.

Test/Substance: Case 1 data from simulations
Test type: Main Test
Limit dose (mg/kg): 2000
Assumed LD50 (mg/kg): 7.906
Assumed sigma (mg/kg): 0.5
Smallest Usable Dose: 1

Recommended dose progression: 2000, 790, 250, 79, 25, 7.9, 2.5, 1

DATA:

Test Seq.	Animal ID	Dose (mg/kg)	Short-term Result	Long-term Result
1	1	2.5	O	O
2	2	7.9	X	X
3	3	2.5	X	X
4	4	1	O	O
5	5	2.5	X	X
6	6	1	X	X
7	7	1	X	X
8	8	1	O	O
9	9	2.5	O	O
10	10	7.9	O	O

(X = Died, O = Survived)

Dose Recommendation: The main test is complete.

WARNING:

Please review the data for accuracy.

At least one dose is close to the smallest usable dose. A smallest usable dose is specified for this test. The OECD 425 procedure does not define or discuss how to use the smallest usable dose.

Stopping criteria met: LR criterion.

SUMMARY OF LONG-TERM RESULTS:

Dose	O	X	Total
1	2	2	4
2.5	2	2	4
7.9	1	1	2
All Doses	5	5	10

Statistical Estimate based on long term outcomes:

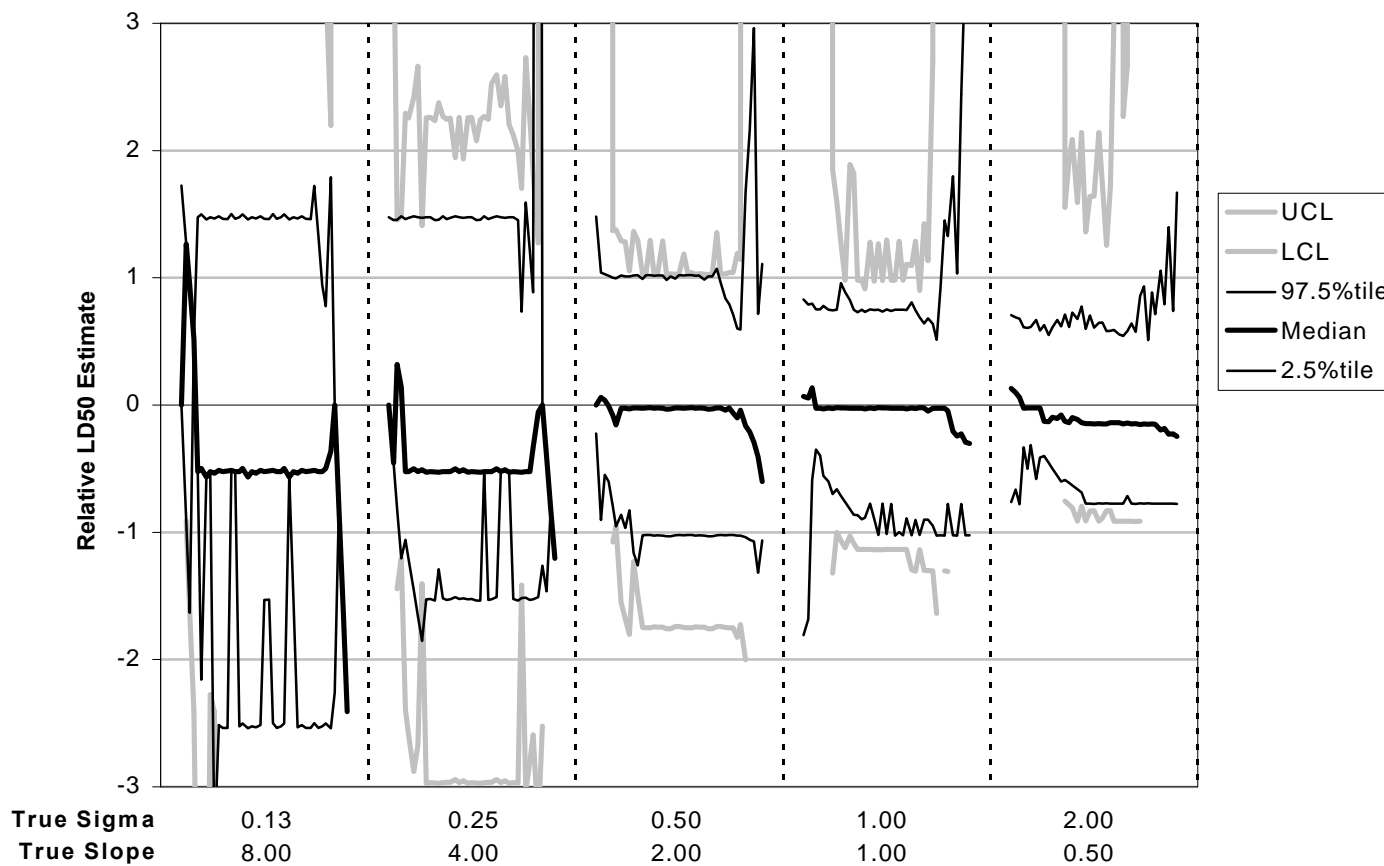
The data do not show a positive dose response relationship. No LD50 is calculated. Please review the data and test procedures.

5.2 Starting Dose = LD30

Figures 16 through 21 show the simulation results when using a starting dose equal to the LD30.

Figure 16, Set 2

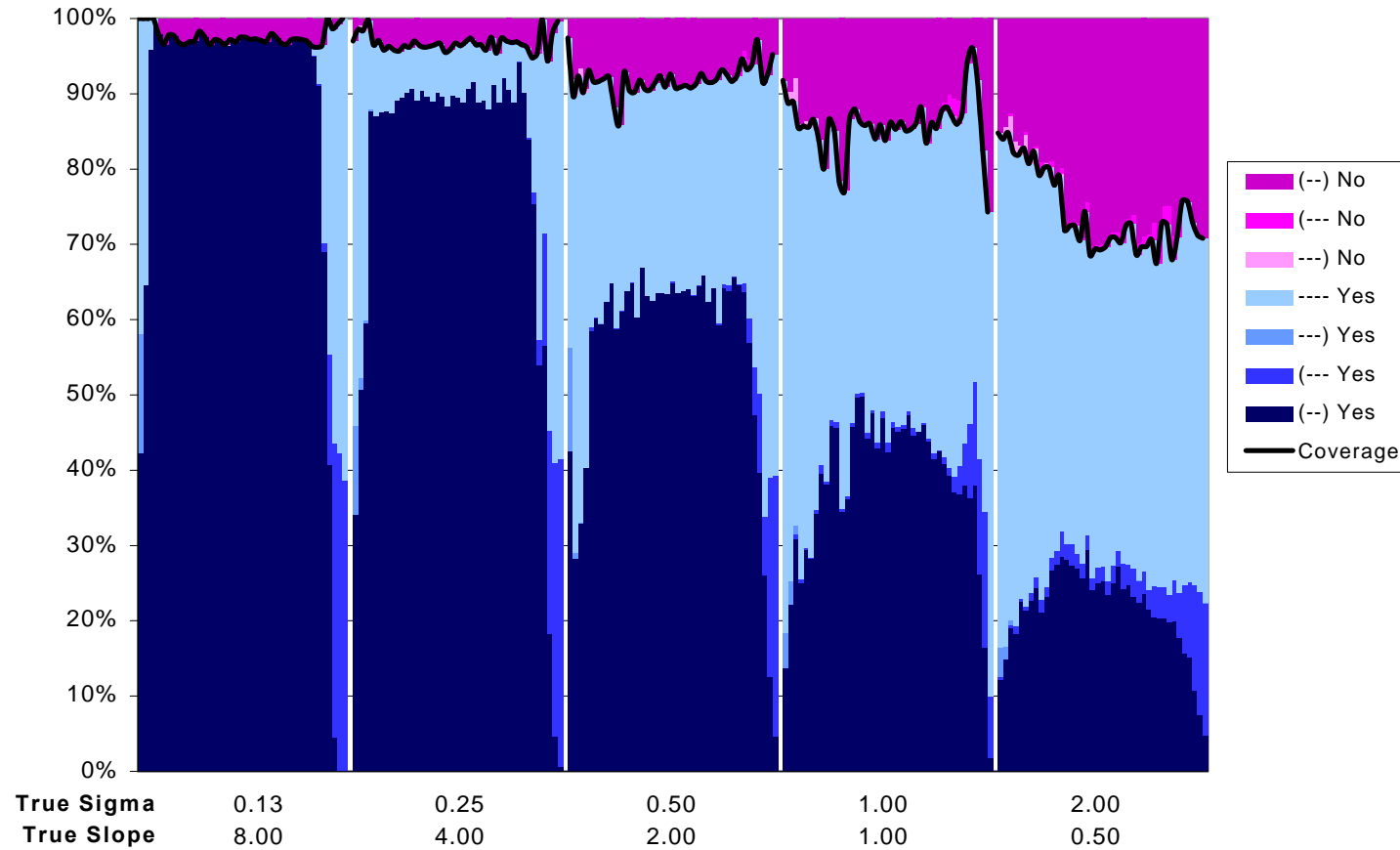
Relative LD50 Estimate as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD30



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 17, Set 2

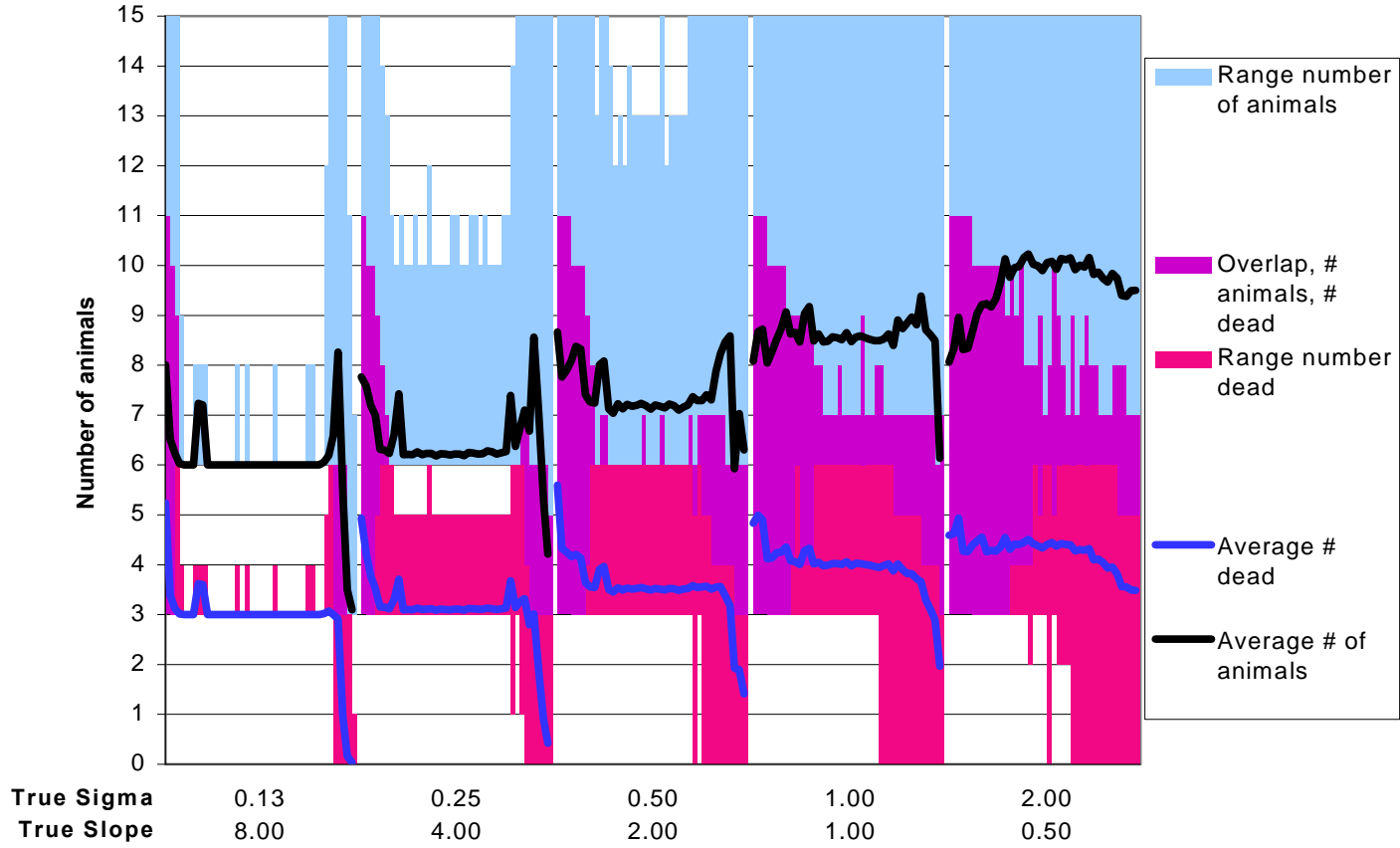
95% CI Coverage as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD30



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 18, Set 2

Number of Animals as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD30



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 19, Set 2

Percent of Simulations by Case as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD30

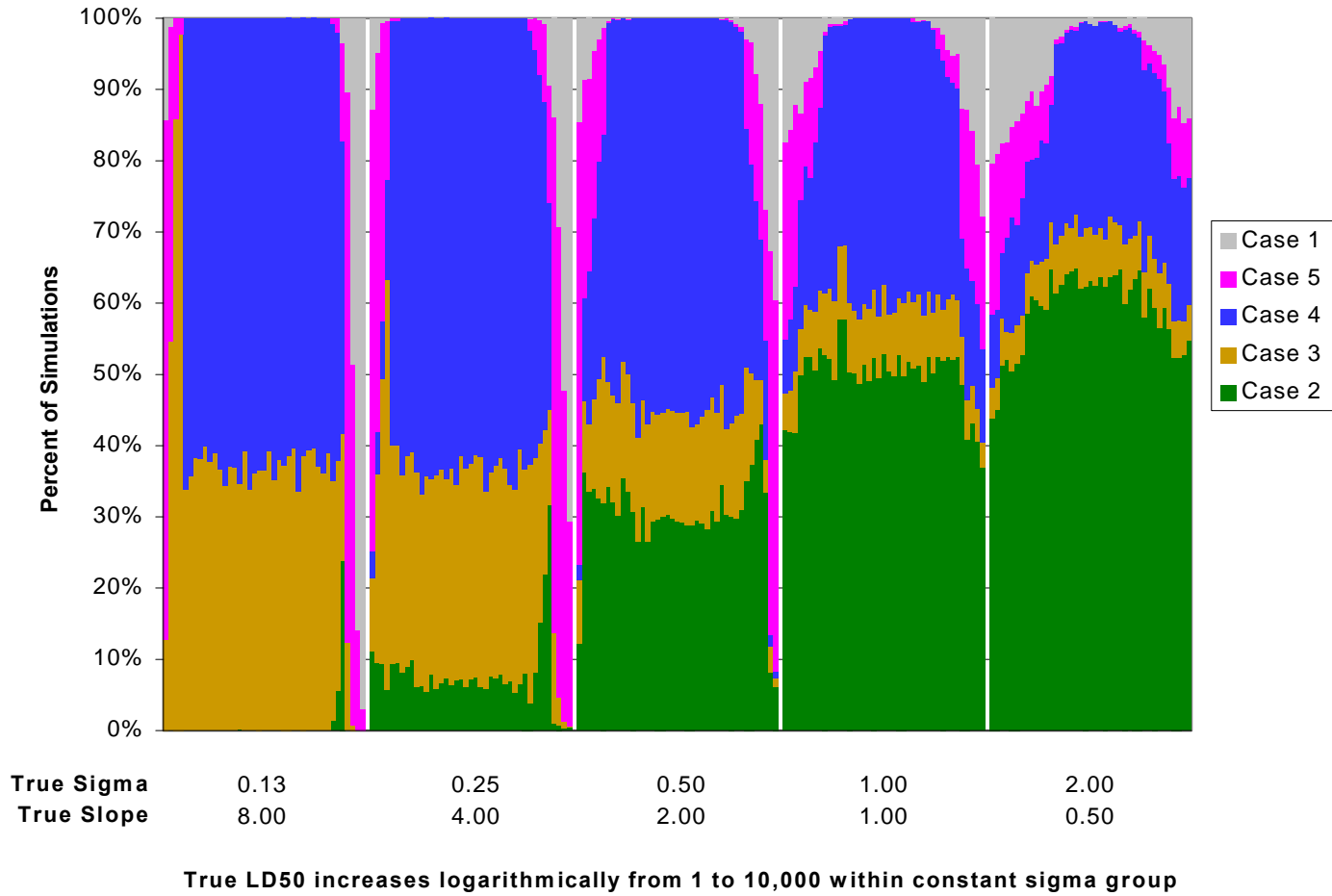
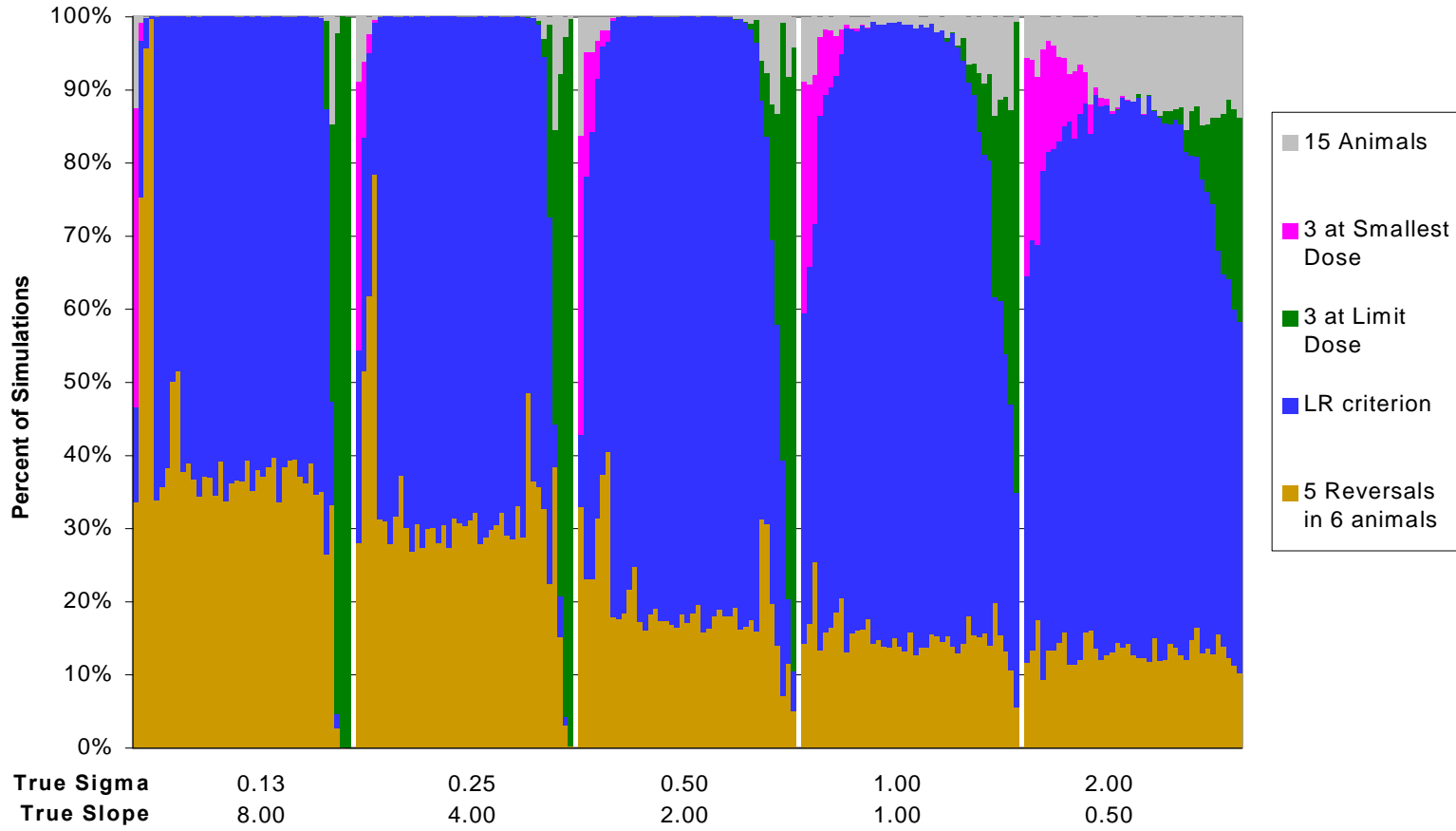


Figure 20, Set 2

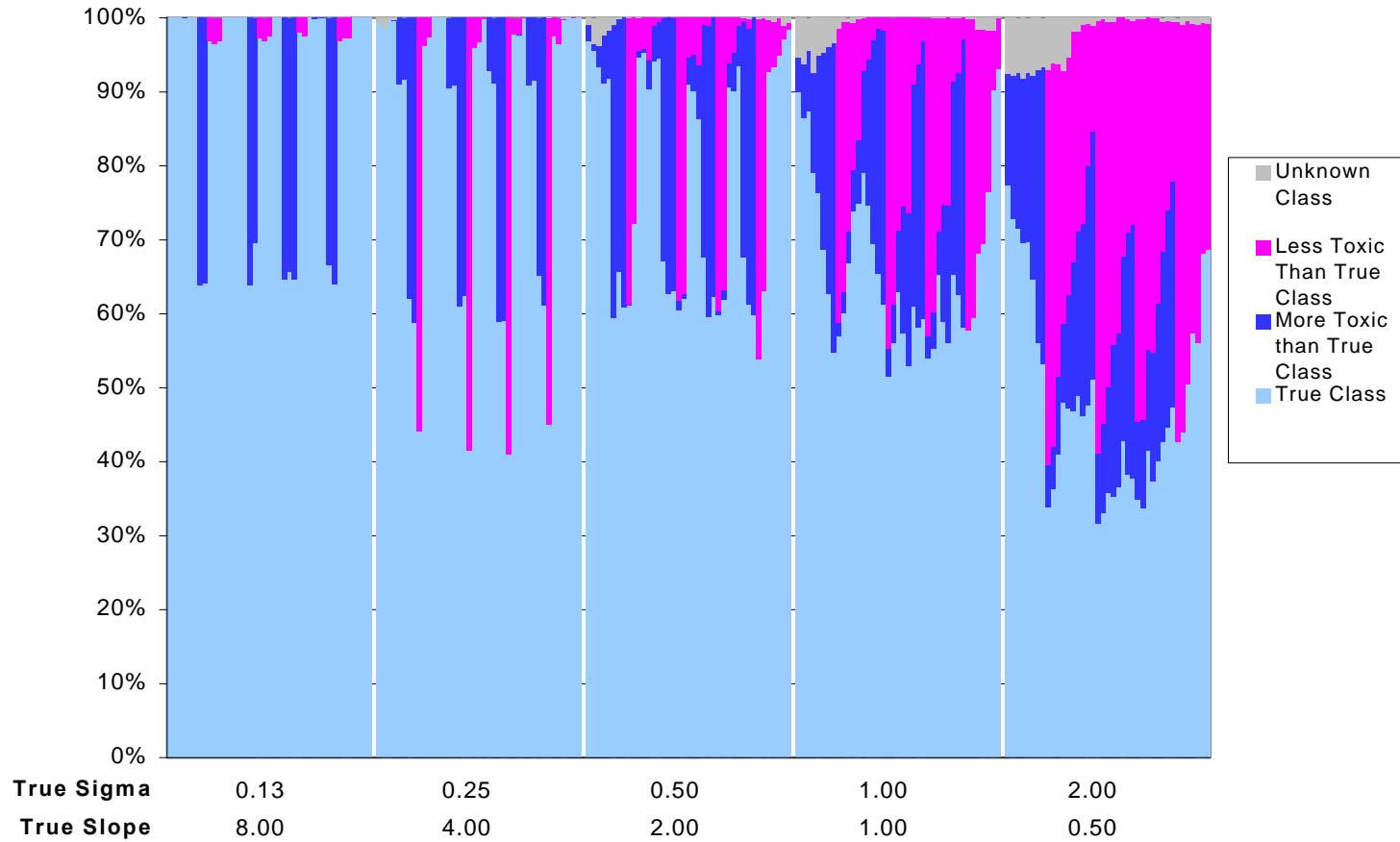
Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD30



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 21, Set 2

Predicted Classification as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD30



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

5.3 Starting Dose = LD80

Figures 22 through 27 show the simulation results when using a starting dose equal to the LD80.

Figure 22, Set 2

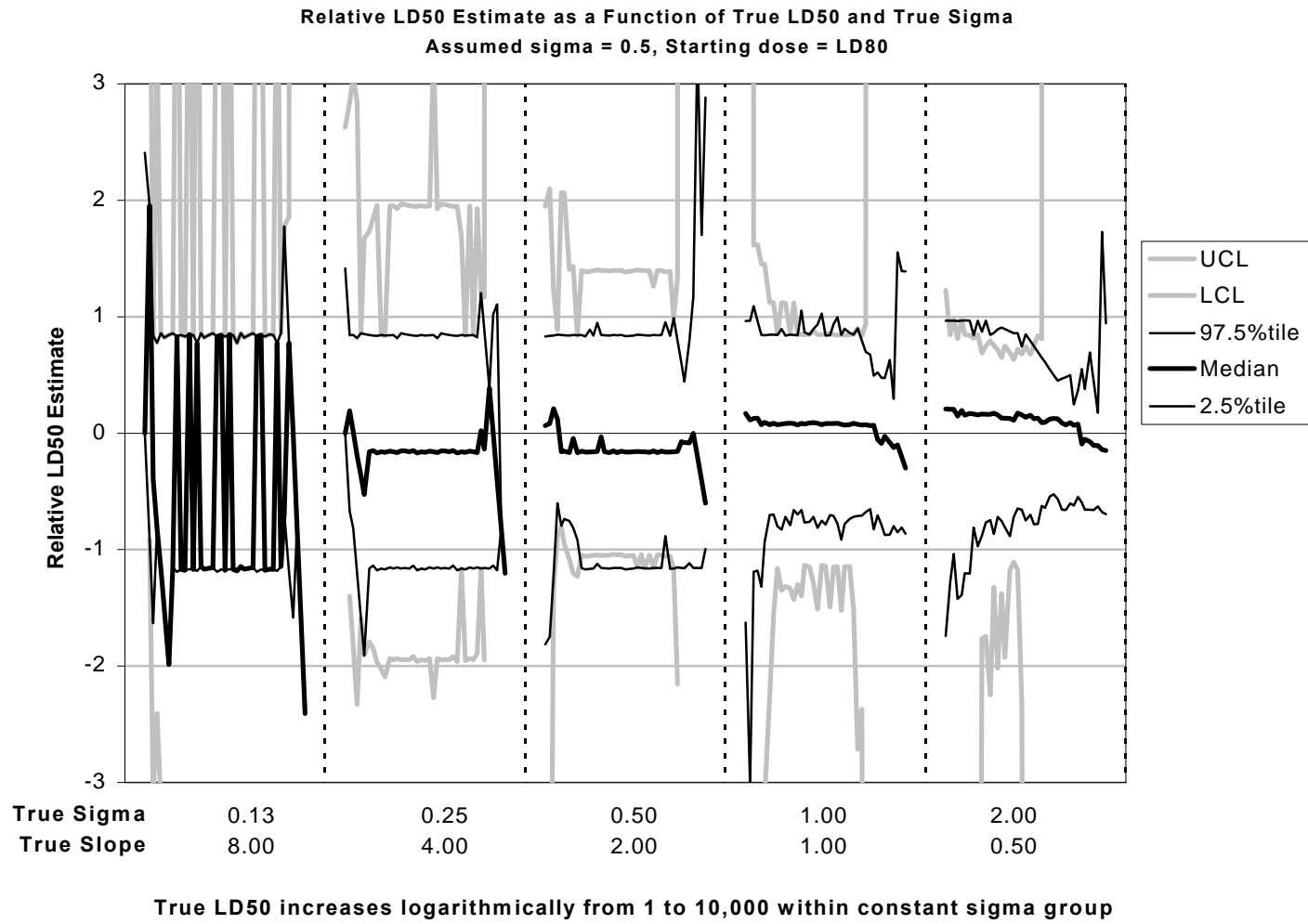
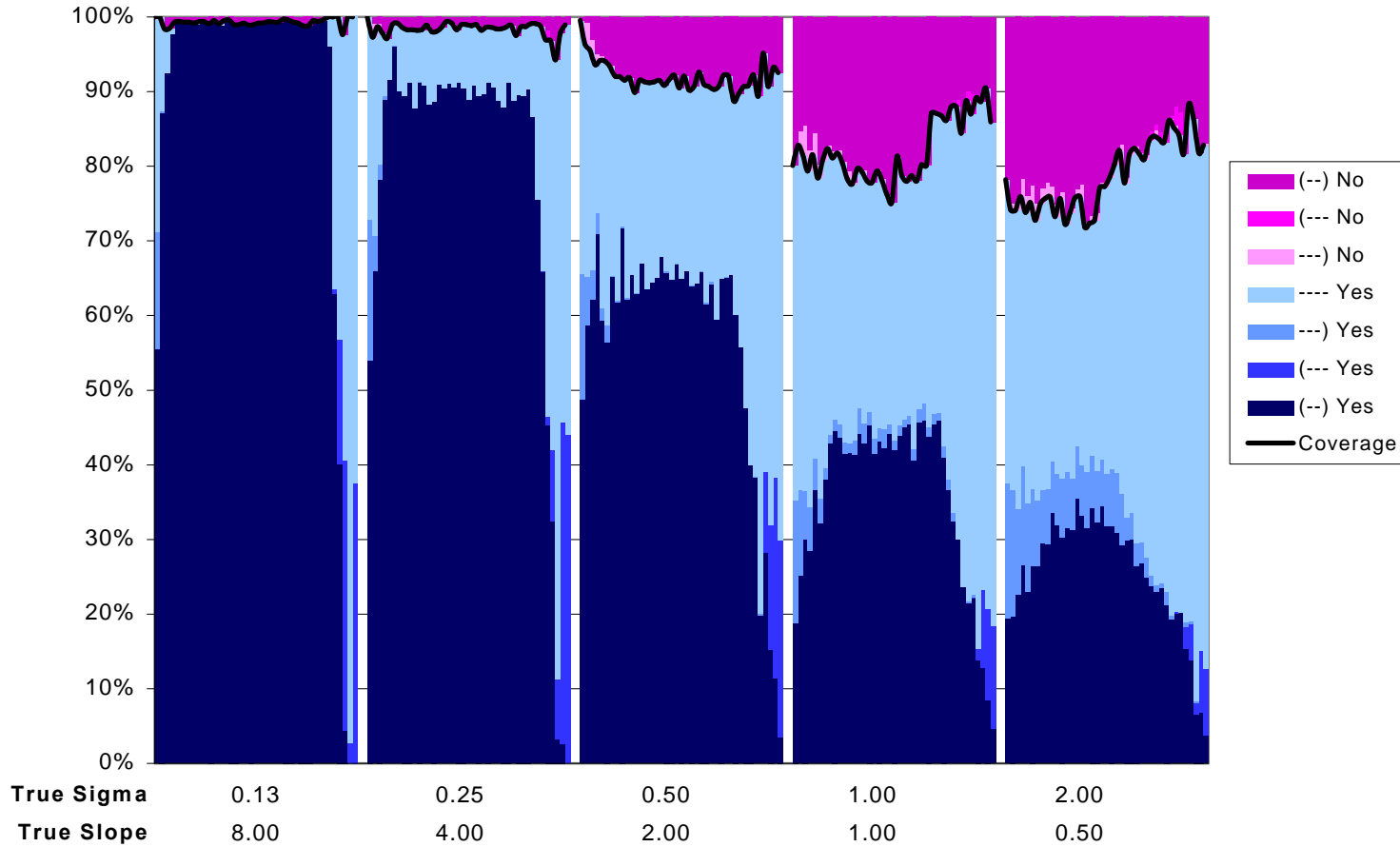


Figure 23, Set 2

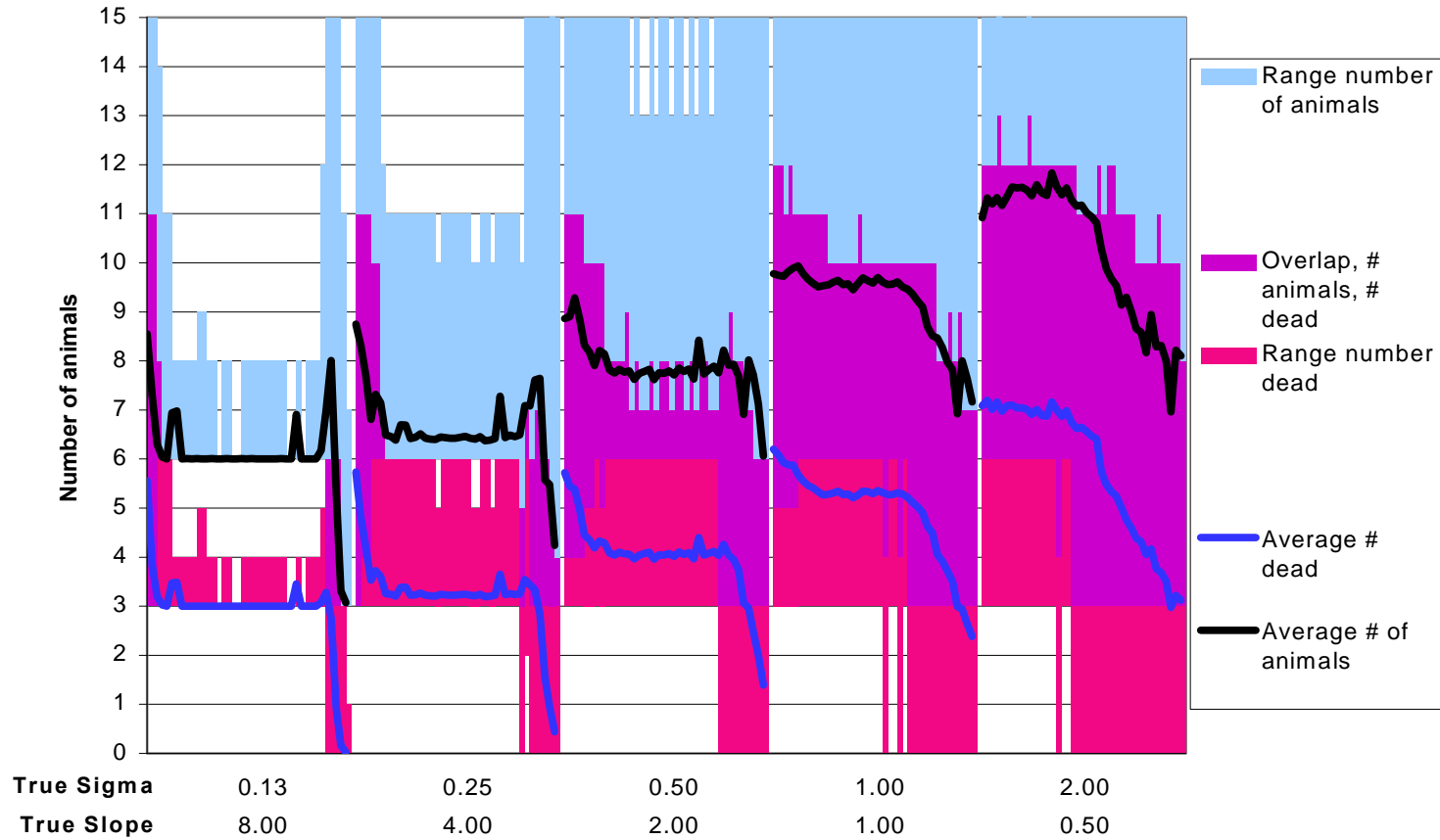
95% CI Coverage as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD80



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 24, Set 2

Number of Animals as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD80



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 25, Set 2

Percent of Simulations by Case as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD80

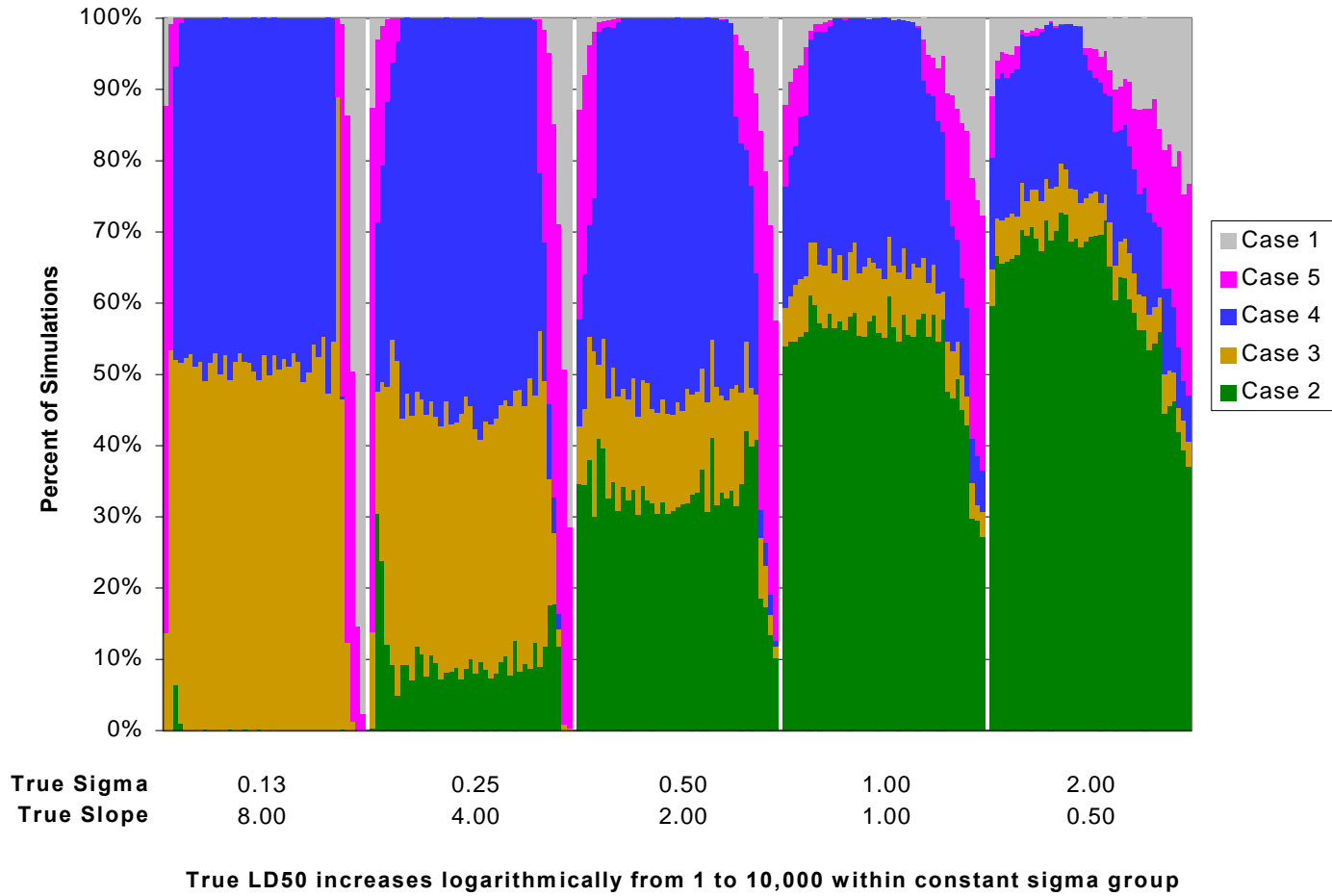
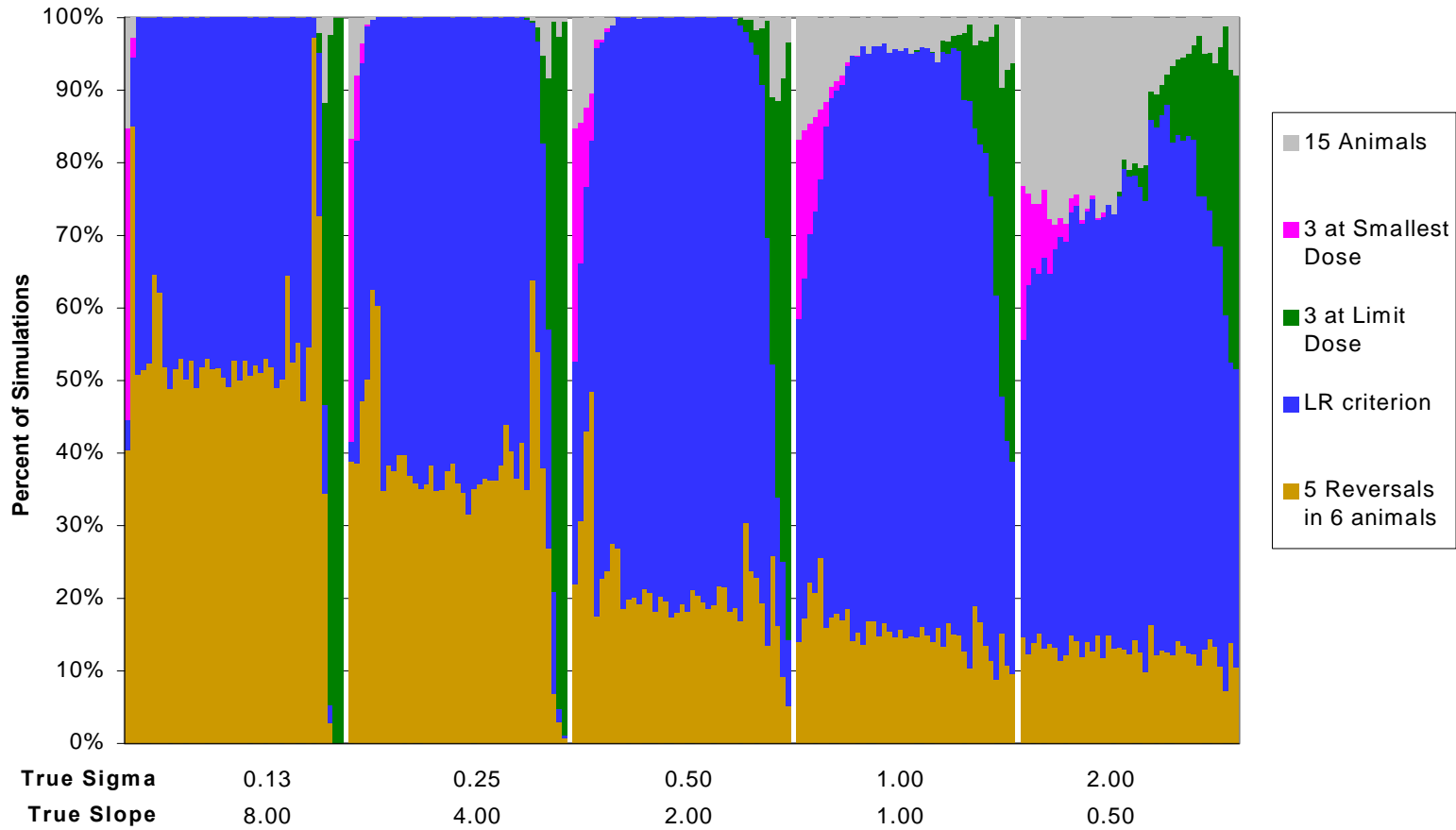


Figure 26, Set 2

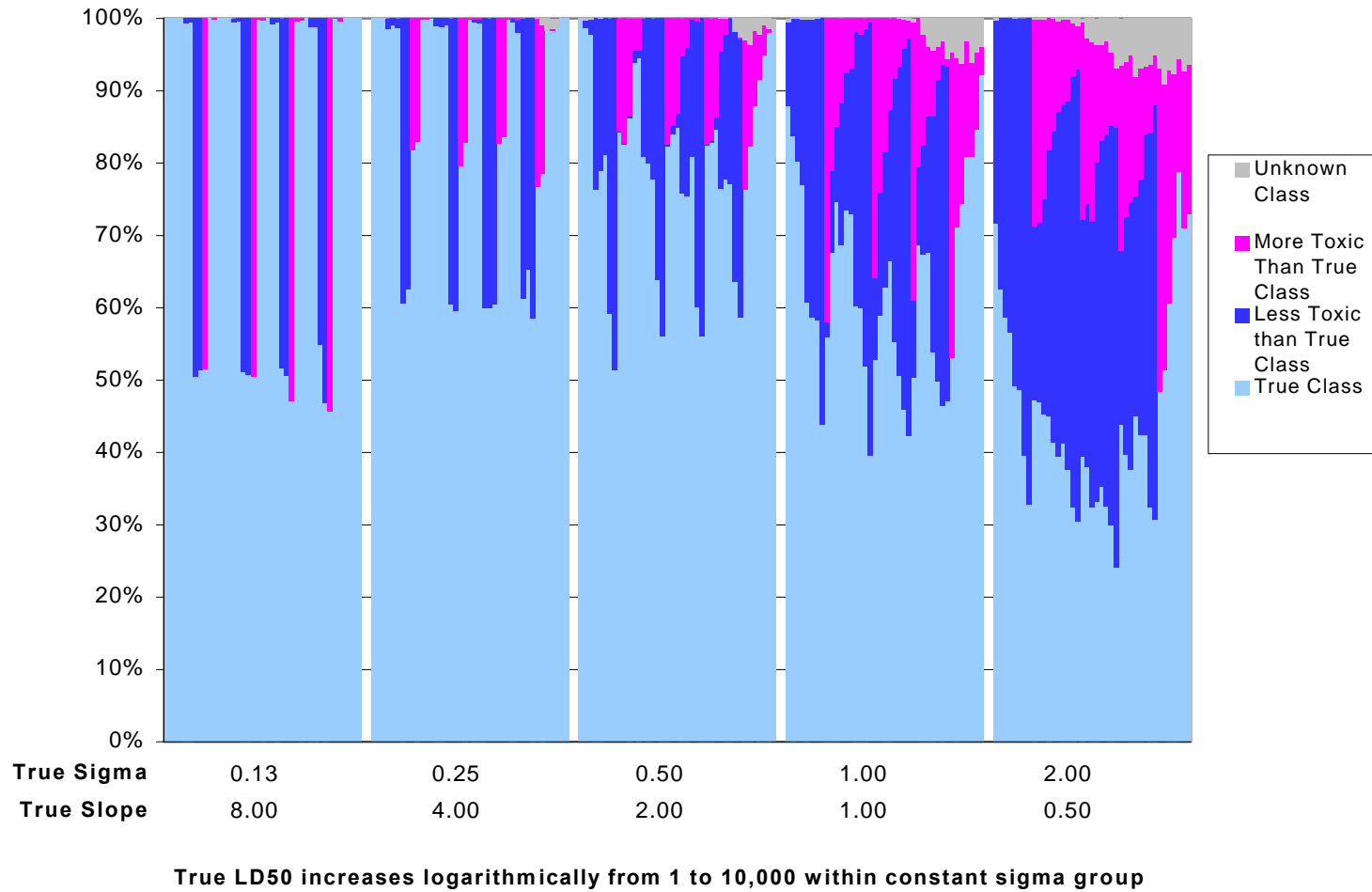
Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD80



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 27, Set 2

Predicted Classification as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD80

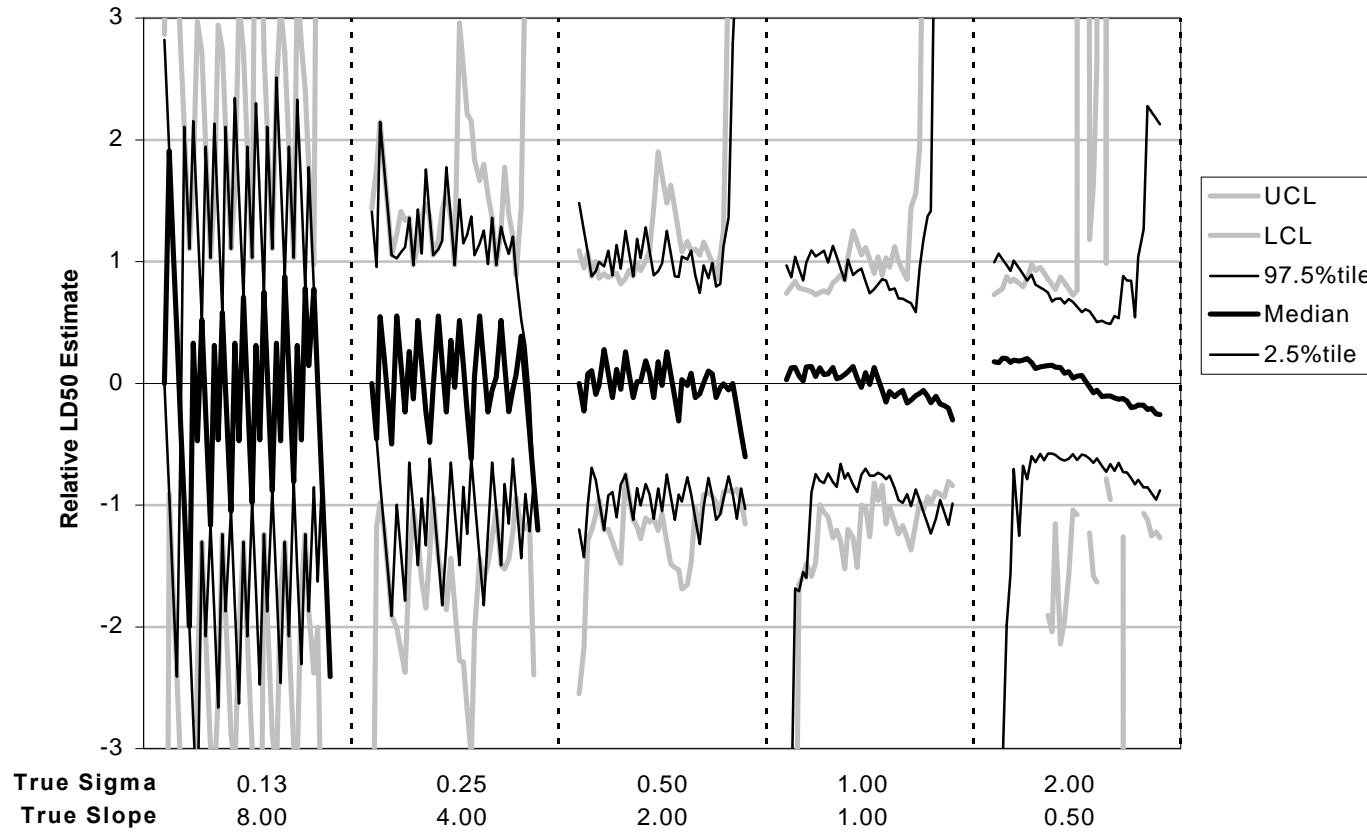


5.4 Starting Dose = 175 mg/kg

Figures 28 through 33 show the simulation results when using a starting dose equal to 175 mg/kg (the default starting dose).

Figure 28, Set 2

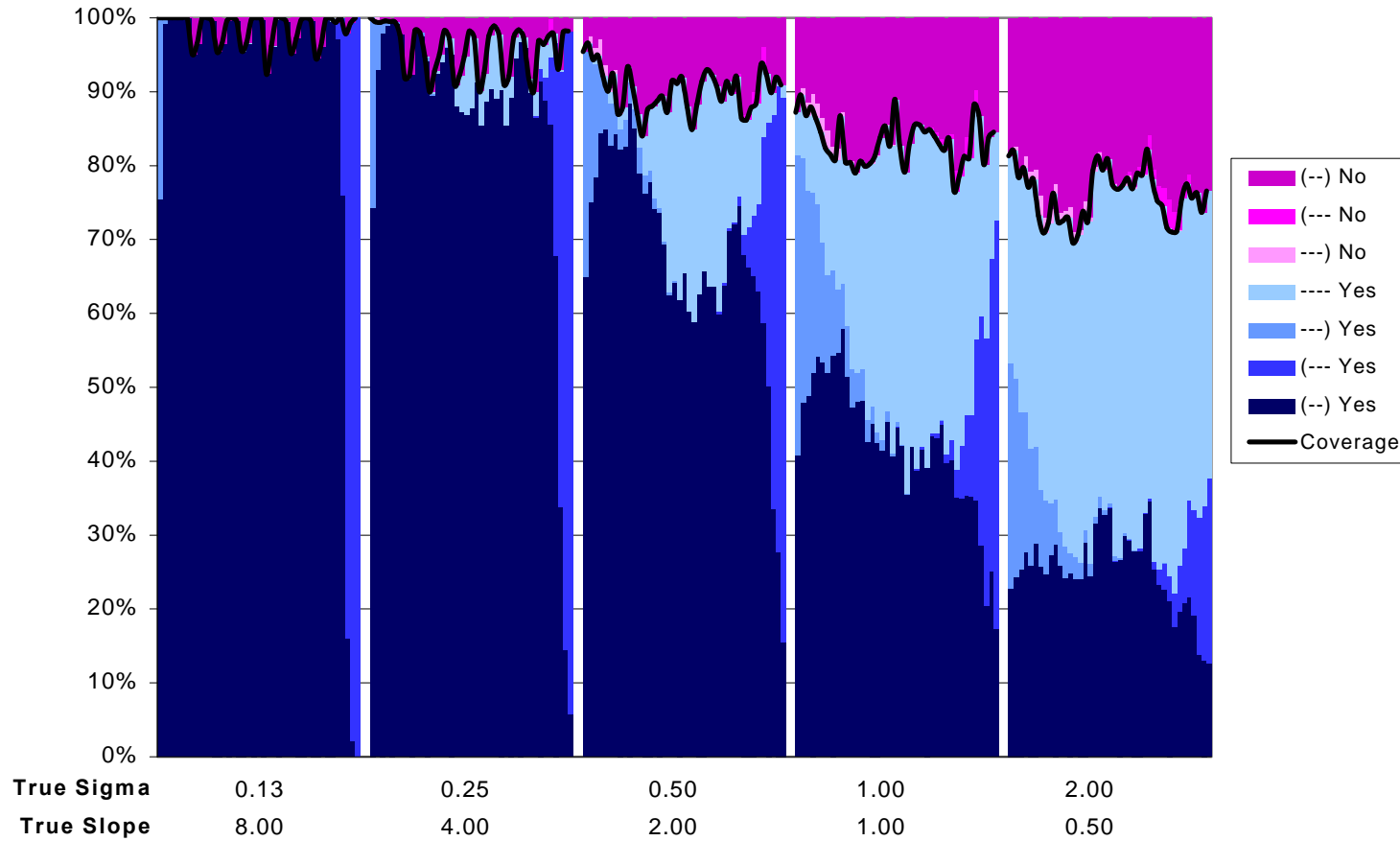
Relative LD50 Estimate as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = 175 mg/kg



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 29, Set 2

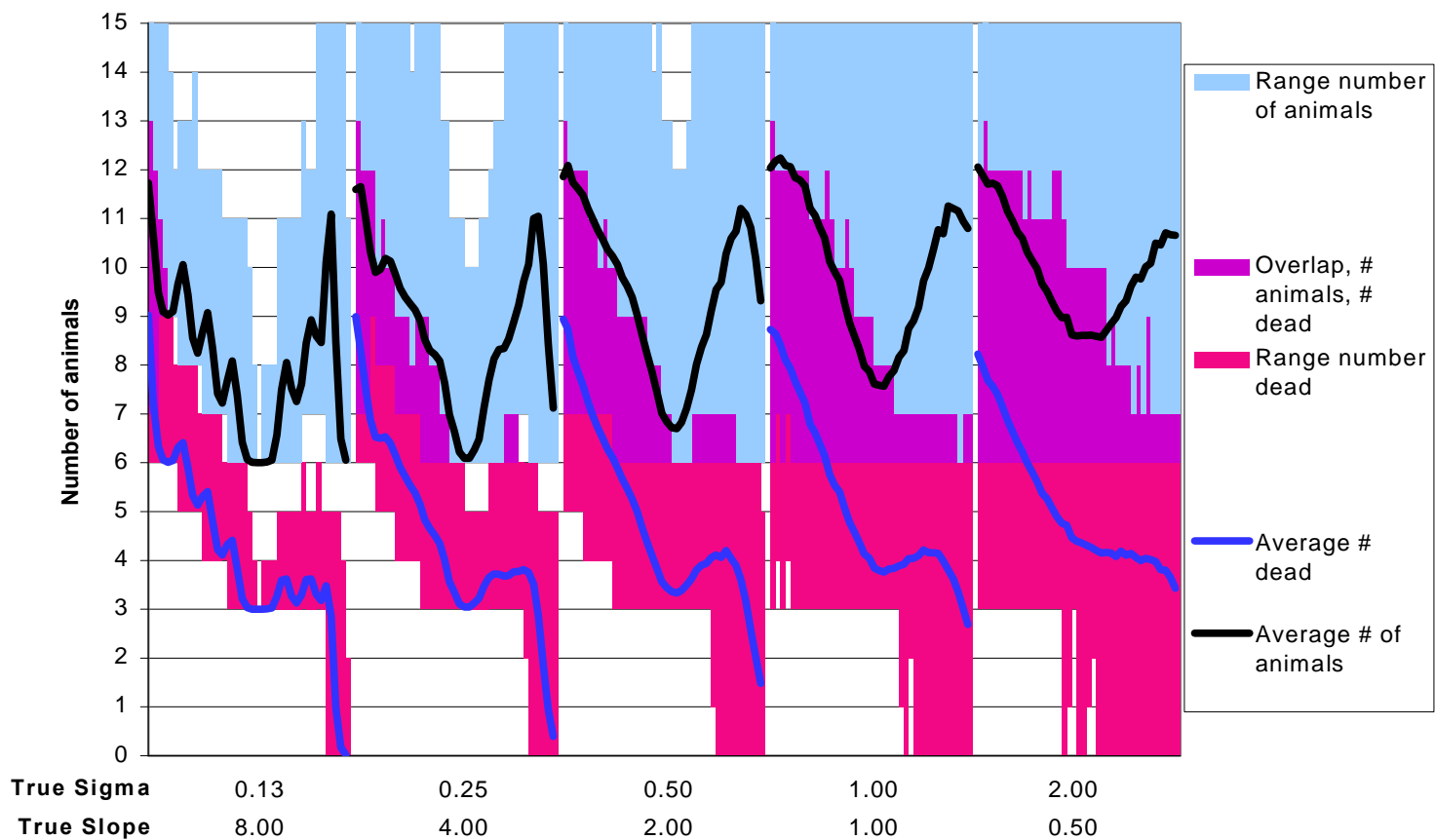
95% CI Coverage as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = 175 mg/kg



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 30, Set 2

Number of Animals as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = 175 mg/kg



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 31, Set 2

Percent of Simulations by Case as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = 175 mg/kg

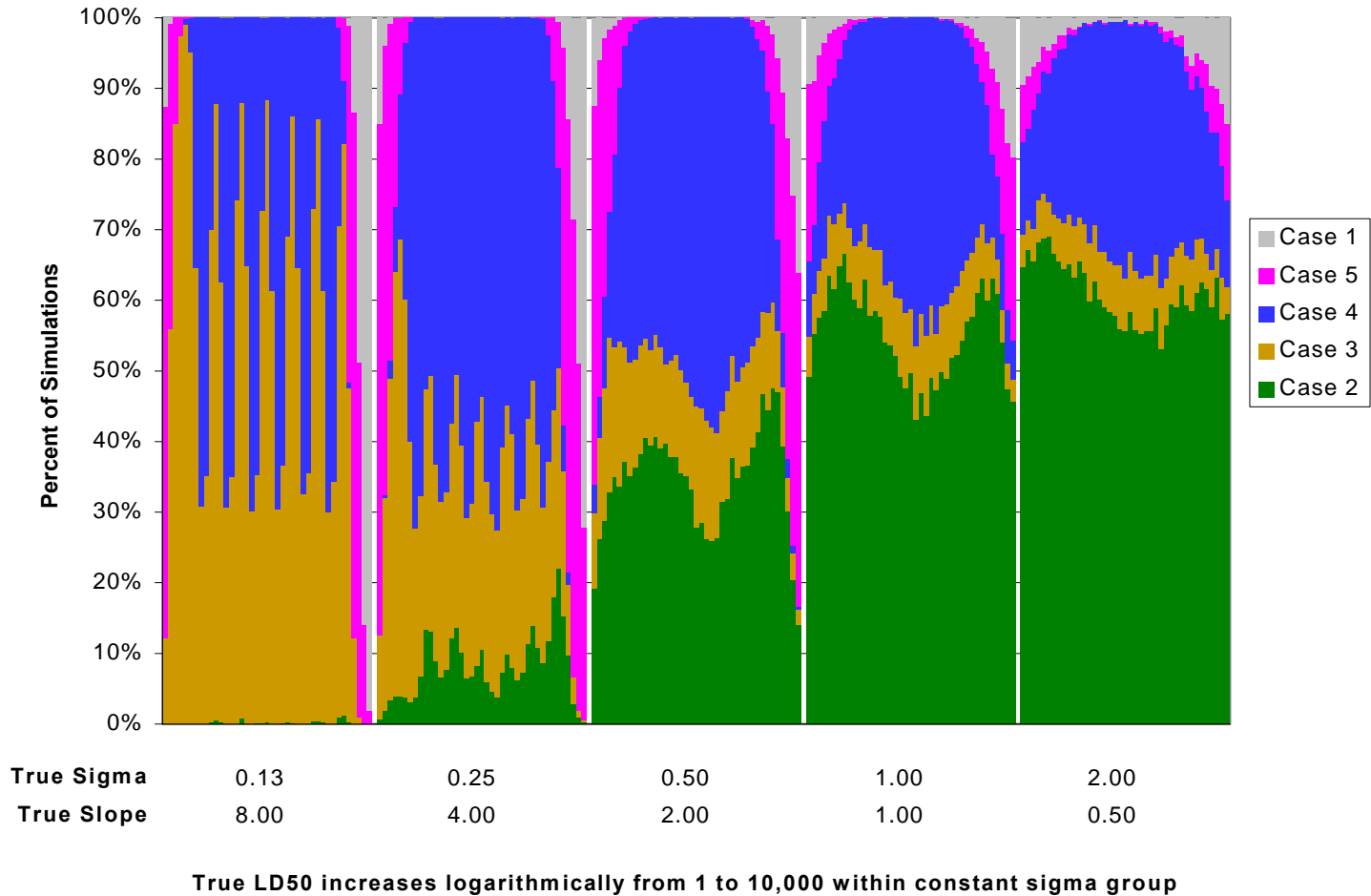
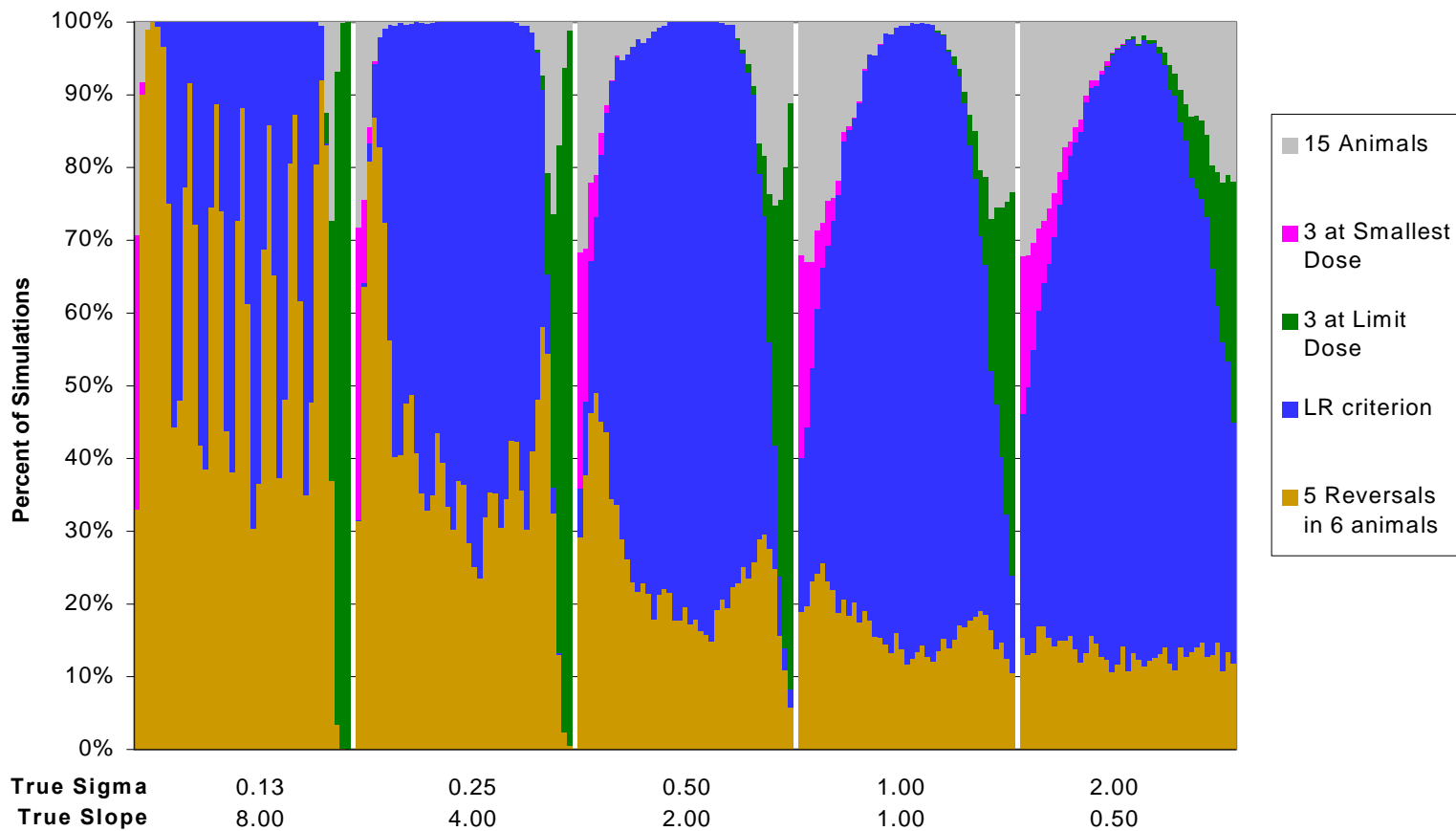


Figure 32, Set 2

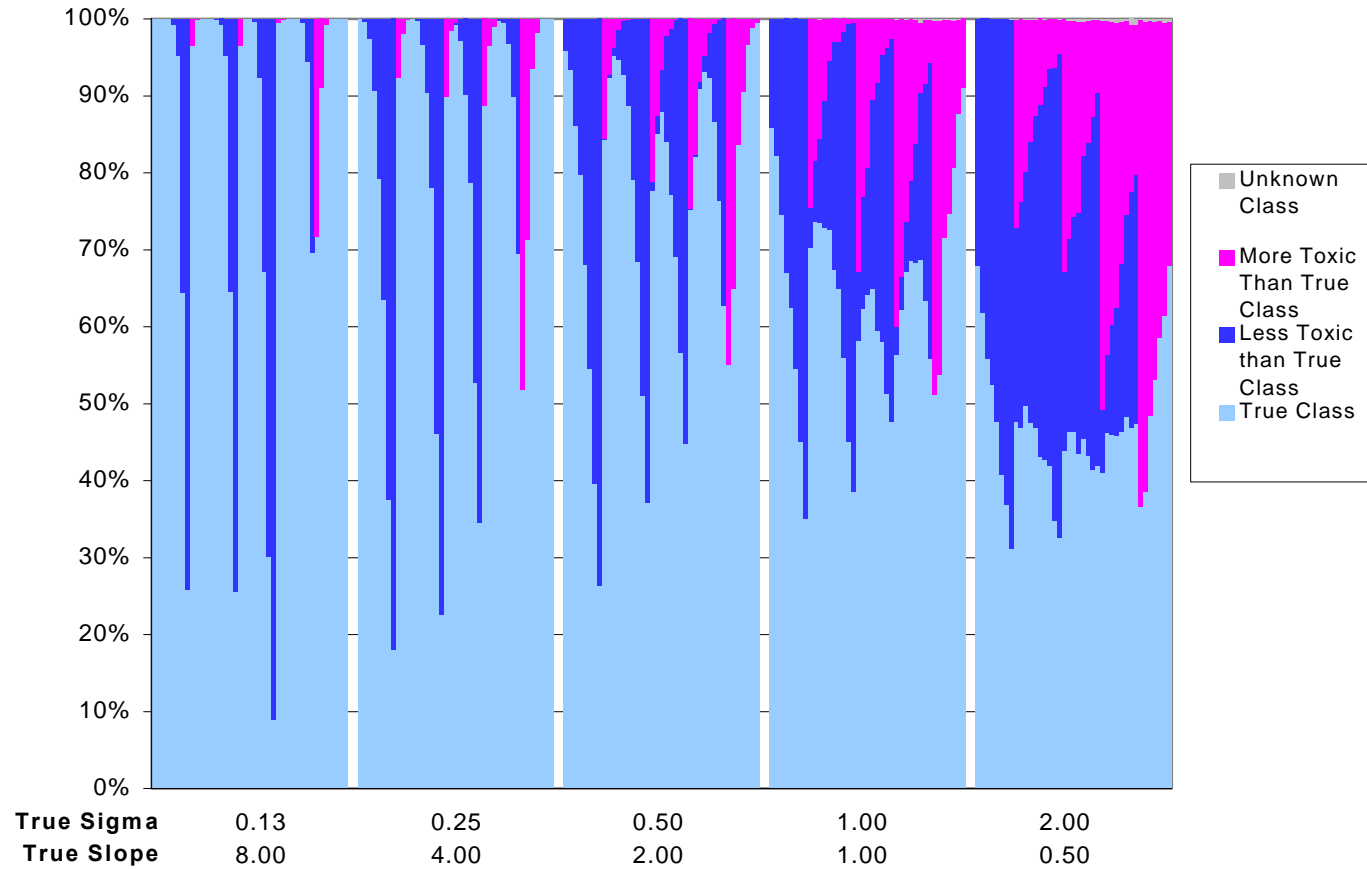
Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = 175 mg/kg



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 33, Set 2

Predicted Classification as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = 175 mg/kg



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

6. Simulations for Limit Tests

Figures 34 and 35 show the frequency of different decisions from the limit test. The primary decision is either "The LD50 is greater than the limit dose" or "The LD50 is less than the limit dose." For a limit test at a limit dose of 2000 mg/kg, if the first animal dies, the test will stop with the decision to conduct the main test. This decision is interpreted as indicating that the LD50 is less than the limit dose. If the first animal does not die, a total of five animals are tested. After testing five animals, the test procedure decides that the LD50 is less than the limit dose if three or more animals die; otherwise the LD50 is greater than the limit dose. For tests using a limit dose of 2000, a main test must be conducted if the LD50 is less than the limit dose.

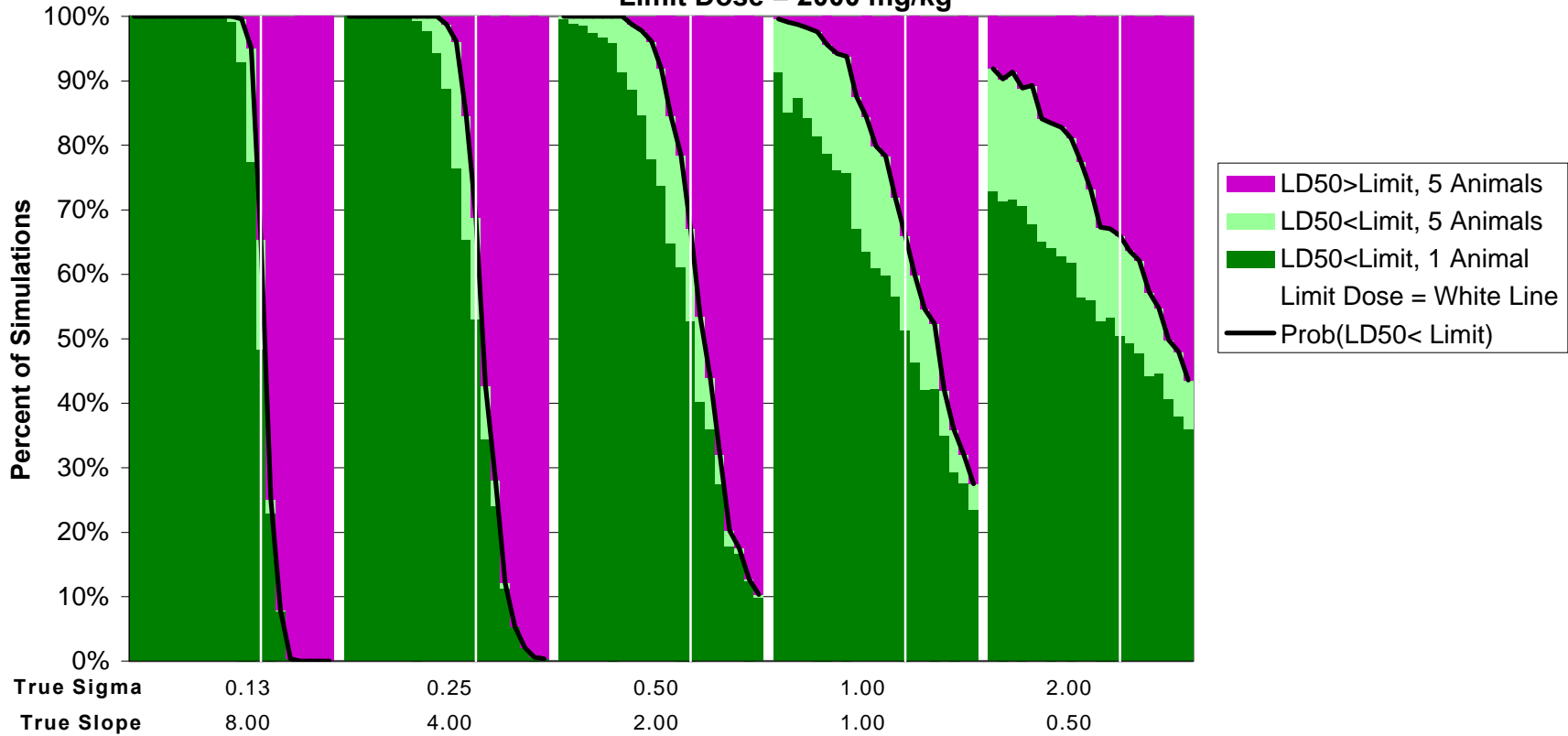
Figure 34 shows the proportion of simulated tests 1) stopping after the first animal with the decision that the LD50 is less than the limit dose (using dark green), 2) stopping after five animals with the decision that the LD50 is less than the limit dose (using light green), or 3) stopping after five animals with the decision that the LD50 is greater than the limit dose (using magenta). A dark line shows the proportion of tests for which the conclusion says the LD50 is less than the limit dose. As with the other plots, the results are shown by increasing LD50 with groups with the same true sigma (with true sigma increasing from left to right). Within each panel with the same true sigma, a thin white line shows where the limit dose is along the horizontal axis.

At the limit dose, 60% to 70% of simulated tests are classified as having an LD50 less than the limit dose. For test substances with a true sigma of twice the assumed sigma, 10% of tests may conclude that the LD50 is greater than 2000 mg/kg when the true LD50 is actually about 100 mg/kg.

Figure 35 shows the results for a limit test at a limit dose of 5000 mg/kg. For a limit test at a limit dose of 5000 mg/kg, the rules for deciding if the LD50 is less than or greater than the limit dose are similar to a test at 2000 mg/kg. However, if the first animal lives, additional testing will stop after either three animals survive or three animals die. Thus, testing may stop before five animals are dosed and tested. As a result, there are a few more possible combinations of decisions and numbers of animals at the end of the test to plot.

Figure 34, Set 3

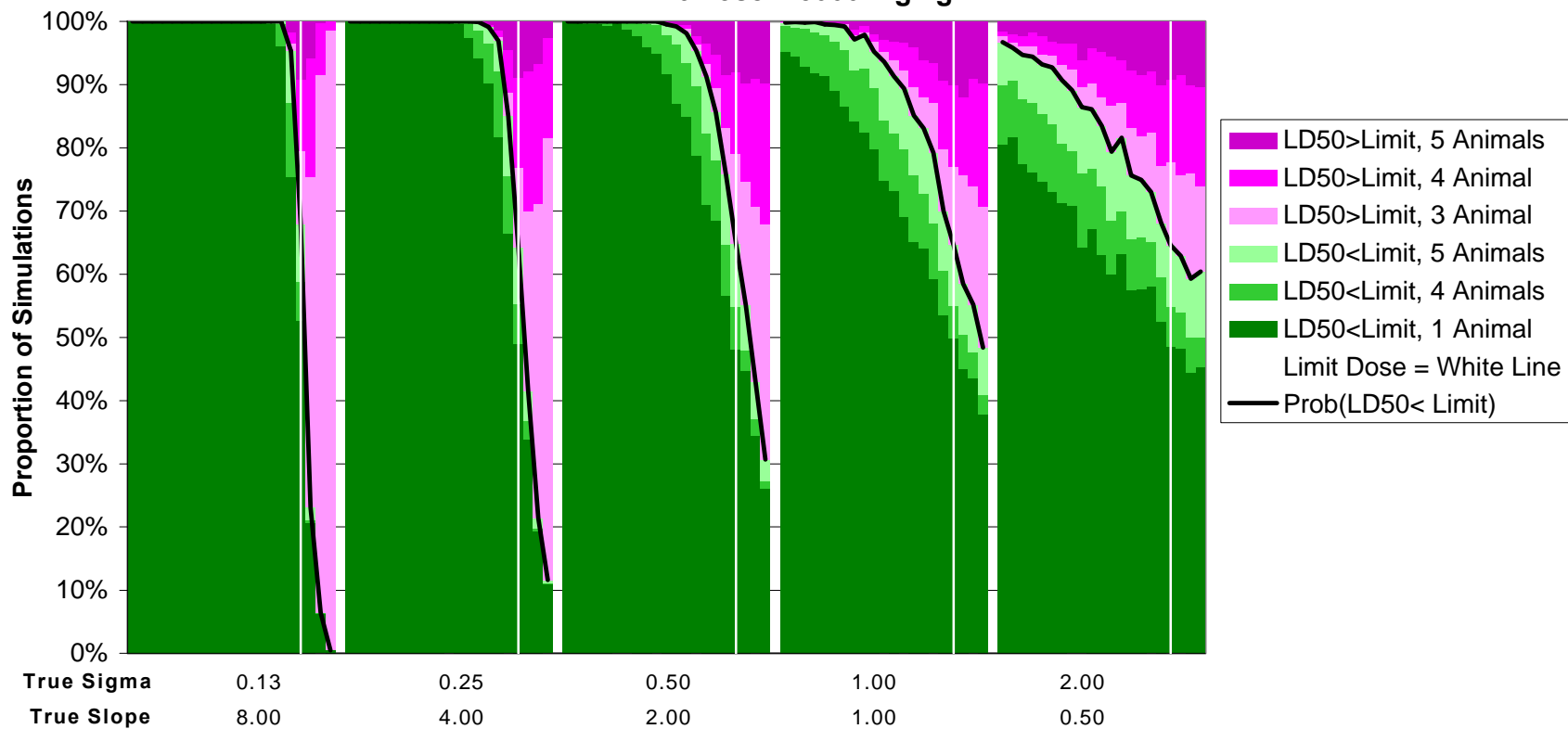
Proportion of Limit Test Simulations Concluding the LD50 is Less than the Limit Dose
 Limit Dose = 2000 mg/kg



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

Figure 35, Set 3

Proportion of Limit Test Simulations Concluding the LD50 is Less than the Limit Dose
 Limit Dose = 5000 mg/kg



True LD50 increases logarithmically from 1 to 10,000 within constant sigma group

APPENDIX A

Simulation Results Simulation Set 2

Starting Dose = LD50

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Percent of Simulations by Case as a Function of True LD50 and True Sigma
 Assumed sigma = 0.5, Starting dose = LD50

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
0.125	1	0	0.127	0	0.75	0.123
	1.3	0	0.581	0	0.415	0.004
	1.6	0	0.858	0	0.142	0
	2	0.008	0.256	0.734	0.002	0
	2.5	0.002	0.253	0.745	0	0
	3	0	0.26	0.74	0	0
	4	0	0.273	0.727	0	0
	5	0	0.261	0.739	0	0
	6.3	0.001	0.28	0.719	0	0
	8	0	0.248	0.752	0	0
	10	0	0.259	0.741	0	0
	13	0	0.255	0.745	0	0
	16	0	0.237	0.763	0	0
	20	0	0.24	0.76	0	0
	25	0	0.265	0.735	0	0
	30	0	0.256	0.744	0	0
	40	0	0.25	0.75	0	0
	50	0	0.217	0.783	0	0
	63	0	0.252	0.748	0	0
	80	0	0.279	0.721	0	0
	100	0	0.257	0.743	0	0
	130	0	0.243	0.757	0	0
	160	0	0.243	0.757	0	0
	200	0	0.23	0.77	0	0
	250	0	0.238	0.762	0	0
	300	0	0.247	0.753	0	0
	400	0	0.245	0.755	0	0
	500	0	0.253	0.747	0	0
	630	0	0.258	0.742	0	0
	800	0	0.253	0.747	0	0
	1000	0.001	0.259	0.74	0	0
	1300	0	0.251	0.749	0	0
	1600	0	0.24	0.76	0	0
	2000	0.001	0.24	0.759	0	0
	2500	0.008	0.259	0.73	0.003	0
	3000	0.049	0.22	0.724	0.007	0
	4000	0	0.474	0	0.519	0.007
	5000	0	0.133	0	0.73	0.137
	6300	0	0.016	0	0.478	0.506
	8000	0	0	0	0.131	0.869
	10000	0	0	0	0.016	0.984

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
0.25	1	0.033	0.127	0.008	0.713	0.119
	1.3	0.045	0.296	0.019	0.602	0.038
	1.6	0.028	0.478	0.03	0.455	0.009
	2	0.153	0.211	0.61	0.024	0.002
	2.5	0.089	0.241	0.657	0.013	0
	3	0.066	0.205	0.725	0.004	0
	4	0.041	0.256	0.702	0.001	0
	5	0.034	0.23	0.735	0.001	0
	6.3	0.041	0.243	0.716	0	0
	8	0.048	0.234	0.718	0	0
	10	0.053	0.221	0.726	0	0
	13	0.033	0.238	0.729	0	0
	16	0.049	0.241	0.71	0	0
	20	0.041	0.245	0.714	0	0
	25	0.048	0.216	0.736	0	0
	30	0.043	0.226	0.731	0	0
	40	0.041	0.236	0.723	0	0
	50	0.045	0.218	0.737	0	0
	63	0.039	0.246	0.715	0	0
	80	0.042	0.229	0.729	0	0
	100	0.05	0.229	0.721	0	0
	130	0.048	0.232	0.72	0	0
	160	0.058	0.254	0.688	0	0
	200	0.055	0.221	0.724	0	0
	250	0.043	0.242	0.715	0	0
	300	0.044	0.243	0.713	0	0
	400	0.054	0.236	0.71	0	0
	500	0.058	0.219	0.723	0	0
	630	0.046	0.237	0.717	0	0
	800	0.053	0.248	0.699	0	0
	1000	0.043	0.235	0.722	0	0
	1300	0.042	0.243	0.714	0.001	0
	1600	0.052	0.247	0.697	0.004	0
	2000	0.091	0.204	0.698	0.007	0
	2500	0.135	0.187	0.658	0.02	0
	3000	0.22	0.172	0.557	0.035	0.016
	4000	0.035	0.269	0.016	0.636	0.044
	5000	0.042	0.144	0.01	0.674	0.13
	6300	0.026	0.041	0.002	0.668	0.263
	8000	0.018	0.007	0.006	0.464	0.505
	10000	0.007	0.002	0	0.276	0.715

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
0.5	1	0.209	0.076	0.07	0.482	0.163
	1.3	0.291	0.11	0.083	0.413	0.103
	1.6	0.246	0.193	0.105	0.402	0.054
	2	0.364	0.139	0.431	0.046	0.02
	2.5	0.359	0.122	0.474	0.028	0.017
	3	0.316	0.156	0.494	0.03	0.004
	4	0.328	0.157	0.498	0.013	0.004
	5	0.277	0.179	0.526	0.017	0.001
	6.3	0.281	0.164	0.555	0	0
	8	0.289	0.152	0.559	0	0
	10	0.27	0.148	0.582	0	0
	13	0.284	0.171	0.545	0	0
	16	0.311	0.149	0.54	0	0
	20	0.264	0.163	0.573	0	0
	25	0.271	0.159	0.57	0	0
	30	0.258	0.163	0.579	0	0
	40	0.254	0.173	0.573	0	0
	50	0.28	0.146	0.574	0	0
	63	0.252	0.147	0.601	0	0
	80	0.248	0.136	0.616	0	0
	100	0.263	0.159	0.578	0	0
	130	0.256	0.141	0.603	0	0
	160	0.274	0.146	0.58	0	0
	200	0.258	0.157	0.585	0	0
	250	0.263	0.152	0.585	0	0
	300	0.27	0.171	0.559	0	0
	400	0.299	0.162	0.539	0	0
	500	0.267	0.159	0.574	0	0
	630	0.263	0.156	0.581	0	0
	800	0.257	0.158	0.584	0.001	0
	1000	0.289	0.147	0.562	0	0.002
	1300	0.327	0.158	0.492	0.022	0.001
	1600	0.296	0.152	0.509	0.036	0.007
	2000	0.353	0.132	0.471	0.029	0.015
	2500	0.36	0.122	0.447	0.048	0.023
	3000	0.389	0.111	0.371	0.064	0.065
	4000	0.291	0.119	0.064	0.431	0.095
	5000	0.208	0.094	0.061	0.459	0.178
	6300	0.214	0.057	0.05	0.469	0.21
	8000	0.198	0.021	0.034	0.46	0.287
	10000	0.122	0.01	0.013	0.444	0.411

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
1	1	0.362	0.054	0.094	0.304	0.186
	1.3	0.422	0.059	0.087	0.269	0.163
	1.6	0.461	0.073	0.096	0.253	0.117
	2	0.509	0.07	0.298	0.058	0.065
	2.5	0.477	0.082	0.325	0.059	0.057
	3	0.49	0.087	0.332	0.048	0.043
	4	0.533	0.098	0.3	0.031	0.038
	5	0.536	0.105	0.294	0.036	0.029
	6.3	0.472	0.096	0.425	0.003	0.004
	8	0.458	0.095	0.437	0.004	0.006
	10	0.445	0.098	0.45	0.002	0.005
	13	0.495	0.103	0.4	0.001	0.001
	16	0.483	0.089	0.424	0.003	0.001
	20	0.461	0.09	0.448	0.001	0
	25	0.458	0.103	0.439	0	0
	30	0.449	0.118	0.433	0	0
	40	0.471	0.089	0.44	0	0
	50	0.46	0.097	0.443	0	0
	63	0.46	0.107	0.433	0	0
	80	0.458	0.115	0.427	0	0
	100	0.464	0.103	0.433	0	0
	130	0.441	0.107	0.451	0	0.001
	160	0.458	0.103	0.439	0	0
	200	0.442	0.117	0.441	0	0
	250	0.456	0.11	0.433	0.001	0
	300	0.459	0.111	0.429	0.001	0
	400	0.459	0.087	0.448	0.002	0.004
	500	0.467	0.094	0.437	0	0.002
	630	0.439	0.1	0.45	0.002	0.009
	800	0.473	0.105	0.418	0	0.004
	1000	0.457	0.088	0.429	0.007	0.019
	1300	0.539	0.103	0.29	0.033	0.035
	1600	0.496	0.081	0.329	0.053	0.041
	2000	0.471	0.094	0.325	0.051	0.059
	2500	0.479	0.072	0.312	0.058	0.079
	3000	0.466	0.067	0.298	0.082	0.087
	4000	0.41	0.058	0.087	0.277	0.168
	5000	0.358	0.047	0.102	0.303	0.19
	6300	0.346	0.038	0.077	0.316	0.223
	8000	0.3	0.036	0.069	0.335	0.26
	10000	0.284	0.019	0.07	0.366	0.261

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
2	1	0.438	0.042	0.1	0.209	0.211
	1.3	0.481	0.05	0.082	0.202	0.185
	1.6	0.5	0.051	0.09	0.189	0.17
	2	0.525	0.058	0.253	0.067	0.097
	2.5	0.522	0.066	0.261	0.057	0.094
	3	0.548	0.059	0.252	0.063	0.078
	4	0.593	0.069	0.213	0.041	0.084
	5	0.602	0.066	0.192	0.044	0.096
	6.3	0.585	0.06	0.313	0.015	0.027
	8	0.566	0.07	0.329	0.015	0.02
	10	0.571	0.068	0.339	0.01	0.012
	13	0.6	0.079	0.297	0.007	0.017
	16	0.591	0.078	0.312	0.01	0.009
	20	0.568	0.085	0.343	0	0.004
	25	0.56	0.075	0.356	0.002	0.007
	30	0.555	0.07	0.37	0.001	0.004
	40	0.558	0.099	0.335	0	0.008
	50	0.571	0.084	0.343	0	0.002
	63	0.558	0.077	0.365	0	0
	80	0.556	0.08	0.361	0.001	0.002
	100	0.571	0.069	0.357	0	0.003
	130	0.556	0.086	0.354	0	0.004
	160	0.569	0.081	0.345	0.001	0.004
	200	0.541	0.091	0.364	0	0.004
	250	0.541	0.087	0.367	0.003	0.002
	300	0.54	0.089	0.351	0.004	0.016
	400	0.584	0.069	0.33	0.004	0.013
	500	0.563	0.082	0.325	0.01	0.02
	630	0.606	0.076	0.285	0.009	0.024
	800	0.548	0.069	0.344	0.01	0.029
	1000	0.51	0.084	0.347	0.013	0.046
	1300	0.607	0.068	0.199	0.049	0.077
	1600	0.54	0.06	0.258	0.056	0.086
	2000	0.543	0.073	0.225	0.054	0.105
	2500	0.552	0.063	0.249	0.044	0.092
	3000	0.511	0.049	0.222	0.096	0.122
	4000	0.473	0.044	0.083	0.207	0.193
	5000	0.439	0.047	0.11	0.204	0.2
	6300	0.44	0.041	0.088	0.217	0.214
	8000	0.407	0.034	0.087	0.241	0.231
	10000	0.351	0.039	0.088	0.31	0.212

**Predicted Classification as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD50**

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
0.125	1	1.000	0.000	0.000	0.000
	1.3	1.000	0.000	0.000	0.000
	1.6	1.000	0.000	0.000	0.000
	2	1.000	0.000	0.000	0.000
	2.5	1.000	0.000	0.000	0.000
	3	0.874	0.126	0.000	0.000
	4	0.871	0.129	0.000	0.000
	5	0.879	0.121	0.000	0.000
	6.3	0.859	0.000	0.141	0.000
	8	0.873	0.000	0.127	0.000
	10	1.000	0.000	0.000	0.000
	13	1.000	0.000	0.000	0.000
	16	1.000	0.000	0.000	0.000
	20	1.000	0.000	0.000	0.000
	25	1.000	0.000	0.000	0.000
	30	0.867	0.133	0.000	0.000
	40	0.888	0.112	0.000	0.000
	50	0.901	0.099	0.000	0.000
	63	0.867	0.000	0.133	0.000
	80	0.865	0.000	0.135	0.000
	100	1.000	0.000	0.000	0.000
	130	1.000	0.000	0.000	0.000
	160	1.000	0.000	0.000	0.000
	200	0.881	0.119	0.000	0.000
	250	0.871	0.129	0.000	0.000
	300	0.876	0.124	0.000	0.000
	400	0.884	0.000	0.116	0.000
	500	0.865	0.000	0.135	0.000
	630	1.000	0.000	0.000	0.000
	800	1.000	0.000	0.000	0.000
	1000	1.000	0.000	0.000	0.000
	1300	0.868	0.132	0.000	0.000
	1600	0.873	0.127	0.000	0.000
	2000	0.868	0.132	0.000	0.000
	2500	0.874	0.000	0.126	0.000
	3000	0.884	0.000	0.116	0.000
	4000	1.000	0.000	0.000	0.000
	5000	1.000	0.000	0.000	0.000
	6300	1.000	0.000	0.000	0.000
	8000	1.000	0.000	0.000	0.000
	10000	1.000	0.000	0.000	0.000

Predicted Classification as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
0.25	1	0.995	0.000	0.000	0.005
	1.3	0.999	0.000	0.000	0.001
	1.6	0.970	0.030	0.000	0.000
	2	0.990	0.010	0.000	0.000
	2.5	0.988	0.012	0.000	0.000
	3	0.858	0.142	0.000	0.000
	4	0.826	0.174	0.000	0.000
	5	0.851	0.149	0.000	0.000
	6.3	0.854	0.000	0.146	0.000
	8	0.859	0.000	0.141	0.000
	10	0.985	0.000	0.015	0.000
	13	0.996	0.000	0.004	0.000
	16	0.996	0.004	0.000	0.000
	20	0.990	0.010	0.000	0.000
	25	0.990	0.010	0.000	0.000
	30	0.860	0.140	0.000	0.000
	40	0.856	0.144	0.000	0.000
	50	0.866	0.134	0.000	0.000
	63	0.834	0.000	0.166	0.000
	80	0.850	0.000	0.150	0.000
	100	0.989	0.004	0.007	0.000
	130	0.971	0.015	0.014	0.000
	160	0.985	0.015	0.000	0.000
	200	0.880	0.120	0.000	0.000
	250	0.869	0.131	0.000	0.000
	300	0.840	0.160	0.000	0.000
	400	0.857	0.000	0.143	0.000
	500	0.864	0.000	0.136	0.000
	630	0.990	0.000	0.010	0.000
	800	0.977	0.012	0.011	0.000
	1000	0.987	0.013	0.000	0.000
	1300	0.860	0.140	0.000	0.000
	1600	0.857	0.143	0.000	0.000
	2000	0.833	0.167	0.000	0.000
	2500	0.862	0.000	0.138	0.000
	3000	0.864	0.000	0.136	0.000
	4000	0.978	0.000	0.018	0.004
	5000	0.986	0.000	0.010	0.004
	6300	0.996	0.000	0.002	0.002
	8000	1.000	0.000	0.000	0.000
	10000	1.000	0.000	0.000	0.000

Predicted Classification as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
0.5	1	0.971	0.002	0.000	0.027
	1.3	0.972	0.005	0.000	0.023
	1.6	0.874	0.110	0.000	0.016
	2	0.918	0.077	0.000	0.005
	2.5	0.883	0.109	0.000	0.008
	3	0.763	0.233	0.000	0.004
	4	0.703	0.295	0.000	0.002
	5	0.670	0.330	0.000	0.000
	6.3	0.727	0.001	0.272	0.000
	8	0.780	0.000	0.220	0.000
	10	0.900	0.003	0.097	0.000
	13	0.936	0.005	0.059	0.000
	16	0.928	0.069	0.003	0.000
	20	0.930	0.067	0.003	0.000
	25	0.912	0.083	0.005	0.000
	30	0.769	0.231	0.000	0.000
	40	0.727	0.272	0.001	0.000
	50	0.722	0.278	0.000	0.000
	63	0.754	0.004	0.242	0.000
	80	0.770	0.007	0.223	0.000
	100	0.830	0.077	0.093	0.000
	130	0.831	0.073	0.096	0.000
	160	0.887	0.108	0.005	0.000
	200	0.734	0.259	0.007	0.000
	250	0.736	0.261	0.003	0.000
	300	0.727	0.273	0.000	0.000
	400	0.761	0.004	0.235	0.000
	500	0.774	0.005	0.221	0.000
	630	0.891	0.006	0.103	0.000
	800	0.852	0.078	0.070	0.000
	1000	0.896	0.099	0.005	0.000
	1300	0.808	0.185	0.006	0.001
	1600	0.744	0.250	0.002	0.004
	2000	0.684	0.307	0.001	0.008
	2500	0.706	0.000	0.285	0.009
	3000	0.778	0.000	0.220	0.002
	4000	0.872	0.000	0.106	0.022
	5000	0.885	0.000	0.086	0.029
	6300	0.909	0.000	0.059	0.032
	8000	0.980	0.000	0.003	0.017
	10000	0.989	0.000	0.002	0.009

Predicted Classification as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
1	1	0.901	0.046	0.000	0.053
	1.3	0.869	0.083	0.000	0.048
	1.6	0.789	0.177	0.000	0.034
	2	0.794	0.182	0.000	0.024
	2.5	0.764	0.208	0.000	0.028
	3	0.649	0.329	0.000	0.022
	4	0.589	0.391	0.000	0.020
	5	0.534	0.450	0.000	0.016
	6.3	0.629	0.005	0.365	0.001
	8	0.671	0.020	0.306	0.003
	10	0.741	0.044	0.212	0.003
	13	0.796	0.058	0.146	0.000
	16	0.799	0.142	0.058	0.001
	20	0.787	0.160	0.053	0.000
	25	0.751	0.202	0.047	0.000
	30	0.628	0.350	0.022	0.000
	40	0.632	0.350	0.018	0.000
	50	0.604	0.379	0.017	0.000
	63	0.584	0.032	0.384	0.000
	80	0.596	0.056	0.348	0.000
	100	0.636	0.151	0.213	0.000
	130	0.630	0.209	0.160	0.001
	160	0.704	0.224	0.072	0.000
	200	0.642	0.311	0.047	0.000
	250	0.588	0.375	0.037	0.000
	300	0.594	0.383	0.023	0.000
	400	0.644	0.041	0.314	0.001
	500	0.613	0.049	0.338	0.000
	630	0.746	0.064	0.187	0.003
	800	0.658	0.161	0.180	0.001
	1000	0.718	0.206	0.074	0.002
	1300	0.657	0.274	0.048	0.021
	1600	0.596	0.347	0.044	0.013
	2000	0.584	0.367	0.031	0.018
	2500	0.629	0.000	0.341	0.030
	3000	0.686	0.000	0.314	0.000
	4000	0.735	0.000	0.209	0.056
	5000	0.744	0.000	0.205	0.051
	6300	0.794	0.000	0.148	0.058
	8000	0.892	0.000	0.047	0.061
	10000	0.925	0.000	0.052	0.023

Predicted Classification as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
2	1	0.777	0.149	0.000	0.074
	1.3	0.747	0.182	0.000	0.071
	1.6	0.688	0.245	0.000	0.067
	2	0.682	0.287	0.000	0.031
	2.5	0.672	0.289	0.000	0.039
	3	0.590	0.383	0.000	0.027
	4	0.543	0.423	0.000	0.034
	5	0.525	0.437	0.000	0.038
	6.3	0.496	0.069	0.429	0.006
	8	0.540	0.099	0.350	0.011
	10	0.584	0.124	0.290	0.002
	13	0.604	0.162	0.225	0.009
	16	0.601	0.246	0.149	0.004
	20	0.615	0.261	0.121	0.003
	25	0.594	0.280	0.124	0.002
	30	0.521	0.383	0.095	0.001
	40	0.529	0.396	0.070	0.005
	50	0.516	0.419	0.065	0.000
	63	0.505	0.130	0.365	0.000
	80	0.456	0.144	0.400	0.000
	100	0.453	0.240	0.306	0.001
	130	0.459	0.272	0.267	0.002
	160	0.521	0.301	0.176	0.002
	200	0.445	0.400	0.153	0.002
	250	0.483	0.407	0.109	0.001
	300	0.468	0.429	0.101	0.002
	400	0.505	0.119	0.371	0.005
	500	0.486	0.138	0.370	0.006
	630	0.564	0.171	0.259	0.006
	800	0.474	0.261	0.257	0.008
	1000	0.536	0.291	0.172	0.001
	1300	0.492	0.326	0.156	0.026
	1600	0.478	0.352	0.134	0.036
	2000	0.449	0.419	0.101	0.031
	2500	0.539	0.000	0.423	0.038
	3000	0.635	0.000	0.358	0.007
	4000	0.595	0.000	0.327	0.078
	5000	0.594	0.000	0.335	0.071
	6300	0.648	0.000	0.275	0.077
	8000	0.741	0.000	0.173	0.086
	10000	0.818	0.000	0.136	0.046

The cutoff points for the harmonized classification are 5, 50, 300, and 2000

**Number of Animals as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD50**

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
0.125	1	8.2	3	15	5.3	3	11
	1.3	7.2	3	15	3.8	3	10
	1.6	6.2	5	14	3.1	3	8
	2	6.0	6	9	3.0	3	5
	2.5	6.0	6	6	3.0	3	3
	3	6.0	6	6	3.0	3	3
	4	7.5	6	8	3.7	3	4
	5	7.5	6	8	3.7	3	4
	6.3	6.0	6	8	3.0	3	4
	8	6.0	6	6	3.0	3	3
	10	6.0	6	6	3.0	3	3
	13	6.0	6	6	3.0	3	3
	16	6.0	6	8	3.0	3	4
	20	6.0	6	6	3.0	3	3
	25	6.0	6	6	3.0	3	3
	30	6.0	6	6	3.0	3	3
	40	6.0	6	6	3.0	3	3
	50	6.0	6	6	3.0	3	3
	63	6.0	6	6	3.0	3	3
	80	6.0	6	6	3.0	3	3
	100	6.0	6	6	3.0	3	3
	130	6.0	6	6	3.0	3	3
	160	6.0	6	6	3.0	3	3
	200	6.0	6	6	3.0	3	3
	250	6.0	6	6	3.0	3	3
	300	6.0	6	6	3.0	3	3
	400	6.0	6	6	3.0	3	3
	500	6.0	6	6	3.0	3	3
	630	6.0	6	6	3.0	3	3
	800	6.0	6	6	3.0	3	3
	1000	6.0	6	8	3.0	3	4
	1300	7.5	6	8	3.7	3	4
	1600	6.0	6	6	3.0	3	3
	2000	6.0	6	8	3.0	3	4
	2500	6.0	6	10	3.0	3	5
	3000	6.1	6	11	3.0	2	5
	4000	7.4	3	15	3.5	0	6
	5000	8.1	3	15	2.7	0	6
	6300	5.4	3	15	0.9	0	6
	8000	3.4	3	15	0.2	0	4
	10000	3.0	3	7	0.0	0	2

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
0.25	1	8.3	3	15	5.4	3	11
	1.3	8.3	3	15	4.7	3	11
	1.6	7.5	3	15	4.0	3	11
	2	6.5	4	15	3.3	3	9
	2.5	6.3	6	15	3.1	3	8
	3	6.1	6	15	3.1	3	8
	4	7.5	6	11	3.7	3	6
	5	7.6	6	11	3.8	3	6
	6.3	6.1	6	10	3.0	3	5
	8	6.1	6	10	3.1	3	5
	10	6.1	6	10	3.1	3	5
	13	6.1	6	10	3.0	3	5
	16	6.1	6	10	3.1	3	5
	20	6.1	6	10	3.1	3	5
	25	6.1	6	9	3.0	3	4
	30	6.1	6	10	3.1	3	5
	40	6.1	6	10	3.0	3	5
	50	6.1	6	10	3.1	3	5
	63	6.1	6	10	3.0	3	5
	80	6.1	6	10	3.0	3	5
	100	6.1	6	10	3.0	3	5
	130	6.1	6	10	3.0	3	5
	160	6.1	6	10	3.1	3	5
	200	6.1	6	10	3.1	3	5
	250	6.1	6	8	3.0	3	4
	300	6.1	6	10	3.0	3	5
	400	6.1	6	10	3.1	3	5
	500	6.1	6	10	3.1	3	5
	630	6.1	6	9	3.1	3	4
	800	6.1	6	9	3.1	3	5
	1000	6.1	6	9	3.1	3	5
	1300	7.5	6	11	3.8	3	5
	1600	6.1	6	14	3.1	3	6
	2000	6.2	6	11	3.1	3	5
	2500	6.3	6	15	3.1	2	6
	3000	6.4	3	15	3.1	0	6
	4000	8.4	3	15	3.6	0	6
	5000	8.1	3	15	2.9	0	6
	6300	7.3	3	15	2.0	0	6
	8000	5.3	3	15	0.9	0	5
	10000	3.7	3	13	0.4	0	4

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
0.5	1	8.0	3	15	5.0	3	11
	1.3	8.7	3	15	5.1	3	11
	1.6	8.6	3	15	4.8	3	11
	2	7.4	4	15	3.9	3	11
	2.5	7.3	4	15	3.8	3	10
	3	7.0	6	15	3.6	3	10
	4	8.0	4	15	4.0	3	9
	5	7.9	6	14	4.0	3	8
	6.3	6.8	6	13	3.4	3	7
	8	6.8	6	13	3.4	3	7
	10	6.8	6	15	3.4	3	9
	13	6.8	6	15	3.4	3	8
	16	7.0	6	13	3.5	3	7
	20	6.7	6	12	3.4	3	6
	25	6.7	6	13	3.4	3	6
	30	6.7	6	12	3.3	3	6
	40	6.6	6	11	3.3	3	6
	50	6.7	6	12	3.4	3	6
	63	6.7	6	12	3.4	3	6
	80	6.7	6	12	3.3	3	6
	100	6.7	6	13	3.3	3	7
	130	6.7	6	13	3.4	3	6
	160	6.7	6	12	3.3	3	6
	200	6.7	6	13	3.3	3	7
	250	6.7	6	12	3.3	3	6
	300	6.7	6	13	3.4	3	7
	400	6.8	6	13	3.4	3	6
	500	6.7	6	12	3.4	3	6
	630	6.8	6	13	3.4	3	6
	800	6.8	6	15	3.4	3	7
	1000	6.9	6	13	3.4	2	6
	1300	8.0	6	15	3.9	1	7
	1600	7.0	6	15	3.4	1	7
	2000	7.3	4	15	3.5	0	7
	2500	7.4	4	15	3.5	0	7
	3000	6.8	3	15	3.1	0	6
	4000	8.6	3	15	3.6	0	7
	5000	7.8	3	15	2.9	0	6
	6300	7.7	3	15	2.6	0	7
	8000	7.1	3	15	2.1	0	6
	10000	4.9	3	15	1.1	0	6

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
1	1	8.2	3	15	4.9	3	11
	1.3	8.6	3	15	5.0	3	11
	1.6	8.9	3	15	5.1	3	11
	2	8.1	4	15	4.3	3	11
	2.5	8.1	4	15	4.3	3	10
	3	8.0	4	15	4.2	3	11
	4	8.7	4	15	4.5	3	10
	5	8.7	4	15	4.4	3	10
	6.3	7.8	5	15	3.9	3	10
	8	7.7	5	15	3.9	3	10
	10	7.6	6	15	3.8	3	9
	13	7.8	6	15	3.9	3	9
	16	7.9	6	15	4.0	3	9
	20	7.6	6	15	3.8	3	9
	25	7.6	6	15	3.8	3	9
	30	7.7	6	15	3.8	3	9
	40	7.7	6	15	3.8	3	7
	50	7.7	6	15	3.8	3	8
	63	7.7	6	15	3.8	3	8
	80	7.6	6	15	3.8	3	9
	100	7.7	6	15	3.8	3	9
	130	7.6	6	15	3.8	3	8
	160	7.7	6	15	3.8	3	8
	200	7.6	6	15	3.8	3	8
	250	7.6	6	15	3.8	3	8
	300	7.7	6	15	3.9	3	9
	400	7.8	6	15	3.9	1	7
	500	7.6	6	15	3.8	2	8
	630	7.7	5	15	3.8	0	9
	800	7.7	5	15	3.8	0	8
	1000	7.7	4	15	3.8	0	9
	1300	8.6	4	15	4.2	0	9
	1600	8.0	4	15	3.8	0	7
	2000	7.9	4	15	3.7	0	8
	2500	8.0	4	15	3.7	0	7
	3000	7.1	3	15	3.2	0	8
	4000	8.5	3	15	3.5	0	8
	5000	8.1	3	15	3.2	0	7
	6300	7.7	3	15	2.9	0	7
	8000	7.3	3	15	2.6	0	6
	10000	6.0	3	15	2.0	0	7

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
2	1	8.2	3	15	4.7	3	11
	1.3	8.6	3	15	4.8	3	11
	1.6	8.8	3	15	4.9	3	11
	2	8.6	4	15	4.6	3	11
	2.5	8.5	4	15	4.5	3	11
	3	8.5	4	15	4.5	3	11
	4	9.1	4	15	4.7	3	11
	5	9.2	4	15	4.8	3	11
	6.3	8.7	5	15	4.5	3	11
	8	8.7	5	15	4.4	3	11
	10	8.5	5	15	4.3	3	11
	13	8.9	5	15	4.5	3	11
	16	8.8	5	15	4.4	3	11
	20	8.6	6	15	4.3	3	10
	25	8.6	6	15	4.3	3	11
	30	8.7	6	15	4.4	3	10
	40	8.5	6	15	4.3	1	10
	50	8.6	6	15	4.3	3	10
	63	8.7	6	15	4.3	3	10
	80	8.6	6	15	4.3	0	11
	100	8.6	6	15	4.3	1	10
	130	8.5	6	15	4.2	0	9
	160	8.6	6	15	4.3	1	10
	200	8.5	6	15	4.2	0	10
	250	8.6	6	15	4.2	0	10
	300	8.4	5	15	4.2	0	10
	400	8.8	5	15	4.3	0	10
	500	8.6	5	15	4.2	0	10
	630	8.7	5	15	4.2	0	9
	800	8.6	5	15	4.2	0	10
	1000	8.2	4	15	4.0	0	9
	1300	9.2	4	15	4.4	0	9
	1600	8.6	4	15	4.0	0	10
	2000	8.5	4	15	3.9	0	9
	2500	8.6	4	15	4.0	0	10
	3000	7.4	3	15	3.3	0	10
	4000	8.5	3	15	3.7	0	9
	5000	8.4	3	15	3.6	0	10
	6300	8.0	3	15	3.4	0	9
	8000	7.7	3	15	3.2	0	10
	10000	6.6	3	15	2.6	0	9

95% CI Coverage as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD50

True Sigma	True LD50	(-) Yes	(--- Yes	---) Yes	---- Yes	---) No	(--- No	(-) No	Coverage
0.125	1	0.413	0.000	0.156	0.431	0.000	0.000	0.000	1.000
	1.3	0.879	0.000	0.004	0.117	0.000	0.000	0.000	1.000
	1.6	0.957	0.000	0.000	0.043	0.000	0.000	0.000	1.000
	2	0.990	0.000	0.000	0.008	0.000	0.000	0.002	0.998
	2.5	0.998	0.000	0.000	0.002	0.000	0.000	0.000	1.000
	3	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	4	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	5	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	6.3	0.999	0.000	0.000	0.001	0.000	0.000	0.000	1.000
	8	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	10	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	13	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	16	0.999	0.000	0.000	0.000	0.000	0.000	0.001	0.999
	20	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	25	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	30	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	40	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	50	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	63	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	80	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	100	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	130	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	160	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	200	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	250	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	300	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	400	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	500	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	630	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	800	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	1000	0.999	0.000	0.000	0.001	0.000	0.000	0.000	1.000
	1300	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	1600	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	2000	0.999	0.000	0.000	0.001	0.000	0.000	0.000	1.000
	2500	0.989	0.000	0.000	0.008	0.000	0.000	0.003	0.997
	3000	0.948	0.000	0.000	0.045	0.000	0.000	0.007	0.993
	4000	0.822	0.009	0.000	0.166	0.000	0.003	0.000	0.997
	5000	0.422	0.178	0.000	0.400	0.000	0.000	0.000	1.000
	6300	0.038	0.381	0.000	0.549	0.000	0.000	0.032	0.968
	8000	0.000	0.313	0.000	0.687	0.000	0.000	0.000	1.000
	10000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	1.000

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(-) Yes	(-- Yes	---) Yes	---- Yes	---) No	(-- No	(-) No	Coverage
0.25	1	0.420	0.000	0.137	0.438	0.000	0.000	0.005	0.995
	1.3	0.734	0.000	0.027	0.227	0.005	0.000	0.007	0.988
	1.6	0.832	0.000	0.006	0.159	0.001	0.000	0.001	0.998
	2	0.823	0.000	0.006	0.145	0.000	0.000	0.026	0.974
	2.5	0.896	0.000	0.000	0.085	0.000	0.000	0.019	0.981
	3	0.920	0.000	0.000	0.066	0.000	0.000	0.014	0.986
	4	0.955	0.000	0.000	0.040	0.000	0.000	0.005	0.995
	5	0.969	0.000	0.000	0.026	0.000	0.000	0.005	0.995
	6.3	0.947	0.000	0.000	0.041	0.000	0.000	0.012	0.988
	8	0.942	0.000	0.000	0.048	0.000	0.000	0.010	0.990
	10	0.930	0.000	0.000	0.053	0.000	0.000	0.017	0.983
	13	0.960	0.000	0.000	0.032	0.000	0.000	0.008	0.992
	16	0.947	0.000	0.000	0.039	0.000	0.000	0.014	0.986
	20	0.951	0.000	0.000	0.041	0.000	0.000	0.008	0.992
	25	0.942	0.000	0.000	0.048	0.000	0.000	0.010	0.990
	30	0.941	0.000	0.000	0.043	0.000	0.000	0.016	0.984
	40	0.951	0.000	0.000	0.041	0.000	0.000	0.008	0.992
	50	0.942	0.000	0.000	0.045	0.000	0.000	0.013	0.987
	63	0.946	0.000	0.000	0.039	0.000	0.000	0.015	0.985
	80	0.947	0.000	0.000	0.042	0.000	0.000	0.011	0.989
	100	0.944	0.000	0.000	0.050	0.000	0.000	0.006	0.994
	130	0.941	0.000	0.000	0.048	0.000	0.000	0.011	0.989
	160	0.931	0.000	0.000	0.058	0.000	0.000	0.011	0.989
	200	0.932	0.000	0.000	0.055	0.000	0.000	0.013	0.987
	250	0.943	0.000	0.000	0.043	0.000	0.000	0.014	0.986
	300	0.946	0.000	0.000	0.044	0.000	0.000	0.010	0.990
	400	0.932	0.000	0.000	0.054	0.000	0.000	0.014	0.986
	500	0.929	0.000	0.000	0.058	0.000	0.000	0.013	0.987
	630	0.938	0.000	0.000	0.046	0.000	0.000	0.016	0.984
	800	0.932	0.000	0.000	0.053	0.000	0.000	0.015	0.985
	1000	0.940	0.000	0.000	0.043	0.000	0.000	0.017	0.983
	1300	0.958	0.000	0.000	0.036	0.000	0.000	0.006	0.994
	1600	0.938	0.001	0.000	0.049	0.000	0.000	0.012	0.988
	2000	0.899	0.000	0.000	0.085	0.000	0.000	0.016	0.984
	2500	0.845	0.005	0.000	0.122	0.000	0.001	0.027	0.972
	3000	0.747	0.001	0.000	0.218	0.000	0.003	0.030	0.966
	4000	0.724	0.029	0.000	0.238	0.000	0.006	0.002	0.992
	5000	0.425	0.141	0.000	0.426	0.000	0.000	0.007	0.993
	6300	0.157	0.294	0.000	0.490	0.000	0.000	0.058	0.942
	8000	0.044	0.362	0.000	0.578	0.000	0.000	0.016	0.984
	10000	0.000	0.035	0.000	0.958	0.000	0.000	0.007	0.993

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(-) Yes	(-- Yes	(---) Yes	(----) Yes	(---) No	(-- No	(-) No	Coverage
0.5	1	0.283	0.000	0.097	0.564	0.000	0.000	0.056	0.944
	1.3	0.448	0.000	0.033	0.473	0.010	0.000	0.036	0.954
	1.6	0.562	0.000	0.013	0.374	0.011	0.000	0.040	0.949
	2	0.551	0.000	0.005	0.349	0.009	0.000	0.086	0.905
	2.5	0.582	0.000	0.004	0.345	0.005	0.000	0.064	0.931
	3	0.624	0.000	0.003	0.301	0.003	0.000	0.068	0.929
	4	0.668	0.000	0.002	0.281	0.000	0.000	0.049	0.951
	5	0.732	0.000	0.001	0.207	0.000	0.000	0.060	0.940
	6.3	0.655	0.000	0.000	0.277	0.000	0.000	0.068	0.932
	8	0.629	0.000	0.001	0.287	0.000	0.000	0.083	0.917
	10	0.641	0.000	0.000	0.269	0.000	0.000	0.090	0.910
	13	0.635	0.000	0.000	0.279	0.000	0.000	0.086	0.914
	16	0.625	0.000	0.000	0.277	0.000	0.000	0.098	0.902
	20	0.659	0.000	0.000	0.261	0.000	0.000	0.080	0.920
	25	0.635	0.000	0.000	0.270	0.000	0.000	0.095	0.905
	30	0.681	0.000	0.000	0.253	0.000	0.000	0.066	0.934
	40	0.671	0.000	0.000	0.254	0.000	0.000	0.075	0.925
	50	0.651	0.000	0.000	0.277	0.000	0.000	0.072	0.928
	63	0.648	0.000	0.000	0.252	0.000	0.000	0.100	0.900
	80	0.667	0.000	0.000	0.243	0.000	0.000	0.090	0.910
	100	0.660	0.000	0.000	0.260	0.000	0.000	0.080	0.920
	130	0.646	0.000	0.000	0.256	0.000	0.000	0.098	0.902
	160	0.651	0.000	0.000	0.271	0.000	0.000	0.078	0.922
	200	0.668	0.000	0.000	0.257	0.000	0.000	0.075	0.925
	250	0.654	0.000	0.000	0.260	0.000	0.000	0.086	0.914
	300	0.652	0.000	0.000	0.268	0.000	0.000	0.080	0.920
	400	0.611	0.000	0.000	0.296	0.000	0.000	0.093	0.907
	500	0.646	0.000	0.000	0.266	0.000	0.000	0.088	0.912
	630	0.656	0.001	0.000	0.262	0.000	0.000	0.081	0.919
	800	0.648	0.000	0.000	0.257	0.000	0.000	0.095	0.905
	1000	0.629	0.000	0.000	0.284	0.000	0.000	0.087	0.913
	1300	0.636	0.001	0.000	0.298	0.000	0.002	0.063	0.935
	1600	0.640	0.001	0.000	0.274	0.000	0.002	0.083	0.915
	2000	0.587	0.006	0.000	0.343	0.000	0.003	0.061	0.936
	2500	0.548	0.008	0.000	0.347	0.000	0.012	0.085	0.903
	3000	0.480	0.000	0.000	0.437	0.000	0.013	0.070	0.918
	4000	0.445	0.048	0.000	0.470	0.000	0.013	0.024	0.962
	5000	0.294	0.088	0.000	0.579	0.000	0.000	0.039	0.961
	6300	0.134	0.158	0.000	0.592	0.000	0.000	0.115	0.885
	8000	0.083	0.208	0.000	0.638	0.000	0.000	0.072	0.928
	10000	0.007	0.058	0.000	0.885	0.000	0.000	0.051	0.949

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(--) Yes	(--- Yes	---) Yes	---- Yes	---) No	(--- No	(--) No	Coverage
1	1	0.184	0.000	0.068	0.645	0.000	0.000	0.103	0.897
	1.3	0.247	0.000	0.035	0.619	0.016	0.000	0.084	0.901
	1.6	0.291	0.003	0.009	0.601	0.029	0.000	0.066	0.905
	2	0.342	0.000	0.011	0.502	0.012	0.000	0.134	0.855
	2.5	0.375	0.001	0.003	0.487	0.007	0.000	0.126	0.866
	3	0.391	0.001	0.002	0.488	0.016	0.000	0.102	0.882
	4	0.384	0.000	0.002	0.502	0.004	0.000	0.108	0.888
	5	0.413	0.000	0.002	0.469	0.005	0.000	0.111	0.884
	6.3	0.406	0.000	0.001	0.443	0.003	0.000	0.148	0.849
	8	0.421	0.000	0.002	0.433	0.000	0.000	0.145	0.855
	10	0.415	0.001	0.000	0.426	0.001	0.000	0.157	0.842
	13	0.390	0.000	0.001	0.467	0.000	0.000	0.141	0.859
	16	0.416	0.001	0.000	0.417	0.000	0.000	0.165	0.835
	20	0.418	0.000	0.000	0.433	0.002	0.000	0.147	0.851
	25	0.408	0.000	0.000	0.435	0.001	0.000	0.156	0.843
	30	0.411	0.000	0.001	0.416	0.000	0.000	0.172	0.828
	40	0.405	0.000	0.003	0.433	0.001	0.000	0.158	0.841
	50	0.420	0.000	0.000	0.425	0.000	0.000	0.155	0.845
	63	0.404	0.002	0.000	0.427	0.000	0.000	0.167	0.833
	80	0.405	0.001	0.000	0.430	0.000	0.001	0.163	0.836
	100	0.394	0.004	0.001	0.431	0.000	0.000	0.170	0.830
	130	0.424	0.003	0.000	0.410	0.000	0.000	0.162	0.838
	160	0.412	0.000	0.000	0.435	0.000	0.000	0.153	0.847
	200	0.403	0.000	0.000	0.422	0.000	0.001	0.174	0.825
	250	0.410	0.000	0.001	0.428	0.000	0.000	0.161	0.839
	300	0.407	0.000	0.000	0.430	0.000	0.000	0.163	0.837
	400	0.384	0.000	0.001	0.445	0.000	0.001	0.170	0.829
	500	0.404	0.000	0.002	0.447	0.000	0.000	0.147	0.853
	630	0.425	0.001	0.001	0.427	0.001	0.000	0.145	0.854
	800	0.389	0.003	0.000	0.454	0.000	0.002	0.153	0.845
	1000	0.397	0.001	0.000	0.448	0.001	0.003	0.151	0.845
	1300	0.379	0.003	0.000	0.503	0.000	0.008	0.107	0.885
	1600	0.408	0.000	0.000	0.470	0.000	0.018	0.104	0.878
	2000	0.394	0.003	0.000	0.473	0.000	0.016	0.114	0.870
	2500	0.354	0.008	0.000	0.496	0.000	0.017	0.125	0.858
	3000	0.329	0.001	0.000	0.517	0.000	0.016	0.137	0.847
	4000	0.239	0.037	0.000	0.621	0.000	0.020	0.082	0.898
	5000	0.146	0.065	0.000	0.689	0.000	0.000	0.100	0.900
	6300	0.100	0.071	0.000	0.709	0.000	0.000	0.120	0.880
	8000	0.093	0.115	0.000	0.668	0.000	0.000	0.124	0.876
	10000	0.008	0.041	0.000	0.823	0.000	0.000	0.129	0.871

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(-- Yes	(--- Yes	(---) Yes	(---) Yes	(---) No	(--- No	(-- No	Coverage
2	1	0.119	0.000	0.042	0.676	0.000	0.004	0.160	0.837
	1.3	0.173	0.000	0.038	0.656	0.011	0.000	0.121	0.867
	1.6	0.212	0.002	0.014	0.639	0.020	0.001	0.111	0.867
	2	0.259	0.001	0.003	0.527	0.032	0.002	0.175	0.791
	2.5	0.308	0.002	0.002	0.512	0.028	0.001	0.147	0.825
	3	0.279	0.001	0.003	0.537	0.018	0.001	0.161	0.820
	4	0.277	0.000	0.003	0.553	0.013	0.001	0.152	0.834
	5	0.268	0.001	0.003	0.565	0.013	0.001	0.148	0.837
	6.3	0.269	0.002	0.003	0.528	0.020	0.000	0.178	0.803
	8	0.280	0.001	0.006	0.519	0.008	0.002	0.184	0.806
	10	0.288	0.000	0.000	0.523	0.012	0.000	0.176	0.812
	13	0.270	0.000	0.001	0.541	0.009	0.001	0.178	0.812
	16	0.291	0.002	0.000	0.513	0.006	0.001	0.188	0.805
	20	0.318	0.002	0.000	0.496	0.006	0.001	0.177	0.816
	25	0.294	0.000	0.004	0.495	0.003	0.001	0.202	0.794
	30	0.321	0.002	0.002	0.469	0.005	0.000	0.201	0.794
	40	0.304	0.002	0.004	0.482	0.001	0.001	0.206	0.792
	50	0.293	0.003	0.001	0.492	0.000	0.001	0.210	0.789
	63	0.291	0.002	0.001	0.488	0.002	0.001	0.215	0.782
	80	0.290	0.001	0.000	0.486	0.002	0.000	0.221	0.777
	100	0.260	0.001	0.001	0.490	0.001	0.004	0.243	0.752
	130	0.303	0.005	0.002	0.472	0.003	0.003	0.212	0.782
	160	0.312	0.002	0.004	0.479	0.003	0.002	0.198	0.797
	200	0.311	0.000	0.001	0.481	0.000	0.005	0.202	0.793
	250	0.318	0.000	0.002	0.471	0.001	0.009	0.199	0.791
	300	0.289	0.000	0.001	0.493	0.002	0.003	0.212	0.783
	400	0.272	0.001	0.002	0.530	0.001	0.009	0.185	0.804
	500	0.279	0.000	0.004	0.514	0.002	0.007	0.194	0.797
	630	0.279	0.004	0.002	0.556	0.000	0.009	0.150	0.841
	800	0.276	0.002	0.007	0.502	0.001	0.022	0.191	0.787
	1000	0.301	0.000	0.002	0.480	0.000	0.012	0.205	0.783
	1300	0.250	0.002	0.003	0.574	0.001	0.014	0.155	0.830
	1600	0.280	0.002	0.000	0.538	0.000	0.027	0.152	0.821
	2000	0.274	0.002	0.002	0.542	0.001	0.025	0.154	0.820
	2500	0.275	0.002	0.001	0.557	0.001	0.024	0.139	0.836
	3000	0.264	0.000	0.000	0.582	0.002	0.025	0.126	0.846
	4000	0.159	0.033	0.001	0.674	0.002	0.012	0.118	0.867
	5000	0.129	0.034	0.000	0.665	0.000	0.000	0.173	0.828
	6300	0.052	0.052	0.000	0.700	0.000	0.000	0.196	0.804
	8000	0.066	0.066	0.003	0.688	0.004	0.000	0.173	0.823
	10000	0.014	0.019	0.000	0.774	0.003	0.000	0.190	0.807

(--) Yes

(--- Yes

(---) Yes

(---) Yes

(---) No

(--- No

(--) No

Coverage

CI is finite and covers the true LD50

CI is infinite on the high side and covers the true LD50

CI is infinite on the low side and covers the true LD50

CI is infinite on the both sides and covers the true LD50

CI is infinite on the low side and does not cover the true LD50

CI is infinite on the high side and does not cover the true LD50

CI is finite and does not cover the true LD50

Overall coverage, percent of case 2 to 5 confidence intervals covering the true LD50

Relative LD50 Estimate Estimate as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD50

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
0.125	1	100.000	-100.000	2.021	0.000	0.000
	1.3	3.991	-0.912	1.540	1.540	-0.912
	1.6	4.028	-1.633	1.197	1.197	-1.633
	2	3.986	-3.918	1.993	0.000	-1.204
	2.5	4.366	-4.397	1.999	0.000	-1.592
	3	4.774	-4.781	2.002	0.000	-1.908
	4	3.739	-4.102	1.993	0.000	-2.408
	5	3.617	-4.607	1.999	0.000	-2.796
	6.3	4.886	-4.886	1.998	0.000	-2.002
	8	4.888	-4.885	1.979	0.000	-2.021
	10	4.885	-4.888	2.021	0.000	-1.979
	13	4.887	-4.886	1.995	0.000	-2.005
	16	4.885	-4.887	2.014	0.000	-1.986
	20	4.887	-4.886	1.993	0.000	-2.007
	25	4.886	-4.886	1.999	0.000	-2.001
	30	4.886	-4.886	2.002	0.000	-1.998
	40	4.887	-4.886	1.993	0.000	-2.007
	50	4.886	-4.886	1.999	0.000	-2.001
	63	4.886	-4.886	1.998	0.000	-2.002
	80	4.888	-4.885	1.979	0.000	-2.021
	100	4.885	-4.888	2.021	0.000	-1.979
	130	4.887	-4.886	1.995	0.000	-2.005
	160	4.885	-4.887	2.014	0.000	-1.986
	200	4.887	-4.886	1.993	0.000	-2.007
	250	4.886	-4.886	1.999	0.000	-2.001
	300	4.886	-4.886	2.002	0.000	-1.998
	400	4.887	-4.886	1.993	0.000	-2.007
	500	4.886	-4.886	1.999	0.000	-2.001
	630	4.886	-4.886	1.998	0.000	-2.002
	800	4.888	-4.885	1.979	0.000	-2.021
	1000	4.885	-4.888	2.021	0.000	-1.979
	1300	4.018	-3.610	2.340	0.000	-2.005
	1600	4.844	-4.844	1.979	0.000	-1.986
	2000	4.407	-4.376	1.592	0.000	-2.007
	2500	3.928	-3.865	1.204	0.000	-2.001
	3000	3.351	-3.995	0.887	0.000	-1.998
	4000	1.832	-4.014	0.775	0.775	-1.619
	5000	100.000	-4.003	0.000	0.000	-2.001
	6300	100.000	-100.000	-0.803	-0.803	-2.403
	8000	100.000	-100.000	-1.633	-1.633	-1.633
	10000	100.000	-100.000	-2.408	-2.408	-2.408

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
0.25	1	100.000	-100.000	1.010	0.000	0.000
	1.3	1.995	-1.131	0.930	-0.456	-0.456
	1.6	2.014	-0.816	2.014	0.599	-0.816
	2	1.993	-1.959	0.997	0.000	-1.204
	2.5	2.183	-2.198	0.999	0.000	-0.801
	3	2.387	-2.390	1.007	0.000	-0.954
	4	1.869	-2.051	0.997	0.000	-1.204
	5	1.955	-2.303	0.999	0.000	-1.398
	6.3	2.443	-2.443	0.999	0.000	-1.001
	8	2.444	-2.442	0.990	0.000	-1.010
	10	2.442	-2.444	1.010	0.000	-0.990
	13	2.443	-2.443	0.998	0.000	-1.002
	16	2.443	-2.444	1.007	0.000	-1.021
	20	2.443	-2.443	0.997	0.000	-1.003
	25	2.443	-2.443	0.999	0.000	-1.001
	30	2.443	-2.443	1.001	0.000	-0.999
	40	2.443	-2.443	0.997	0.000	-1.003
	50	2.443	-2.443	0.999	0.000	-1.001
	63	2.443	-2.443	0.999	0.000	-1.001
	80	2.444	-2.442	0.990	0.000	-1.010
	100	2.442	-2.444	1.010	0.000	-0.990
	130	2.443	-2.443	0.998	0.000	-1.002
	160	2.443	-2.444	1.007	0.000	-0.993
	200	2.443	-2.443	0.997	0.000	-1.003
	250	2.443	-2.443	0.999	0.000	-1.001
	300	2.443	-2.443	1.001	0.000	-0.999
	400	2.443	-2.443	1.012	0.000	-1.003
	500	2.443	-2.443	0.999	0.000	-1.001
	630	2.443	-2.443	0.999	0.000	-1.001
	800	2.444	-2.442	0.990	0.000	-1.010
	1000	2.442	-2.444	1.010	0.000	-0.990
	1300	2.009	-1.862	1.170	0.000	-1.002
	1600	2.422	-2.422	0.990	0.000	-0.995
	2000	2.203	-2.188	0.796	0.000	-1.023
	2500	1.964	-2.001	0.875	0.000	-1.043
	3000	1.765	-2.777	0.887	0.000	-1.064
	4000	1.554	-2.007	0.388	0.388	-0.916
	5000	100.000	-100.000	0.000	0.000	-1.001
	6300	100.000	-100.000	-0.401	-0.401	-1.202
	8000	100.000	-100.000	-0.614	-0.816	-1.419
	10000	100.000	-100.000	-1.204	-1.204	-1.204

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
0.5	1	100.000	-100.000	1.010	0.000	-1.298
	1.3	100.000	-100.000	0.998	-0.228	-0.684
	1.6	1.478	-1.961	1.007	-0.061	-0.621
	2	1.435	-1.044	0.997	0.000	-0.602
	2.5	1.496	-1.295	0.999	0.000	-0.796
	3	1.544	-1.497	1.001	0.000	-0.954
	4	0.935	-1.072	0.997	0.000	-0.760
	5	0.977	-1.152	0.999	0.000	-0.740
	6.3	1.554	-1.556	0.999	0.000	-1.001
	8	1.545	-1.565	0.990	0.000	-1.010
	10	1.565	-1.545	1.010	0.000	-0.990
	13	1.553	-1.558	0.998	0.000	-1.002
	16	1.562	-1.548	1.007	0.000	-0.993
	20	1.552	-1.559	0.997	0.000	-1.003
	25	1.555	-1.556	0.999	0.000	-1.001
	30	1.556	-1.554	1.001	0.000	-0.999
	40	1.552	-1.559	0.997	0.000	-1.003
	50	1.555	-1.556	0.999	0.000	-1.001
	63	1.554	-1.556	0.999	0.000	-1.001
	80	1.545	-1.565	0.990	0.000	-1.010
	100	1.565	-1.545	1.010	0.000	-0.990
	130	1.553	-1.558	0.998	0.000	-1.002
	160	1.562	-1.548	1.007	0.000	-0.993
	200	1.552	-1.559	0.997	0.000	-1.003
	250	1.555	-1.556	0.999	0.000	-1.001
	300	1.556	-1.554	1.001	0.000	-0.999
	400	1.552	-1.559	0.997	0.000	-1.003
	500	1.555	-1.556	0.999	0.000	-1.001
	630	1.554	-1.556	0.999	0.000	-1.001
	800	1.545	-1.565	0.990	0.000	-1.010
	1000	1.565	-1.545	1.010	0.000	-0.990
	1300	1.043	-0.931	0.851	0.000	-1.002
	1600	1.540	-1.544	0.990	0.000	-0.993
	2000	1.296	-1.501	0.796	0.000	-1.003
	2500	1.045	-1.440	0.602	0.000	-1.001
	3000	0.882	-2.220	12.329	0.000	-0.999
	4000	100.000	-100.000	0.649	0.194	-1.003
	5000	100.000	-100.000	0.984	0.000	-1.001
	6300	100.000	-100.000	2.206	-0.201	-1.001
	8000	100.000	-100.000	1.258	-0.408	-1.010
	10000	100.000	-100.000	0.149	-0.602	-0.990

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
1	1	100.000	-100.000	0.800	0.058	-0.964
	1.3	100.000	-100.000	0.853	0.103	-1.297
	1.6	100.000	-100.000	0.927	0.058	-1.466
	2	100.000	-100.000	0.770	0.000	-0.352
	2.5	100.000	-100.000	0.858	0.000	-0.461
	3	100.000	-100.000	0.771	0.000	-0.527
	4	100.000	-100.000	0.757	0.000	-0.602
	5	4.852	-4.631	0.783	0.000	-0.699
	6.3	1.000	-0.809	0.752	0.000	-0.676
	8	1.105	-0.861	0.769	0.000	-0.727
	10	0.946	-0.923	0.788	0.000	-0.736
	13	1.110	-1.038	0.757	0.000	-0.734
	16	0.946	-1.077	0.754	0.000	-0.860
	20	0.906	-0.947	0.757	0.000	-0.753
	25	0.944	-0.946	0.771	0.000	-0.771
	30	0.944	-0.942	0.758	0.000	-0.771
	40	1.109	-1.000	0.770	0.000	-0.776
	50	0.946	-0.907	0.811	0.000	-0.771
	63	0.946	-0.946	0.758	0.000	-0.771
	80	0.942	-0.949	0.755	0.000	-0.773
	100	0.946	-0.972	0.773	0.000	-0.873
	130	0.942	-0.908	0.784	0.000	-0.772
	160	0.948	-0.942	0.773	0.000	-0.756
	200	0.942	-0.943	0.770	0.000	-0.772
	250	0.946	-0.943	0.771	0.000	-0.771
	300	1.000	-0.942	0.970	0.000	-0.771
	400	0.797	-1.113	0.710	0.000	-0.753
	500	0.946	-1.111	0.765	0.000	-0.771
	630	0.846	-0.946	0.701	0.000	-0.771
	800	0.804	-1.116	0.658	0.000	-0.773
	1000	0.783	-1.105	0.693	0.000	-0.769
	1300	100.000	-100.000	0.585	0.000	-0.772
	1600	100.000	-2.424	0.569	0.000	-0.857
	2000	100.000	-100.000	0.398	0.000	-1.000
	2500	100.000	-100.000	0.892	0.000	-0.771
	3000	100.000	-100.000	6.164	0.000	-1.000
	4000	100.000	-100.000	1.477	-0.035	-0.766
	5000	100.000	-100.000	0.821	-0.070	-1.000
	6300	100.000	-100.000	1.103	-0.100	-0.765
	8000	100.000	-100.000	0.506	-0.204	-0.776
	10000	100.000	-100.000	0.074	-0.301	-0.815

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
2	1	100.000	-100.000	0.671	0.126	-1.048
	1.3	100.000	-100.000	0.629	0.096	-0.452
	1.6	100.000	-100.000	0.680	0.075	-1.601
	2	100.000	-100.000	0.679	0.000	-0.446
	2.5	100.000	-100.000	0.629	0.000	-0.291
	3	100.000	-100.000	0.697	0.000	-0.355
	4	100.000	-100.000	0.688	0.000	-0.510
	5	100.000	-100.000	0.750	0.000	-0.408
	6.3	100.000	-100.000	0.589	0.000	-0.494
	8	100.000	-100.000	0.636	0.000	-0.461
	10	100.000	-100.000	0.630	0.000	-0.543
	13	100.000	-100.000	0.629	0.000	-0.549
	16	100.000	-100.000	0.627	0.000	-0.602
	20	100.000	-100.000	0.626	0.000	-0.547
	25	82.841	-100.000	0.576	0.000	-0.586
	30	1.203	-0.901	0.576	0.000	-0.621
	40	1.386	-1.207	0.621	0.000	-0.545
	50	3.049	-1.472	0.642	0.000	-0.596
	63	2.053	-1.204	0.626	0.000	-0.600
	80	1.216	-1.728	0.557	0.000	-0.634
	100	1.871	-1.838	0.621	0.000	-0.635
	130	1.211	-1.127	0.560	0.000	-0.637
	160	1.198	-1.212	0.579	0.000	-0.632
	200	0.874	-1.201	0.585	0.000	-0.606
	250	0.922	-0.924	0.577	0.000	-0.575
	300	100.000	-100.000	0.500	0.000	-0.626
	400	100.000	-100.000	0.520	0.000	-0.617
	500	100.000	-100.000	0.500	0.000	-0.626
	630	100.000	-100.000	0.463	0.000	-0.629
	800	100.000	-100.000	0.496	0.000	-0.640
	1000	100.000	-100.000	0.695	0.000	-0.621
	1300	100.000	-100.000	0.509	0.000	-0.637
	1600	100.000	-100.000	0.372	0.000	-0.636
	2000	100.000	-100.000	0.595	0.000	-0.715
	2500	100.000	-100.000	0.446	0.000	-0.729
	3000	100.000	-100.000	3.082	0.000	-0.629
	4000	100.000	-100.000	0.437	-0.101	-0.697
	5000	100.000	-100.000	1.007	-0.125	-0.679
	6300	100.000	-100.000	0.552	-0.163	-0.680
	8000	100.000	-100.000	0.802	-0.158	-0.689
	10000	100.000	-100.000	0.037	-0.161	-0.639

Relative LD50 Estimate is $(\text{Log}_{10}(\text{estimated LD50}) - \text{Log}_{10}(\text{True LD50})) / \text{True Sigma}$

The following values are all converted to a relative scale

UCL is the median of the estimated upper confidence bound for a 95% (two-sided) confidence interval

LCL is the median of the estimated lower confidence bound for a 95% (two-sided) confidence interval

97.5%tile is the 97 and a half percentile of the simulated LD50 values

Median is the median of the simulated LD50 values

2.5%tile is the 2 and a half percentile of the simulated LD50 values

Extreme or infinite values appear as 100 or -100

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD50

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
0.125	1	0	0.335	0.134	0.404	0.127
	1.3	0	0.856	0.106	0.014	0.024
	1.6	0	0.957	0.042	0.001	0
	2	0	0.259	0.741	0	0
	2.5	0	0.253	0.747	0	0
	3	0	0.26	0.74	0	0
	4	0	0.403	0.597	0	0
	5	0	0.399	0.601	0	0
	6.3	0	0.28	0.72	0	0
	8	0	0.248	0.752	0	0
	10	0	0.259	0.741	0	0
	13	0	0.255	0.745	0	0
	16	0	0.237	0.763	0	0
	20	0	0.24	0.76	0	0
	25	0	0.265	0.735	0	0
	30	0	0.256	0.744	0	0
	40	0	0.25	0.75	0	0
	50	0	0.217	0.783	0	0
	63	0	0.252	0.748	0	0
	80	0	0.279	0.721	0	0
	100	0	0.257	0.743	0	0
	130	0	0.243	0.757	0	0
	160	0	0.243	0.757	0	0
	200	0	0.23	0.77	0	0
	250	0	0.238	0.762	0	0
	300	0	0.247	0.753	0	0
	400	0	0.245	0.755	0	0
	500	0	0.253	0.747	0	0
	630	0	0.258	0.742	0	0
	800	0	0.253	0.747	0	0
	1000	0	0.259	0.741	0	0
	1300	0	0.378	0.622	0	0
	1600	0	0.24	0.76	0	0
	2000	0	0.24	0.76	0	0
	2500	0	0.263	0.737	0	0
	3000	0.002	0.233	0.765	0	0
	4000	0.041	0.831	0.094	0	0.034
	5000	0.442	0.327	0.106	0	0.125
	6300	0.921	0.039	0.021	0	0.019
	8000	0.999	0	0.001	0	0
	10000	1	0	0	0	0

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
0.25	1	0	0.34	0.133	0.392	0.135
	1.3	0	0.65	0.139	0.123	0.088
	1.6	0	0.822	0.121	0.028	0.029
	2	0	0.242	0.752	0.004	0.002
	2.5	0	0.265	0.735	0	0
	3	0	0.212	0.788	0	0
	4	0	0.384	0.616	0	0
	5	0	0.35	0.65	0	0
	6.3	0	0.243	0.757	0	0
	8	0	0.234	0.766	0	0
	10	0	0.221	0.779	0	0
	13	0	0.238	0.762	0	0
	16	0	0.243	0.757	0	0
	20	0	0.245	0.755	0	0
	25	0	0.216	0.784	0	0
	30	0	0.226	0.774	0	0
	40	0	0.236	0.764	0	0
	50	0	0.218	0.782	0	0
	63	0	0.246	0.754	0	0
	80	0	0.229	0.771	0	0
	100	0	0.229	0.771	0	0
	130	0	0.232	0.768	0	0
	160	0	0.254	0.746	0	0
	200	0	0.221	0.779	0	0
	250	0	0.242	0.758	0	0
	300	0	0.243	0.757	0	0
	400	0	0.238	0.762	0	0
	500	0	0.219	0.781	0	0
	630	0	0.237	0.763	0	0
	800	0	0.248	0.752	0	0
	1000	0	0.235	0.765	0	0
	1300	0	0.37	0.63	0	0
	1600	0	0.254	0.746	0	0
	2000	0	0.218	0.782	0	0
	2500	0.002	0.221	0.775	0	0.002
	3000	0.05	0.21	0.738	0	0.002
	4000	0.147	0.625	0.127	0	0.101
	5000	0.371	0.354	0.146	0	0.129
	6300	0.694	0.138	0.076	0	0.092
	8000	0.933	0.019	0.028	0	0.02
	10000	0.993	0.003	0.004	0	0

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
0.5	1	0	0.233	0.295	0.368	0.104
	1.3	0	0.354	0.325	0.217	0.104
	1.6	0	0.487	0.303	0.128	0.082
	2	0	0.189	0.744	0.029	0.038
	2.5	0	0.175	0.796	0.016	0.013
	3	0	0.202	0.775	0.007	0.016
	4	0	0.274	0.72	0.002	0.004
	5	0	0.284	0.715	0.001	0
	6.3	0	0.168	0.832	0	0
	8	0	0.164	0.836	0	0
	10	0	0.156	0.843	0	0.001
	13	0	0.188	0.812	0	0
	16	0	0.16	0.84	0	0
	20	0	0.171	0.829	0	0
	25	0	0.163	0.837	0	0
	30	0	0.17	0.83	0	0
	40	0	0.18	0.82	0	0
	50	0	0.15	0.85	0	0
	63	0	0.153	0.847	0	0
	80	0	0.14	0.86	0	0
	100	0	0.165	0.835	0	0
	130	0	0.142	0.858	0	0
	160	0	0.15	0.85	0	0
	200	0	0.162	0.838	0	0
	250	0	0.157	0.843	0	0
	300	0	0.173	0.827	0	0
	400	0	0.171	0.829	0	0
	500	0	0.165	0.835	0	0
	630	0	0.165	0.835	0	0
	800	0	0.164	0.836	0	0
	1000	0.002	0.152	0.846	0	0
	1300	0.003	0.267	0.725	0	0.005
	1600	0.007	0.216	0.77	0	0.007
	2000	0.014	0.178	0.788	0	0.02
	2500	0.039	0.182	0.754	0	0.025
	3000	0.166	0.143	0.687	0	0.004
	4000	0.23	0.344	0.323	0	0.103
	5000	0.37	0.238	0.292	0	0.1
	6300	0.469	0.161	0.267	0	0.103
	8000	0.662	0.062	0.199	0	0.077
	10000	0.875	0.029	0.093	0	0.003

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
1	1	0	0.165	0.433	0.325	0.077
	1.3	0	0.202	0.429	0.281	0.088
	1.6	0	0.236	0.435	0.226	0.103
	2	0	0.15	0.74	0.068	0.042
	2.5	0	0.166	0.744	0.058	0.032
	3	0	0.16	0.766	0.042	0.032
	4	0	0.182	0.766	0.028	0.024
	5	0	0.197	0.757	0.023	0.023
	6.3	0	0.122	0.863	0.003	0.012
	8	0	0.129	0.858	0.004	0.009
	10	0	0.126	0.868	0.003	0.003
	13	0	0.133	0.863	0.001	0.003
	16	0	0.126	0.868	0	0.006
	20	0	0.113	0.885	0	0.002
	25	0	0.13	0.868	0	0.002
	30	0	0.137	0.862	0	0.001
	40	0	0.124	0.876	0	0
	50	0	0.125	0.875	0	0
	63	0	0.128	0.872	0	0
	80	0	0.14	0.858	0	0.002
	100	0	0.121	0.878	0	0.001
	130	0	0.128	0.871	0	0.001
	160	0	0.124	0.876	0	0
	200	0	0.144	0.854	0	0.002
	250	0	0.128	0.871	0	0.001
	300	0	0.136	0.861	0	0.003
	400	0.003	0.122	0.87	0	0.005
	500	0.002	0.119	0.877	0	0.002
	630	0.006	0.122	0.865	0	0.007
	800	0.005	0.124	0.866	0	0.005
	1000	0.036	0.109	0.849	0	0.006
	1300	0.026	0.185	0.764	0	0.025
	1600	0.051	0.15	0.759	0	0.04
	2000	0.067	0.157	0.744	0	0.032
	2500	0.098	0.138	0.726	0	0.038
	3000	0.234	0.111	0.65	0	0.005
	4000	0.296	0.198	0.414	0	0.092
	5000	0.318	0.141	0.463	0	0.078
	6300	0.388	0.126	0.405	0	0.081
	8000	0.456	0.113	0.378	0	0.053
	10000	0.645	0.053	0.298	0	0.004

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
2	1	0	0.112	0.509	0.322	0.057
	1.3	0	0.165	0.518	0.262	0.055
	1.6	0	0.161	0.516	0.249	0.074
	2	0	0.106	0.718	0.126	0.05
	2.5	0	0.128	0.741	0.088	0.043
	3	0	0.128	0.728	0.096	0.048
	4	0	0.145	0.728	0.086	0.041
	5	0	0.157	0.711	0.084	0.048
	6.3	0	0.112	0.819	0.036	0.033
	8	0	0.12	0.832	0.018	0.03
	10	0	0.113	0.839	0.019	0.029
	13	0	0.128	0.826	0.014	0.032
	16	0	0.137	0.825	0.01	0.028
	20	0	0.116	0.857	0.002	0.025
	25	0	0.116	0.857	0.005	0.022
	30	0	0.114	0.857	0.005	0.024
	40	0.002	0.129	0.845	0.002	0.022
	50	0	0.125	0.848	0.002	0.025
	63	0	0.119	0.859	0	0.022
	80	0.001	0.114	0.864	0.001	0.02
	100	0.003	0.111	0.868	0.001	0.017
	130	0.003	0.105	0.874	0	0.018
	160	0.001	0.121	0.854	0	0.024
	200	0.004	0.114	0.861	0	0.021
	250	0.004	0.114	0.863	0	0.019
	300	0.023	0.131	0.826	0	0.02
	400	0.014	0.114	0.839	0	0.033
	500	0.024	0.115	0.825	0	0.036
	630	0.026	0.122	0.82	0	0.032
	800	0.042	0.115	0.819	0	0.024
	1000	0.09	0.116	0.781	0	0.013
	1300	0.087	0.158	0.698	0	0.057
	1600	0.092	0.128	0.721	0	0.059
	2000	0.115	0.132	0.706	0	0.047
	2500	0.115	0.111	0.732	0	0.042
	3000	0.281	0.084	0.624	0	0.011
	4000	0.271	0.143	0.525	0	0.061
	5000	0.277	0.13	0.517	0	0.076
	6300	0.294	0.125	0.518	0	0.063
	8000	0.348	0.092	0.516	0	0.044
	10000	0.476	0.092	0.427	0	0.005

APPENDIX B

Simulation Results Simulation Set 2

Starting Dose = LD30

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Percent of Simulations by Case as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD30

TrueSigma	TrueLD50	Case 2	Case 3	Case 4	Case 5	Case 1
0.125	1	0	0.127	0	0.73	0.143
	1.3	0.001	0.545	0.001	0.441	0.012
	1.6	0	0.858	0.001	0.141	0
	2	0	0.977	0.001	0.022	0
	2.5	0	0.339	0.661	0	0
	3	0	0.357	0.643	0	0
	4	0	0.383	0.617	0	0
	5	0	0.382	0.618	0	0
	6.3	0.001	0.399	0.6	0	0
	8	0	0.378	0.622	0	0
	10	0	0.39	0.61	0	0
	13	0	0.367	0.633	0	0
	16	0	0.344	0.656	0	0
	20	0	0.371	0.629	0	0
	25	0	0.37	0.63	0	0
	30	0.002	0.345	0.653	0	0
	40	0	0.392	0.608	0	0
	50	0.001	0.337	0.662	0	0
	63	0	0.362	0.638	0	0
	80	0	0.366	0.634	0	0
	100	0.001	0.365	0.634	0	0
	130	0	0.393	0.607	0	0
	160	0	0.352	0.648	0	0
	200	0	0.38	0.62	0	0
	250	0	0.372	0.628	0	0
	300	0	0.385	0.615	0	0
	400	0	0.397	0.603	0	0
	500	0	0.336	0.664	0	0
	630	0	0.385	0.615	0	0
	800	0	0.394	0.606	0	0
	1000	0.001	0.395	0.604	0	0
	1300	0	0.371	0.629	0	0
	1600	0	0.362	0.638	0	0
	2000	0	0.39	0.61	0	0
	2500	0.014	0.336	0.643	0.007	0
	3000	0.056	0.323	0.601	0.02	0
	4000	0.238	0.179	0.41	0.138	0.035
	5000	0	0.124	0	0.773	0.103
	6300	0	0.007	0	0.507	0.486
	8000	0	0.001	0	0.141	0.858
	10000	0	0	0	0.031	0.969

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

TrueSigma	TrueLD50	Case 2	Case 3	Case 4	Case 5	Case 1
0.25	1	0.111	0.103	0.038	0.62	0.128
	1.3	0.095	0.265	0.059	0.533	0.048
	1.6	0.093	0.4	0.082	0.419	0.006
	2	0.057	0.576	0.141	0.223	0.003
	2.5	0.094	0.306	0.597	0.003	0
	3	0.095	0.305	0.597	0.003	0
	4	0.081	0.278	0.641	0	0
	5	0.089	0.297	0.614	0	0
	6.3	0.099	0.292	0.609	0	0
	8	0.062	0.301	0.637	0	0
	10	0.063	0.269	0.668	0	0
	13	0.055	0.303	0.642	0	0
	16	0.079	0.274	0.647	0	0
	20	0.059	0.3	0.641	0	0
	25	0.066	0.301	0.633	0	0
	30	0.074	0.279	0.647	0	0
	40	0.064	0.304	0.632	0	0
	50	0.071	0.274	0.655	0	0
	63	0.072	0.314	0.614	0	0
	80	0.062	0.307	0.631	0	0
	100	0.072	0.303	0.625	0	0
	130	0.075	0.312	0.613	0	0
	160	0.062	0.322	0.616	0	0
	200	0.058	0.278	0.664	0	0
	250	0.076	0.287	0.637	0	0
	300	0.074	0.298	0.628	0	0
	400	0.079	0.304	0.617	0	0
	500	0.065	0.304	0.631	0	0
	630	0.07	0.275	0.655	0	0
	800	0.053	0.286	0.661	0	0
	1000	0.065	0.33	0.605	0	0
	1300	0.08	0.287	0.633	0	0
	1600	0.038	0.335	0.609	0.017	0.001
	2000	0.081	0.302	0.573	0.044	0
	2500	0.152	0.251	0.518	0.077	0.002
	3000	0.219	0.203	0.461	0.11	0.007
	4000	0.317	0.133	0.291	0.165	0.094
	5000	0.01	0.127	0.001	0.723	0.139
	6300	0.007	0.04	0	0.66	0.293
	8000	0.004	0.008	0.001	0.465	0.522
	10000	0.004	0.001	0	0.289	0.706

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

TrueSigma	TrueLD50	Case 2	Case 3	Case 4	Case 5	Case 1
0.5	1	0.123	0.088	0.022	0.622	0.145
	1.3	0.362	0.101	0.144	0.307	0.086
	1.6	0.336	0.095	0.215	0.269	0.085
	2	0.34	0.126	0.253	0.235	0.046
	2.5	0.326	0.168	0.305	0.172	0.029
	3	0.319	0.205	0.313	0.15	0.013
	4	0.343	0.146	0.505	0.002	0.004
	5	0.321	0.149	0.529	0.001	0
	6.3	0.302	0.157	0.539	0.001	0.001
	8	0.355	0.164	0.481	0	0
	10	0.336	0.164	0.498	0.001	0.001
	13	0.307	0.153	0.54	0	0
	16	0.266	0.145	0.589	0	0
	20	0.314	0.15	0.536	0	0
	25	0.266	0.164	0.57	0	0
	30	0.294	0.154	0.552	0	0
	40	0.296	0.148	0.556	0	0
	50	0.3	0.146	0.554	0	0
	63	0.303	0.149	0.548	0	0
	80	0.297	0.152	0.551	0	0
	100	0.293	0.154	0.553	0	0
	130	0.293	0.153	0.554	0	0
	160	0.288	0.16	0.552	0	0
	200	0.288	0.138	0.574	0	0
	250	0.295	0.136	0.569	0	0
	300	0.291	0.151	0.558	0	0
	400	0.283	0.168	0.549	0	0
	500	0.309	0.159	0.532	0	0
	630	0.294	0.153	0.553	0	0
	800	0.344	0.142	0.511	0.002	0.001
	1000	0.303	0.12	0.575	0.002	0
	1300	0.3	0.132	0.563	0.003	0.002
	1600	0.298	0.144	0.546	0.004	0.008
	2000	0.31	0.135	0.536	0.007	0.012
	2500	0.35	0.16	0.335	0.126	0.029
	3000	0.373	0.129	0.293	0.172	0.033
	4000	0.409	0.083	0.251	0.179	0.078
	5000	0.43	0.062	0.198	0.19	0.12
	6300	0.334	0.046	0.167	0.185	0.268
	8000	0.082	0.037	0.015	0.539	0.327
	10000	0.061	0.012	0.009	0.523	0.395

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

TrueSigma	TrueLD50	Case 2	Case 3	Case 4	Case 5	Case 1
1	1	0.423	0.05	0.075	0.278	0.174
	1.3	0.42	0.058	0.099	0.267	0.156
	1.6	0.418	0.087	0.118	0.256	0.121
	2	0.499	0.065	0.181	0.122	0.133
	2.5	0.525	0.072	0.196	0.118	0.089
	3	0.524	0.067	0.185	0.141	0.083
	4	0.506	0.082	0.238	0.106	0.068
	5	0.537	0.081	0.256	0.081	0.045
	6.3	0.527	0.087	0.362	0.005	0.019
	8	0.522	0.099	0.367	0.005	0.007
	10	0.493	0.111	0.385	0.003	0.008
	13	0.578	0.102	0.309	0.003	0.008
	16	0.578	0.103	0.31	0.006	0.003
	20	0.503	0.097	0.399	0	0.001
	25	0.501	0.089	0.41	0	0
	30	0.487	0.091	0.422	0	0
	40	0.514	0.085	0.401	0	0
	50	0.491	0.102	0.407	0	0
	63	0.523	0.096	0.381	0	0
	80	0.495	0.087	0.418	0	0
	100	0.529	0.098	0.373	0	0
	130	0.505	0.08	0.415	0	0
	160	0.498	0.089	0.413	0	0
	200	0.527	0.08	0.393	0	0
	250	0.497	0.104	0.399	0	0
	300	0.517	0.1	0.383	0	0
	400	0.509	0.093	0.393	0.005	0
	500	0.513	0.099	0.383	0.001	0.004
	630	0.489	0.094	0.413	0.002	0.002
	800	0.525	0.091	0.381	0	0.003
	1000	0.501	0.086	0.396	0.004	0.013
	1300	0.525	0.087	0.345	0.03	0.013
	1600	0.519	0.072	0.35	0.036	0.023
	2000	0.525	0.081	0.312	0.038	0.044
	2500	0.521	0.091	0.298	0.038	0.052
	3000	0.524	0.081	0.297	0.049	0.049
	4000	0.485	0.068	0.138	0.183	0.126
	5000	0.408	0.056	0.185	0.223	0.128
	6300	0.432	0.052	0.148	0.211	0.157
	8000	0.406	0.046	0.147	0.196	0.205
	10000	0.369	0.035	0.132	0.187	0.277

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

TrueSigma	TrueLD50	Case 2	Case 3	Case 4	Case 5	Case 1
2	1	0.438	0.043	0.103	0.212	0.204
	1.3	0.45	0.045	0.096	0.219	0.19
	1.6	0.512	0.067	0.091	0.155	0.175
	2	0.521	0.039	0.132	0.134	0.174
	2.5	0.504	0.055	0.161	0.128	0.152
	3	0.515	0.054	0.141	0.146	0.144
	4	0.528	0.055	0.165	0.119	0.133
	5	0.586	0.056	0.157	0.085	0.116
	6.3	0.61	0.049	0.143	0.096	0.102
	8	0.605	0.05	0.15	0.073	0.122
	10	0.597	0.061	0.17	0.07	0.102
	13	0.591	0.071	0.163	0.083	0.092
	16	0.648	0.065	0.166	0.041	0.08
	20	0.613	0.07	0.281	0.007	0.029
	25	0.626	0.069	0.27	0.01	0.025
	30	0.641	0.071	0.268	0.004	0.016
	40	0.645	0.06	0.279	0.006	0.01
	50	0.649	0.075	0.259	0.005	0.012
	63	0.621	0.073	0.3	0.001	0.005
	80	0.623	0.083	0.29	0.001	0.003
	100	0.632	0.075	0.285	0	0.008
	130	0.625	0.071	0.293	0.001	0.01
	160	0.636	0.07	0.289	0.001	0.004
	200	0.623	0.067	0.305	0.001	0.004
	250	0.637	0.085	0.275	0	0.003
	300	0.639	0.075	0.277	0	0.009
	400	0.648	0.062	0.271	0.006	0.013
	500	0.599	0.084	0.301	0.005	0.011
	630	0.619	0.071	0.297	0.005	0.008
	800	0.634	0.061	0.284	0.005	0.016
	1000	0.646	0.069	0.258	0.008	0.019
	1300	0.58	0.063	0.285	0.041	0.031
	1600	0.62	0.075	0.241	0.027	0.037
	2000	0.593	0.069	0.262	0.031	0.045
	2500	0.565	0.078	0.272	0.035	0.05
	3000	0.594	0.063	0.241	0.037	0.065
	4000	0.564	0.063	0.198	0.078	0.097
	5000	0.523	0.052	0.199	0.086	0.14
	6300	0.523	0.053	0.202	0.098	0.124
	8000	0.528	0.046	0.189	0.09	0.147
	10000	0.548	0.049	0.179	0.084	0.14

**Predicted Classification as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD30**

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
0.125	1	1.000	0.000	0.000	0.000
	1.3	1.000	0.000	0.000	0.000
	1.6	1.000	0.000	0.000	0.000
	2	0.999	0.001	0.000	0.000
	2.5	1.000	0.000	0.000	0.000
	3	1.000	0.000	0.000	0.000
	4	0.638	0.362	0.000	0.000
	5	0.641	0.359	0.000	0.000
	6.3	0.968	0.000	0.032	0.000
	8	0.965	0.000	0.035	0.000
	10	0.969	0.000	0.031	0.000
	13	1.000	0.000	0.000	0.000
	16	1.000	0.000	0.000	0.000
	20	1.000	0.000	0.000	0.000
	25	1.000	0.000	0.000	0.000
	30	1.000	0.000	0.000	0.000
	40	0.638	0.362	0.000	0.000
	50	0.696	0.304	0.000	0.000
	63	0.972	0.000	0.028	0.000
	80	0.969	0.000	0.031	0.000
	100	0.975	0.000	0.025	0.000
	130	1.000	0.000	0.000	0.000
	160	1.000	0.000	0.000	0.000
	200	0.646	0.354	0.000	0.000
	250	0.657	0.343	0.000	0.000
	300	0.646	0.354	0.000	0.000
	400	0.980	0.000	0.020	0.000
	500	0.975	0.000	0.025	0.000
	630	1.000	0.000	0.000	0.000
	800	0.998	0.002	0.000	0.000
	1000	0.999	0.001	0.000	0.000
	1300	0.999	0.001	0.000	0.000
	1600	0.666	0.334	0.000	0.000
	2000	0.640	0.360	0.000	0.000
	2500	0.969	0.000	0.031	0.000
	3000	0.972	0.000	0.028	0.000
	4000	0.972	0.000	0.028	0.000
	5000	1.000	0.000	0.000	0.000
	6300	1.000	0.000	0.000	0.000
	8000	1.000	0.000	0.000	0.000
	10000	1.000	0.000	0.000	0.000

Predicted Classification as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
0.25	1	0.992	0.000	0.000	0.008
	1.3	0.985	0.000	0.000	0.015
	1.6	0.997	0.000	0.000	0.003
	2	0.996	0.001	0.000	0.003
	2.5	0.910	0.090	0.000	0.000
	3	0.917	0.083	0.000	0.000
	4	0.620	0.380	0.000	0.000
	5	0.587	0.413	0.000	0.000
	6.3	0.441	0.000	0.559	0.000
	8	0.962	0.000	0.038	0.000
	10	0.974	0.000	0.026	0.000
	13	1.000	0.000	0.000	0.000
	16	1.000	0.000	0.000	0.000
	20	1.000	0.000	0.000	0.000
	25	0.905	0.095	0.000	0.000
	30	0.909	0.091	0.000	0.000
	40	0.610	0.390	0.000	0.000
	50	0.624	0.376	0.000	0.000
	63	0.415	0.000	0.585	0.000
	80	0.959	0.000	0.041	0.000
	100	0.967	0.000	0.033	0.000
	130	0.998	0.000	0.002	0.000
	160	0.928	0.072	0.000	0.000
	200	0.912	0.088	0.000	0.000
	250	0.589	0.411	0.000	0.000
	300	0.590	0.410	0.000	0.000
	400	0.409	0.000	0.591	0.000
	500	0.978	0.000	0.022	0.000
	630	0.976	0.002	0.022	0.000
	800	0.999	0.000	0.001	0.000
	1000	0.908	0.092	0.000	0.000
	1300	0.915	0.085	0.000	0.000
	1600	0.652	0.348	0.000	0.000
	2000	0.611	0.389	0.000	0.000
	2500	0.450	0.000	0.549	0.001
	3000	0.975	0.000	0.025	0.000
	4000	0.965	0.000	0.035	0.000
	5000	0.997	0.000	0.001	0.002
	6300	1.000	0.000	0.000	0.000
	8000	0.999	0.000	0.001	0.000
	10000	0.999	0.000	0.000	0.001

Predicted Classification as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
0.5	1	0.969	0.022	0.000	0.009
	1.3	0.956	0.009	0.000	0.035
	1.6	0.934	0.028	0.000	0.038
	2	0.912	0.064	0.000	0.024
	2.5	0.918	0.065	0.000	0.017
	3	0.594	0.396	0.000	0.010
	4	0.657	0.341	0.000	0.002
	5	0.608	0.392	0.000	0.000
	6.3	0.611	0.002	0.386	0.001
	8	0.721	0.000	0.279	0.000
	10	0.947	0.008	0.044	0.001
	13	0.953	0.005	0.042	0.000
	16	0.904	0.038	0.058	0.000
	20	0.941	0.048	0.011	0.000
	25	0.945	0.050	0.005	0.000
	30	0.671	0.328	0.001	0.000
	40	0.627	0.373	0.000	0.000
	50	0.631	0.368	0.001	0.000
	63	0.605	0.012	0.383	0.000
	80	0.620	0.006	0.374	0.000
	100	0.910	0.036	0.054	0.000
	130	0.901	0.049	0.050	0.000
	160	0.864	0.072	0.064	0.000
	200	0.676	0.314	0.010	0.000
	250	0.596	0.393	0.011	0.000
	300	0.623	0.377	0.000	0.000
	400	0.598	0.005	0.397	0.000
	500	0.619	0.013	0.368	0.000
	630	0.906	0.033	0.061	0.000
	800	0.901	0.051	0.048	0.000
	1000	0.935	0.054	0.011	0.000
	1300	0.677	0.317	0.005	0.001
	1600	0.613	0.372	0.013	0.002
	2000	0.598	0.402	0.000	0.000
	2500	0.538	0.000	0.460	0.002
	3000	0.631	0.000	0.368	0.001
	4000	0.927	0.000	0.070	0.003
	5000	0.934	0.000	0.060	0.006
	6300	0.949	0.000	0.050	0.001
	8000	0.971	0.000	0.018	0.011
	10000	0.984	0.000	0.009	0.007

Predicted Classification as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
1	1	0.900	0.046	0.000	0.054
	1.3	0.865	0.072	0.000	0.063
	1.6	0.874	0.082	0.000	0.044
	2	0.791	0.134	0.000	0.075
	2.5	0.763	0.186	0.000	0.051
	3	0.687	0.266	0.000	0.047
	4	0.626	0.335	0.000	0.039
	5	0.548	0.418	0.000	0.034
	6.3	0.570	0.018	0.397	0.015
	8	0.601	0.028	0.365	0.006
	10	0.668	0.043	0.284	0.005
	13	0.738	0.057	0.198	0.007
	16	0.749	0.086	0.163	0.002
	20	0.791	0.137	0.071	0.001
	25	0.746	0.198	0.056	0.000
	30	0.694	0.276	0.030	0.000
	40	0.654	0.331	0.015	0.000
	50	0.613	0.369	0.018	0.000
	63	0.515	0.037	0.448	0.000
	80	0.561	0.052	0.387	0.000
	100	0.629	0.083	0.288	0.000
	130	0.573	0.172	0.255	0.000
	160	0.529	0.207	0.264	0.000
	200	0.610	0.300	0.090	0.000
	250	0.581	0.356	0.063	0.000
	300	0.593	0.376	0.031	0.000
	400	0.539	0.031	0.430	0.000
	500	0.553	0.049	0.397	0.001
	630	0.653	0.058	0.288	0.001
	800	0.589	0.158	0.252	0.001
	1000	0.561	0.185	0.254	0.000
	1300	0.653	0.261	0.085	0.001
	1600	0.626	0.299	0.074	0.001
	2000	0.582	0.389	0.029	0.000
	2500	0.578	0.000	0.420	0.002
	3000	0.595	0.000	0.403	0.002
	4000	0.682	0.000	0.302	0.016
	5000	0.694	0.000	0.290	0.016
	6300	0.764	0.000	0.218	0.018
	8000	0.902	0.000	0.081	0.017
	10000	0.931	0.000	0.068	0.001

Predicted Classification as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
2	1	0.774	0.150	0.000	0.076
	1.3	0.728	0.193	0.000	0.079
	1.6	0.715	0.211	0.000	0.074
	2	0.696	0.222	0.000	0.082
	2.5	0.697	0.229	0.000	0.074
	3	0.646	0.275	0.000	0.079
	4	0.560	0.369	0.000	0.071
	5	0.532	0.402	0.000	0.066
	6.3	0.338	0.058	0.533	0.071
	8	0.364	0.056	0.519	0.061
	10	0.410	0.105	0.422	0.063
	13	0.480	0.107	0.341	0.072
	16	0.472	0.154	0.320	0.054
	20	0.468	0.202	0.311	0.019
	25	0.489	0.223	0.269	0.019
	30	0.461	0.260	0.270	0.009
	40	0.477	0.322	0.193	0.008
	50	0.511	0.336	0.142	0.011
	63	0.316	0.095	0.585	0.004
	80	0.331	0.121	0.546	0.002
	100	0.358	0.143	0.493	0.006
	130	0.353	0.206	0.435	0.006
	160	0.365	0.208	0.427	0.000
	200	0.428	0.249	0.323	0.000
	250	0.383	0.327	0.288	0.002
	300	0.378	0.342	0.276	0.004
	400	0.349	0.105	0.544	0.002
	500	0.337	0.119	0.542	0.002
	630	0.415	0.136	0.449	0.000
	800	0.374	0.173	0.452	0.001
	1000	0.401	0.213	0.385	0.001
	1300	0.427	0.257	0.311	0.005
	1600	0.446	0.294	0.256	0.004
	2000	0.473	0.306	0.215	0.006
	2500	0.426	0.000	0.569	0.005
	3000	0.440	0.000	0.551	0.009
	4000	0.505	0.000	0.491	0.004
	5000	0.574	0.000	0.418	0.008
	6300	0.560	0.000	0.431	0.009
	8000	0.681	0.000	0.312	0.007
	10000	0.687	0.000	0.305	0.008

The cutoff points for the harmonized classification are 5, 50, 300, and 2000

**Number of Animals as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD30**

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
0.125	1	8.0	3	15	5.2	3	11
	1.3	6.5	3	15	3.4	3	10
	1.6	6.2	6	15	3.1	3	9
	2	6.0	6	9	3.0	3	4
	2.5	6.0	6	6	3.0	3	3
	3	6.0	6	6	3.0	3	3
	4	6.0	6	8	3.0	3	4
	5	7.2	6	8	3.6	3	4
	6.3	7.2	6	8	3.6	3	4
	8	6.0	6	6	3.0	3	3
	10	6.0	6	6	3.0	3	3
	13	6.0	6	6	3.0	3	3
	16	6.0	6	6	3.0	3	3
	20	6.0	6	6	3.0	3	3
	25	6.0	6	6	3.0	3	3
	30	6.0	6	8	3.0	3	4
	40	6.0	6	6	3.0	3	3
	50	6.0	6	8	3.0	3	4
	63	6.0	6	6	3.0	3	3
	80	6.0	6	6	3.0	3	3
	100	6.0	6	6	3.0	3	3
	130	6.0	6	6	3.0	3	3
	160	6.0	6	6	3.0	3	3
	200	6.0	6	8	3.0	3	4
	250	6.0	6	6	3.0	3	3
	300	6.0	6	6	3.0	3	3
	400	6.0	6	6	3.0	3	3
	500	6.0	6	6	3.0	3	3
	630	6.0	6	6	3.0	3	3
	800	6.0	6	6	3.0	3	3
	1000	6.0	6	8	3.0	3	4
	1300	6.0	6	8	3.0	3	4
	1600	6.0	6	6	3.0	3	3
	2000	6.0	6	6	3.0	3	3
	2500	6.1	6	12	3.0	3	5
	3000	6.2	6	15	3.1	3	6
	4000	6.6	3	15	3.0	0	6
	5000	8.3	3	15	2.9	0	6
	6300	5.5	3	15	1.0	0	6
	8000	3.5	3	11	0.2	0	3
	10000	3.1	3	7	0.0	0	1

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
0.25	1	7.8	3	15	4.9	3	11
	1.3	7.6	3	15	4.2	3	10
	1.6	7.2	3	15	3.8	3	10
	2	7.0	5	15	3.5	3	9
	2.5	6.3	6	14	3.2	3	8
	3	6.3	6	13	3.1	3	7
	4	6.2	6	11	3.1	3	6
	5	6.6	6	10	3.3	3	5
	6.3	7.4	6	11	3.7	3	5
	8	6.2	6	10	3.1	3	5
	10	6.2	6	10	3.1	3	5
	13	6.2	6	11	3.1	3	5
	16	6.3	6	10	3.1	3	5
	20	6.2	6	10	3.1	3	5
	25	6.2	6	12	3.1	3	6
	30	6.2	6	10	3.1	3	5
	40	6.2	6	10	3.1	3	5
	50	6.2	6	10	3.1	3	5
	63	6.2	6	10	3.1	3	5
	80	6.2	6	11	3.1	3	5
	100	6.2	6	11	3.1	3	5
	130	6.2	6	10	3.1	3	5
	160	6.2	6	10	3.1	3	5
	200	6.3	6	11	3.1	3	5
	250	6.2	6	11	3.1	3	5
	300	6.2	6	10	3.1	3	5
	400	6.2	6	11	3.1	3	5
	500	6.3	6	10	3.1	3	5
	630	6.3	6	10	3.1	3	5
	800	6.2	6	10	3.1	3	5
	1000	6.2	6	11	3.1	3	5
	1300	6.3	6	11	3.1	3	5
	1600	7.4	6	14	3.7	1	6
	2000	6.4	6	15	3.1	3	6
	2500	6.7	6	15	3.3	1	7
	3000	7.1	4	15	3.3	0	7
	4000	6.7	3	15	2.8	0	6
	5000	8.6	3	15	3.0	0	6
	6300	7.1	3	15	1.9	0	6
	8000	5.3	3	15	0.9	0	6
	10000	4.2	3	15	0.4	0	5

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
0.5	1	8.7	3	15	5.6	3	11
	1.3	7.8	3	15	4.3	3	11
	1.6	7.9	3	15	4.3	3	11
	2	8.1	3	15	4.2	3	10
	2.5	8.4	3	15	4.2	3	10
	3	8.3	3	15	4.1	3	10
	4	7.4	4	15	3.6	3	9
	5	7.3	6	15	3.6	3	8
	6.3	7.2	6	13	3.5	3	6
	8	8.0	6	15	3.9	3	7
	10	8.1	6	15	4.0	3	7
	13	7.1	6	14	3.5	3	6
	16	7.0	6	12	3.5	3	6
	20	7.2	6	13	3.5	3	6
	25	7.1	6	12	3.5	3	6
	30	7.2	6	14	3.5	3	6
	40	7.2	6	13	3.5	3	6
	50	7.2	6	13	3.5	3	6
	63	7.2	6	13	3.5	3	7
	80	7.2	6	13	3.5	3	6
	100	7.1	6	13	3.5	3	6
	130	7.2	6	13	3.5	3	6
	160	7.2	6	15	3.5	3	7
	200	7.1	6	12	3.5	3	6
	250	7.2	6	13	3.5	3	6
	300	7.2	6	13	3.5	3	6
	400	7.1	6	13	3.5	3	6
	500	7.2	6	13	3.5	3	6
	630	7.2	6	15	3.5	3	7
	800	7.4	5	15	3.6	0	6
	1000	7.3	6	15	3.5	3	7
	1300	7.3	5	15	3.6	0	7
	1600	7.4	5	15	3.6	0	7
	2000	7.3	4	15	3.5	0	7
	2500	7.9	4	15	3.6	0	7
	3000	8.2	4	15	3.6	0	7
	4000	8.5	4	15	3.4	0	6
	5000	8.6	4	15	3.2	0	6
	6300	5.9	3	15	1.9	0	6
	8000	7.0	3	15	1.9	0	6
	10000	6.3	3	15	1.4	0	6

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
1	1	8.1	3	15	4.8	3	11
	1.3	8.7	3	15	5.0	3	11
	1.6	8.7	3	15	4.9	3	11
	2	8.0	3	15	4.1	3	10
	2.5	8.3	3	15	4.1	3	10
	3	8.5	3	15	4.2	3	10
	4	8.7	3	15	4.3	3	10
	5	9.1	3	15	4.4	3	9
	6.3	8.6	4	15	4.1	3	9
	8	8.7	6	15	4.1	3	9
	10	8.5	4	15	4.0	3	9
	13	9.0	4	15	4.3	3	9
	16	9.2	4	15	4.3	3	9
	20	8.5	6	15	4.0	3	8
	25	8.6	6	15	4.0	3	8
	30	8.5	6	15	4.0	3	7
	40	8.5	6	15	4.0	3	7
	50	8.6	6	15	4.0	3	7
	63	8.6	6	15	4.0	3	8
	80	8.5	6	15	4.0	3	7
	100	8.7	6	15	4.1	3	7
	130	8.5	6	15	4.0	3	7
	160	8.6	6	15	4.0	3	7
	200	8.6	6	15	4.0	3	9
	250	8.6	6	15	4.0	3	7
	300	8.5	6	15	4.0	3	7
	400	8.5	6	15	4.0	3	8
	500	8.5	6	15	3.9	0	8
	630	8.5	6	15	4.0	0	7
	800	8.6	6	15	4.0	0	7
	1000	8.4	5	15	3.9	0	7
	1300	8.9	5	15	4.0	0	7
	1600	8.7	5	15	3.9	0	7
	2000	8.8	5	15	3.8	0	7
	2500	9.0	5	15	3.8	0	7
	3000	8.8	5	15	3.7	0	7
	4000	9.4	4	15	3.7	0	7
	5000	8.7	4	15	3.3	0	7
	6300	8.6	4	15	3.1	0	7
	8000	8.5	4	15	2.9	0	6
	10000	6.1	3	15	2.0	0	7

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
2	1	8.1	3	15	4.6	3	11
	1.3	8.3	3	15	4.6	3	11
	1.6	9.0	3	15	4.9	3	11
	2	8.3	3	15	4.3	3	11
	2.5	8.3	3	15	4.3	3	11
	3	8.7	3	15	4.4	3	10
	4	9.0	3	15	4.5	3	10
	5	9.2	3	15	4.6	3	10
	6.3	9.2	3	15	4.3	3	10
	8	9.2	3	15	4.3	3	10
	10	9.3	3	15	4.3	3	10
	13	9.7	3	15	4.3	3	10
	16	10.1	3	15	4.5	3	9
	20	9.8	4	15	4.3	3	10
	25	10.0	4	15	4.4	3	9
	30	10.0	4	15	4.4	3	10
	40	10.2	4	15	4.5	3	8
	50	10.2	4	15	4.5	2	8
	63	10.0	6	15	4.4	3	8
	80	10.0	5	15	4.4	3	9
	100	9.9	6	15	4.3	3	7
	130	10.1	6	15	4.4	0	8
	160	10.1	5	15	4.4	3	10
	200	9.9	6	15	4.4	2	9
	250	10.1	6	15	4.4	2	8
	300	10.1	6	15	4.4	2	7
	400	10.2	6	15	4.4	0	9
	500	9.9	6	15	4.3	0	7
	630	10.0	6	15	4.3	0	8
	800	10.0	6	15	4.3	0	9
	1000	10.2	6	15	4.3	0	8
	1300	9.8	6	15	4.1	0	8
	1600	9.9	6	15	4.1	0	7
	2000	9.7	6	15	4.0	0	7
	2500	9.7	6	15	3.9	0	7
	3000	9.8	6	15	4.0	0	8
	4000	9.7	5	15	3.8	0	8
	5000	9.4	5	15	3.6	0	8
	6300	9.4	5	15	3.6	0	7
	8000	9.5	5	15	3.5	0	7
	10000	9.5	5	15	3.5	0	7

95% CI Coverage as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD30

True Sigma	True LD50	(-- Yes	(--- Yes	---- Yes	----- Yes	---- No	(--- No	(-- No	Coverage
0.125	1	0.422	0.000	0.159	0.419	0.000	0.000	0.000	1.000
	1.3	0.647	0.000	0.000	0.353	0.000	0.000	0.000	1.000
	1.6	0.959	0.000	0.000	0.041	0.000	0.000	0.000	1.000
	2	0.990	0.000	0.000	0.010	0.000	0.000	0.000	1.000
	2.5	0.980	0.000	0.000	0.000	0.000	0.000	0.020	0.980
	3	0.966	0.000	0.000	0.000	0.000	0.000	0.034	0.966
	4	0.978	0.000	0.000	0.000	0.000	0.000	0.022	0.978
	5	0.977	0.000	0.000	0.000	0.000	0.000	0.023	0.977
	6.3	0.967	0.000	0.000	0.001	0.000	0.000	0.032	0.968
	8	0.965	0.000	0.000	0.000	0.000	0.000	0.035	0.965
	10	0.969	0.000	0.000	0.000	0.000	0.000	0.031	0.969
	13	0.970	0.000	0.000	0.000	0.000	0.000	0.030	0.970
	16	0.983	0.000	0.000	0.000	0.000	0.000	0.017	0.983
	20	0.976	0.000	0.000	0.000	0.000	0.000	0.024	0.976
	25	0.965	0.000	0.000	0.000	0.000	0.000	0.035	0.965
	30	0.970	0.000	0.000	0.002	0.000	0.000	0.028	0.972
	40	0.970	0.000	0.000	0.000	0.000	0.000	0.030	0.970
	50	0.964	0.000	0.000	0.001	0.000	0.000	0.035	0.965
	63	0.972	0.000	0.000	0.000	0.000	0.000	0.028	0.972
	80	0.969	0.000	0.000	0.000	0.000	0.000	0.031	0.969
	100	0.974	0.000	0.000	0.001	0.000	0.000	0.025	0.975
	130	0.975	0.000	0.000	0.000	0.000	0.000	0.025	0.975
	160	0.972	0.000	0.000	0.000	0.000	0.000	0.028	0.972
	200	0.973	0.000	0.000	0.000	0.000	0.000	0.027	0.973
	250	0.971	0.000	0.000	0.000	0.000	0.000	0.029	0.971
	300	0.969	0.000	0.000	0.000	0.000	0.000	0.031	0.969
	400	0.980	0.000	0.000	0.000	0.000	0.000	0.020	0.980
	500	0.975	0.000	0.000	0.000	0.000	0.000	0.025	0.975
	630	0.967	0.000	0.000	0.000	0.000	0.000	0.033	0.967
	800	0.966	0.000	0.000	0.000	0.000	0.000	0.034	0.966
	1000	0.971	0.000	0.000	0.001	0.000	0.000	0.028	0.972
	1300	0.973	0.000	0.000	0.000	0.000	0.000	0.027	0.973
	1600	0.972	0.000	0.000	0.000	0.000	0.000	0.028	0.972
	2000	0.970	0.000	0.000	0.000	0.000	0.000	0.030	0.970
	2500	0.950	0.001	0.000	0.012	0.000	0.000	0.037	0.963
	3000	0.911	0.002	0.000	0.049	0.000	0.000	0.038	0.962
	4000	0.690	0.011	0.000	0.263	0.000	0.001	0.034	0.965
	5000	0.407	0.147	0.000	0.446	0.000	0.000	0.000	1.000
	6300	0.045	0.391	0.000	0.551	0.000	0.000	0.014	0.986
	8000	0.000	0.423	0.000	0.570	0.000	0.000	0.007	0.993
	10000	0.000	0.387	0.000	0.613	0.000	0.000	0.000	1.000

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(-- Yes	(--- Yes	---) Yes	---- Yes	---) No	(--- No	(--) No	Coverage
0.25	1	0.342	0.000	0.117	0.511	0.000	0.000	0.030	0.970
	1.3	0.507	0.000	0.016	0.462	0.006	0.000	0.008	0.985
	1.6	0.595	0.000	0.004	0.385	0.004	0.000	0.012	0.984
	2	0.877	0.000	0.002	0.119	0.000	0.000	0.002	0.998
	2.5	0.871	0.000	0.000	0.094	0.000	0.000	0.035	0.965
	3	0.876	0.000	0.000	0.095	0.000	0.000	0.029	0.971
	4	0.877	0.000	0.000	0.081	0.000	0.000	0.042	0.958
	5	0.874	0.000	0.000	0.089	0.000	0.000	0.037	0.963
	6.3	0.891	0.000	0.000	0.067	0.000	0.000	0.042	0.958
	8	0.895	0.000	0.000	0.062	0.000	0.000	0.043	0.957
	10	0.901	0.000	0.000	0.063	0.000	0.000	0.036	0.964
	13	0.907	0.000	0.000	0.055	0.000	0.000	0.038	0.962
	16	0.891	0.000	0.000	0.079	0.000	0.000	0.030	0.970
	20	0.905	0.000	0.000	0.059	0.000	0.000	0.036	0.964
	25	0.896	0.000	0.000	0.066	0.000	0.000	0.038	0.962
	30	0.889	0.000	0.000	0.074	0.000	0.000	0.037	0.963
	40	0.901	0.000	0.000	0.064	0.000	0.000	0.035	0.965
	50	0.896	0.000	0.000	0.071	0.000	0.000	0.033	0.967
	63	0.883	0.000	0.000	0.072	0.000	0.000	0.045	0.955
	80	0.897	0.000	0.000	0.062	0.000	0.000	0.041	0.959
	100	0.895	0.000	0.000	0.072	0.000	0.000	0.033	0.967
	130	0.889	0.000	0.000	0.075	0.000	0.000	0.036	0.964
	160	0.907	0.000	0.000	0.062	0.000	0.000	0.031	0.969
	200	0.916	0.000	0.000	0.058	0.000	0.000	0.026	0.974
	250	0.889	0.000	0.000	0.076	0.000	0.000	0.035	0.965
	300	0.891	0.000	0.000	0.074	0.000	0.000	0.035	0.965
	400	0.880	0.000	0.000	0.078	0.000	0.000	0.042	0.958
	500	0.912	0.000	0.000	0.063	0.000	0.000	0.025	0.975
	630	0.888	0.000	0.000	0.066	0.000	0.000	0.046	0.954
	800	0.921	0.000	0.000	0.053	0.000	0.000	0.026	0.974
	1000	0.905	0.001	0.000	0.064	0.000	0.000	0.030	0.970
	1300	0.888	0.000	0.000	0.080	0.000	0.000	0.032	0.968
	1600	0.942	0.001	0.000	0.026	0.000	0.000	0.031	0.969
	2000	0.901	0.001	0.000	0.063	0.000	0.000	0.035	0.965
	2500	0.840	0.002	0.000	0.120	0.000	0.002	0.036	0.962
	3000	0.753	0.016	0.000	0.178	0.000	0.006	0.046	0.948
	4000	0.540	0.034	0.000	0.380	0.000	0.006	0.041	0.954
	5000	0.566	0.150	0.000	0.283	0.000	0.000	0.001	0.999
	6300	0.182	0.270	0.000	0.491	0.000	0.000	0.057	0.943
	8000	0.046	0.364	0.000	0.571	0.000	0.000	0.019	0.981
	10000	0.007	0.408	0.000	0.582	0.000	0.000	0.003	0.997

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(-- Yes	(--- Yes	---) Yes	---- Yes	---) No	(--- No	(--) No	Coverage
0.5	1	0.426	0.000	0.137	0.412	0.000	0.000	0.026	0.974
	1.3	0.283	0.000	0.007	0.607	0.023	0.000	0.080	0.897
	1.6	0.329	0.000	0.002	0.592	0.011	0.000	0.066	0.923
	2	0.403	0.000	0.001	0.498	0.005	0.000	0.093	0.901
	2.5	0.585	0.005	0.000	0.341	0.000	0.000	0.069	0.931
	3	0.602	0.001	0.000	0.313	0.003	0.000	0.081	0.916
	4	0.594	0.000	0.001	0.321	0.001	0.000	0.082	0.917
	5	0.624	0.000	0.000	0.296	0.000	0.000	0.080	0.920
	6.3	0.648	0.001	0.000	0.274	0.000	0.000	0.077	0.923
	8	0.588	0.001	0.000	0.293	0.000	0.000	0.118	0.882
	10	0.611	0.001	0.000	0.247	0.000	0.000	0.141	0.859
	13	0.638	0.000	0.000	0.291	0.000	0.000	0.071	0.929
	16	0.649	0.001	0.000	0.254	0.000	0.000	0.096	0.904
	20	0.603	0.000	0.000	0.299	0.000	0.000	0.098	0.902
	25	0.670	0.000	0.000	0.248	0.000	0.000	0.082	0.918
	30	0.632	0.000	0.000	0.274	0.000	0.000	0.094	0.906
	40	0.626	0.000	0.000	0.279	0.000	0.000	0.095	0.905
	50	0.635	0.000	0.000	0.280	0.000	0.000	0.085	0.915
	63	0.636	0.000	0.000	0.288	0.000	0.000	0.076	0.924
	80	0.634	0.000	0.000	0.275	0.000	0.000	0.091	0.909
	100	0.649	0.002	0.000	0.275	0.000	0.000	0.074	0.926
	130	0.636	0.000	0.000	0.272	0.000	0.000	0.092	0.908
	160	0.638	0.000	0.000	0.271	0.000	0.000	0.091	0.909
	200	0.640	0.001	0.000	0.270	0.000	0.000	0.089	0.911
	250	0.632	0.001	0.000	0.275	0.000	0.000	0.092	0.908
	300	0.645	0.001	0.000	0.267	0.000	0.000	0.087	0.913
	400	0.659	0.000	0.000	0.268	0.000	0.000	0.073	0.927
	500	0.624	0.000	0.000	0.293	0.000	0.000	0.083	0.917
	630	0.642	0.000	0.000	0.273	0.000	0.000	0.085	0.915
	800	0.593	0.002	0.000	0.324	0.000	0.000	0.081	0.919
	1000	0.643	0.004	0.000	0.285	0.000	0.000	0.068	0.932
	1300	0.638	0.007	0.000	0.281	0.000	0.000	0.074	0.926
	1600	0.656	0.002	0.000	0.258	0.000	0.001	0.083	0.916
	2000	0.646	0.001	0.000	0.277	0.000	0.005	0.071	0.924
	2500	0.636	0.012	0.000	0.298	0.000	0.011	0.042	0.946
	3000	0.570	0.032	0.000	0.330	0.000	0.014	0.054	0.932
	4000	0.474	0.063	0.000	0.403	0.000	0.020	0.040	0.940
	5000	0.397	0.105	0.000	0.470	0.000	0.000	0.028	0.972
	6300	0.261	0.078	0.000	0.577	0.000	0.000	0.085	0.915
	8000	0.125	0.266	0.000	0.535	0.000	0.000	0.074	0.926
	10000	0.046	0.347	0.000	0.559	0.000	0.000	0.048	0.952

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(-- Yes	(--- Yes	---) Yes	---- Yes	---) No	(--- No	(--) No	Coverage
1	1	0.137	0.000	0.047	0.734	0.000	0.000	0.082	0.918
	1.3	0.222	0.000	0.031	0.635	0.015	0.000	0.097	0.887
	1.6	0.308	0.007	0.011	0.563	0.032	0.000	0.078	0.890
	2	0.250	0.006	0.000	0.599	0.006	0.000	0.140	0.855
	2.5	0.294	0.003	0.000	0.560	0.007	0.000	0.136	0.857
	3	0.282	0.001	0.000	0.573	0.007	0.000	0.137	0.856
	4	0.342	0.005	0.000	0.518	0.002	0.000	0.132	0.866
	5	0.396	0.012	0.000	0.430	0.002	0.000	0.160	0.838
	6.3	0.381	0.004	0.000	0.415	0.000	0.000	0.200	0.800
	8	0.459	0.008	0.000	0.399	0.000	0.000	0.134	0.866
	10	0.457	0.008	0.000	0.387	0.000	0.000	0.148	0.852
	13	0.345	0.005	0.000	0.433	0.001	0.000	0.216	0.783
	16	0.362	0.004	0.000	0.404	0.001	0.001	0.228	0.770
	20	0.457	0.005	0.000	0.404	0.000	0.000	0.133	0.867
	25	0.497	0.005	0.000	0.378	0.000	0.000	0.120	0.880
	30	0.498	0.005	0.000	0.360	0.000	0.000	0.137	0.863
	40	0.442	0.008	0.000	0.408	0.000	0.000	0.142	0.858
	50	0.476	0.004	0.000	0.380	0.000	0.002	0.138	0.860
	63	0.429	0.008	0.000	0.403	0.000	0.000	0.160	0.840
	80	0.469	0.010	0.000	0.380	0.000	0.000	0.141	0.859
	100	0.425	0.012	0.000	0.401	0.000	0.000	0.162	0.838
	130	0.457	0.007	0.000	0.398	0.000	0.001	0.137	0.862
	160	0.451	0.007	0.000	0.395	0.000	0.000	0.147	0.853
	200	0.455	0.005	0.000	0.403	0.000	0.001	0.136	0.863
	250	0.473	0.006	0.000	0.372	0.000	0.000	0.149	0.851
	300	0.445	0.012	0.000	0.396	0.000	0.001	0.146	0.853
	400	0.451	0.000	0.000	0.410	0.000	0.000	0.139	0.861
	500	0.461	0.002	0.000	0.420	0.000	0.002	0.115	0.883
	630	0.438	0.005	0.000	0.392	0.000	0.003	0.162	0.835
	800	0.415	0.007	0.000	0.439	0.000	0.003	0.135	0.862
	1000	0.426	0.001	0.000	0.428	0.000	0.012	0.134	0.854
	1300	0.408	0.009	0.000	0.460	0.000	0.011	0.111	0.877
	1600	0.393	0.010	0.000	0.479	0.000	0.016	0.101	0.882
	2000	0.370	0.021	0.000	0.479	0.000	0.024	0.106	0.870
	2500	0.368	0.038	0.000	0.454	0.000	0.032	0.109	0.860
	3000	0.380	0.056	0.000	0.438	0.000	0.034	0.093	0.874
	4000	0.363	0.100	0.000	0.478	0.000	0.003	0.056	0.941
	5000	0.380	0.139	0.000	0.443	0.000	0.000	0.039	0.961
	6300	0.262	0.153	0.000	0.503	0.000	0.000	0.082	0.918
	8000	0.165	0.180	0.000	0.481	0.000	0.000	0.175	0.825
	10000	0.018	0.082	0.000	0.643	0.000	0.000	0.257	0.743

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(--) Yes	(--- Yes	---) Yes	---- Yes	---) No	(--- No	(--) No	Coverage
2	1	0.122	0.004	0.039	0.683	0.000	0.001	0.151	0.848
	1.3	0.148	0.001	0.016	0.674	0.017	0.000	0.143	0.840
	1.6	0.190	0.004	0.007	0.647	0.022	0.005	0.125	0.848
	2	0.183	0.010	0.000	0.630	0.015	0.002	0.161	0.822
	2.5	0.225	0.005	0.000	0.588	0.013	0.000	0.169	0.818
	3	0.214	0.005	0.000	0.610	0.018	0.005	0.150	0.828
	4	0.227	0.009	0.000	0.571	0.008	0.005	0.180	0.807
	5	0.243	0.015	0.000	0.566	0.005	0.002	0.170	0.824
	6.3	0.212	0.017	0.000	0.563	0.006	0.012	0.190	0.792
	8	0.231	0.014	0.000	0.557	0.006	0.002	0.190	0.802
	10	0.267	0.017	0.000	0.518	0.001	0.008	0.189	0.802
	13	0.275	0.018	0.000	0.486	0.006	0.004	0.211	0.779
	16	0.285	0.034	0.000	0.473	0.002	0.009	0.198	0.791
	20	0.281	0.021	0.000	0.417	0.001	0.005	0.275	0.719
	25	0.274	0.028	0.000	0.423	0.001	0.005	0.270	0.724
	30	0.270	0.018	0.000	0.436	0.001	0.004	0.270	0.725
	40	0.258	0.018	0.000	0.429	0.000	0.004	0.291	0.705
	50	0.295	0.019	0.000	0.430	0.000	0.012	0.244	0.744
	63	0.241	0.015	0.000	0.429	0.002	0.011	0.302	0.685
	80	0.251	0.020	0.000	0.423	0.000	0.005	0.301	0.694
	100	0.253	0.019	0.000	0.420	0.000	0.008	0.299	0.693
	130	0.235	0.017	0.000	0.444	0.000	0.007	0.296	0.697
	160	0.250	0.023	0.000	0.436	0.000	0.007	0.284	0.709
	200	0.272	0.021	0.000	0.416	0.000	0.008	0.283	0.709
	250	0.243	0.033	0.000	0.426	0.000	0.011	0.287	0.702
	300	0.248	0.026	0.000	0.450	0.000	0.010	0.265	0.725
	400	0.232	0.039	0.000	0.457	0.000	0.012	0.260	0.727
	500	0.224	0.028	0.001	0.433	0.000	0.016	0.297	0.687
	630	0.235	0.031	0.000	0.430	0.000	0.014	0.289	0.697
	800	0.215	0.026	0.000	0.455	0.000	0.016	0.287	0.697
	1000	0.204	0.043	0.000	0.460	0.000	0.022	0.271	0.706
	1300	0.204	0.040	0.000	0.430	0.000	0.033	0.292	0.675
	1600	0.204	0.042	0.000	0.484	0.000	0.023	0.248	0.729
	2000	0.198	0.037	0.000	0.492	0.000	0.025	0.248	0.727
	2500	0.199	0.056	0.000	0.425	0.000	0.033	0.287	0.680
	3000	0.178	0.060	0.000	0.473	0.000	0.034	0.256	0.710
	4000	0.157	0.090	0.000	0.511	0.000	0.003	0.239	0.757
	5000	0.151	0.100	0.000	0.506	0.000	0.000	0.243	0.757
	6300	0.107	0.140	0.000	0.482	0.000	0.000	0.271	0.729
	8000	0.075	0.163	0.000	0.475	0.000	0.000	0.287	0.713
	10000	0.048	0.176	0.001	0.484	0.000	0.000	0.292	0.708

(--) Yes

(--- Yes

---) Yes

---- Yes

---) No

(--- No

(--) No

Coverage

CI is finite and covers the true LD50

CI is infinite on the high side and covers the true LD50

CI is infinite on the low side and covers the true LD50

CI is infinite on the both side and covers the true LD50

CI is infinite on the low side and does not cover the true LD50

CI is infinite on the high side and does not cover the true LD50

CI is finite and does not cover the true LD50

Overall coverage, percent of case 2 to 5 confidence intervals covering the true LD50

Relative LD50 Estimate as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD30

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
0.125	1	100.000	-100.000	1.725	0.000	0.000
	1.3	3.441	-0.912	1.265	1.265	-0.912
	1.6	3.515	-1.633	0.941	0.941	-1.633
	2	3.451	-2.408	0.521	0.521	0.521
	2.5	3.505	-4.605	1.476	-0.524	-0.524
	3	3.952	-4.972	1.498	-0.497	-2.157
	4	4.508	-5.630	1.459	-0.565	-0.565
	5	3.278	-2.275	1.476	-0.524	-0.524
	6.3	3.434	-2.408	1.467	-0.536	-3.465
	8	4.372	-5.400	1.484	-0.514	-2.516
	10	4.363	-5.409	1.463	-0.524	-2.537
	13	4.370	-5.402	1.462	-0.518	-2.538
	16	4.371	-5.401	1.500	-0.514	-0.514
	20	4.363	-5.409	1.463	-0.524	-0.524
	25	4.362	-5.410	1.476	-0.524	-2.524
	30	4.389	-5.383	1.498	-0.497	-2.502
	40	4.320	-5.453	1.459	-0.565	-2.541
	50	4.362	-5.410	1.476	-0.524	-2.524
	63	4.350	-5.422	1.467	-0.536	-2.533
	80	4.372	-5.400	1.484	-0.514	-2.516
	100	4.363	-5.409	1.463	-0.524	-1.530
	130	4.370	-5.402	1.462	-0.518	-1.528
	160	4.371	-5.401	1.500	-0.514	-2.500
	200	4.363	-5.409	1.463	-0.524	-2.537
	250	4.362	-5.410	1.476	-0.524	-2.524
	300	4.389	-5.383	1.498	-0.497	-2.502
	400	4.320	-5.453	1.459	-0.565	-0.565
	500	4.362	-5.410	1.476	-0.524	-1.524
	630	4.350	-5.422	1.467	-0.536	-2.533
	800	4.372	-5.400	1.484	-0.514	-2.516
	1000	4.363	-5.409	1.463	-0.524	-2.537
	1300	4.370	-5.402	1.462	-0.518	-2.538
	1600	4.633	-5.679	1.722	-0.514	-2.500
	2000	4.204	-5.240	1.330	-0.524	-2.537
	2500	3.722	-4.730	0.942	-0.524	-2.524
	3000	3.351	-4.276	0.777	-0.497	-2.502
	4000	2.199	-3.673	1.790	-0.362	-2.541
	5000	100.000	-100.000	0.000	0.000	-2.262
	6300	100.000	-100.000	-0.803	-0.803	-0.803
	8000	100.000	-100.000	-1.633	-1.633	-1.633
	10000	100.000	-100.000	-2.408	-2.408	-2.408

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
0.25	1	100.000	-100.000	1.477	0.000	0.000
	1.3	3.850	-100.000	1.453	-0.456	-0.456
	1.6	1.456	-1.442	1.456	0.320	-0.816
	2	1.484	-1.204	1.484	0.140	-1.204
	2.5	2.295	-2.393	1.462	-0.523	-1.057
	3	2.256	-2.594	1.472	-0.523	-1.216
	4	2.416	-2.879	1.484	-0.500	-1.454
	5	2.664	-2.673	1.477	-0.523	-1.659
	6.3	1.411	-1.404	1.472	-0.509	-1.853
	8	2.259	-2.972	1.475	-0.529	-1.527
	10	2.261	-2.966	1.477	-0.523	-1.523
	13	2.236	-2.969	1.453	-0.527	-1.537
	16	2.377	-2.971	1.456	-0.529	-1.289
	20	2.268	-2.966	1.484	-0.523	-1.519
	25	2.245	-2.966	1.462	-0.523	-1.531
	30	2.256	-2.966	1.472	-0.523	-1.526
	40	1.944	-2.942	1.484	-0.500	-1.508
	50	2.261	-2.966	1.477	-0.523	-1.523
	63	1.935	-2.951	1.472	-0.509	-1.519
	80	2.259	-2.972	1.475	-0.529	-1.527
	100	2.261	-2.966	1.477	-0.523	-1.523
	130	2.077	-2.969	1.453	-0.527	-1.537
	160	2.240	-2.971	1.456	-0.529	-1.536
	200	2.268	-2.966	1.484	-0.523	-0.523
	250	2.245	-2.966	1.462	-0.523	-1.531
	300	2.527	-2.966	1.472	-0.523	-1.526
	400	2.595	-2.942	1.484	-0.500	-1.508
	500	2.350	-2.966	1.477	-0.523	-0.523
	630	2.583	-2.951	1.472	-0.509	-0.509
	800	2.204	-2.972	1.475	-0.529	-0.529
	1000	2.123	-2.966	1.477	-0.523	-1.523
	1300	1.994	-2.969	1.453	-0.527	-1.537
	1600	1.702	-1.417	0.735	-0.529	-1.516
	2000	2.731	-3.034	1.592	-0.523	-1.515
	2500	2.244	-2.802	1.204	-0.523	-1.531
	3000	1.835	-2.593	0.887	-0.335	-1.526
	4000	1.276	-3.300	22.544	-0.056	-1.508
	5000	100.000	-2.523	0.000	0.000	-1.262
	6300	100.000	-100.000	-0.401	-0.401	-1.465
	8000	100.000	-100.000	-0.816	-0.816	-0.816
	10000	100.000	-100.000	-1.204	-1.204	-1.204

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
0.5	1	3.307	-100.000	1.481	0.000	-0.223
	1.3	100.000	-100.000	1.040	0.062	-0.903
	1.6	100.000	-100.000	1.028	0.039	-0.548
	2	100.000	-100.000	1.016	-0.008	-0.602
	2.5	1.372	-1.075	1.001	-0.081	-0.796
	3	1.378	-0.954	0.996	-0.155	-0.954
	4	1.289	-1.551	1.017	-0.025	-0.864
	5	1.283	-1.679	1.010	-0.026	-0.967
	6.3	1.052	-1.802	1.012	-0.030	-0.828
	8	1.364	-1.229	1.019	-0.023	-1.163
	10	1.292	-1.491	1.021	-0.022	-1.260
	13	1.032	-1.747	0.991	-0.024	-1.024
	16	1.041	-1.751	1.020	-0.022	-1.022
	20	1.295	-1.749	1.021	-0.021	-1.021
	25	1.026	-1.744	1.017	-0.026	-1.026
	30	1.033	-1.746	1.019	-0.023	-1.023
	40	1.289	-1.745	1.017	-0.025	-1.025
	50	1.026	-1.757	0.983	-0.032	-1.032
	63	1.031	-1.758	1.012	-0.030	-1.030
	80	1.029	-1.741	0.993	-0.023	-1.023
	100	1.031	-1.741	1.021	-0.022	-1.022
	130	1.188	-1.747	1.017	-0.024	-1.024
	160	1.041	-1.751	1.020	-0.022	-1.022
	200	1.041	-1.749	1.021	-0.021	-1.021
	250	1.026	-1.744	1.017	-0.026	-1.026
	300	1.033	-1.746	1.019	-0.023	-1.023
	400	1.029	-1.745	0.985	-0.025	-1.025
	500	1.026	-1.757	1.010	-0.032	-1.032
	630	1.031	-1.758	1.012	-0.030	-1.030
	800	1.356	-1.741	1.072	-0.023	-1.023
	1000	1.031	-1.741	0.963	-0.022	-1.022
	1300	1.032	-1.747	0.838	-0.040	-1.024
	1600	1.041	-1.751	0.791	-0.022	-1.022
	2000	1.041	-1.749	0.711	-0.064	-1.021
	2500	1.193	-1.826	0.602	-0.102	-1.026
	3000	1.148	-1.725	0.593	-0.040	-1.025
	4000	100.000	-2.001	1.675	-0.165	-1.039
	5000	100.000	-100.000	2.162	-0.211	-1.058
	6300	100.000	-100.000	2.962	-0.292	-1.071
	8000	100.000	-100.000	0.715	-0.408	-1.318
	10000	100.000	-100.000	1.108	-0.602	-1.063

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
1	1	100.000	-100.000	0.829	0.068	-1.809
	1.3	100.000	-100.000	0.791	0.055	-1.683
	1.6	100.000	-100.000	0.798	0.137	-0.587
	2	100.000	-100.000	0.752	-0.025	-0.348
	2.5	100.000	-100.000	0.751	-0.025	-0.398
	3	100.000	-100.000	0.780	-0.030	-0.557
	4	100.000	-100.000	0.750	-0.022	-0.602
	5	1.848	-1.321	0.746	-0.027	-0.699
	6.3	1.599	-1.002	0.750	-0.021	-0.662
	8	1.272	-1.064	0.958	-0.022	-0.714
	10	0.980	-1.120	0.888	-0.022	-0.761
	13	1.892	-1.029	0.824	-0.024	-0.818
	16	1.823	-1.087	0.749	-0.025	-0.863
	20	0.980	-1.134	0.729	-0.025	-0.865
	25	0.980	-1.134	0.749	-0.025	-0.898
	30	0.914	-1.133	0.731	-0.030	-0.885
	40	1.279	-1.134	0.751	-0.022	-0.776
	50	0.973	-1.137	0.747	-0.027	-0.895
	63	1.266	-1.136	0.750	-0.021	-1.021
	80	0.978	-1.136	0.735	-0.022	-0.773
	100	1.298	-1.134	0.751	-0.022	-1.014
	130	0.980	-1.134	0.739	-0.024	-0.777
	160	0.980	-1.134	0.749	-0.025	-1.025
	200	1.286	-1.134	0.750	-0.025	-0.998
	250	0.980	-1.134	0.749	-0.025	-1.024
	300	1.106	-1.133	0.747	-0.030	-0.891
	400	1.097	-1.294	0.807	-0.022	-1.022
	500	1.287	-1.304	0.744	-0.027	-0.904
	630	0.900	-1.136	0.689	-0.021	-1.021
	800	1.425	-1.300	0.641	-0.022	-0.901
	1000	1.134	-1.300	0.682	-0.048	-0.900
	1300	2.706	-1.302	0.637	-0.024	-0.948
	1600	100.000	-1.636	0.514	-0.025	-1.025
	2000	100.000	-100.000	0.918	-0.025	-1.024
	2500	100.000	-1.303	1.452	-0.025	-1.025
	3000	100.000	-1.307	1.328	-0.046	-0.776
	4000	100.000	-100.000	1.797	-0.206	-1.022
	5000	100.000	-100.000	1.034	-0.243	-1.027
	6300	100.000	-100.000	2.442	-0.226	-0.777
	8000	100.000	-100.000	3.517	-0.292	-1.022
	10000	100.000	-100.000	5.641	-0.301	-1.022

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
2	1	100.000	-100.000	0.707	0.130	-0.762
	1.3	100.000	-100.000	0.690	0.098	-0.665
	1.6	100.000	-100.000	0.680	0.061	-0.779
	2	100.000	-100.000	0.612	-0.024	-0.332
	2.5	100.000	-100.000	0.607	-0.024	-0.502
	3	100.000	-100.000	0.613	-0.023	-0.315
	4	100.000	-100.000	0.669	-0.023	-0.580
	5	100.000	-100.000	0.587	-0.023	-0.411
	6.3	100.000	-100.000	0.630	-0.129	-0.400
	8	100.000	-100.000	0.552	-0.132	-0.452
	10	100.000	-100.000	0.611	-0.095	-0.500
	13	100.000	-100.000	0.669	-0.105	-0.557
	16	100.000	-100.000	0.620	-0.078	-0.602
	20	1.555	-0.754	0.712	-0.127	-0.587
	25	1.933	-0.786	0.613	-0.139	-0.612
	30	2.087	-0.807	0.726	-0.098	-0.631
	40	1.591	-0.913	0.676	-0.114	-0.662
	50	2.143	-0.796	0.773	-0.138	-0.686
	63	1.362	-0.911	0.598	-0.146	-0.774
	80	1.640	-0.831	0.703	-0.146	-0.774
	100	1.643	-0.831	0.608	-0.148	-0.776
	130	2.144	-0.912	0.647	-0.145	-0.773
	160	1.735	-0.887	0.648	-0.149	-0.775
	200	1.256	-0.830	0.581	-0.147	-0.773
	250	1.714	-0.830	0.582	-0.139	-0.773
	300	3.023	-0.913	0.590	-0.138	-0.774
	400	100.000	-0.913	0.557	-0.138	-0.774
	500	2.267	-0.914	0.543	-0.147	-0.775
	630	2.668	-0.913	0.581	-0.140	-0.714
	800	100.000	-0.913	0.640	-0.149	-0.774
	1000	100.000	-0.915	0.576	-0.147	-0.776
	1300	100.000	-0.912	0.859	-0.154	-0.773
	1600	100.000	-100.000	0.934	-0.148	-0.775
	2000	100.000	-100.000	0.511	-0.151	-0.773
	2500	100.000	-0.912	0.884	-0.149	-0.773
	3000	100.000	-100.000	0.715	-0.151	-0.774
	4000	100.000	-100.000	1.056	-0.195	-0.774
	5000	100.000	-100.000	0.793	-0.184	-0.775
	6300	100.000	-100.000	1.398	-0.228	-0.774
	8000	100.000	-100.000	0.739	-0.227	-0.774
	10000	100.000	-100.000	1.671	-0.246	-0.776

Relative LD50 Estimate is $(\text{Log}_{10}(\text{estimated LD50}) - \text{Log}_{10}(\text{True LD50})) / \text{True Sigma}$
The following values are all converted to a relative scale

UCL is the median of the estimated upper confidence bound for a 95% (two-sided) confidence interval

LCL is the median of the estimated lower confidence bound for a 95% (two-sided) confidence interval

97.5%tile is the 97 and a half percentile of the simulated LD50 values

Median is the median of the simulated LD50 values

2.5%tile is the 2 and a half percentile of the simulated LD50 values

Extreme or infinite values appear as 100 or -100

**Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD30**

TrueSigma	TrueLD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
0.125	1	0	0.337	0.129	0.409	0.125
	1.3	0	0.753	0.215	0.024	0.008
	1.6	0	0.957	0.042	0	0.001
	2	0	0.997	0.003	0	0
	2.5	0	0.339	0.661	0	0
	3	0	0.357	0.643	0	0
	4	0	0.383	0.617	0	0
	5	0	0.501	0.499	0	0
	6.3	0	0.515	0.485	0	0
	8	0	0.378	0.622	0	0
	10	0	0.39	0.61	0	0
	13	0	0.367	0.633	0	0
	16	0	0.344	0.656	0	0
	20	0	0.371	0.629	0	0
	25	0	0.37	0.63	0	0
	30	0	0.345	0.655	0	0
	40	0	0.392	0.608	0	0
	50	0	0.337	0.663	0	0
	63	0	0.362	0.638	0	0
	80	0	0.366	0.634	0	0
	100	0	0.365	0.635	0	0
	130	0	0.393	0.607	0	0
	160	0	0.352	0.648	0	0
	200	0	0.38	0.62	0	0
	250	0	0.372	0.628	0	0
	300	0	0.385	0.615	0	0
	400	0	0.397	0.603	0	0
	500	0	0.336	0.664	0	0
	630	0	0.385	0.615	0	0
	800	0	0.394	0.606	0	0
	1000	0	0.395	0.605	0	0
	1300	0	0.371	0.629	0	0
	1600	0	0.362	0.638	0	0
	2000	0	0.39	0.61	0	0
	2500	0	0.347	0.653	0	0
	3000	0	0.35	0.649	0	0.001
	4000	0.12	0.265	0.609	0	0.006
	5000	0.379	0.333	0.141	0	0.147
	6300	0.932	0.027	0.019	0	0.022
	8000	0.999	0.001	0	0	0
	10000	1	0	0	0	0

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Continued)

TrueSigma	TrueLD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
0.25	1	0	0.28	0.264	0.367	0.089
	1.3	0	0.516	0.319	0.104	0.061
	1.6	0	0.619	0.331	0.027	0.023
	2	0	0.784	0.208	0.004	0.004
	2.5	0	0.313	0.687	0	0
	3	0	0.31	0.69	0	0
	4	0	0.279	0.721	0	0
	5	0	0.317	0.683	0	0
	6.3	0	0.373	0.627	0	0
	8	0	0.301	0.699	0	0
	10	0	0.269	0.731	0	0
	13	0	0.306	0.694	0	0
	16	0	0.274	0.726	0	0
	20	0	0.3	0.7	0	0
	25	0	0.301	0.699	0	0
	30	0	0.28	0.72	0	0
	40	0	0.305	0.695	0	0
	50	0	0.274	0.726	0	0
	63	0	0.314	0.686	0	0
	80	0	0.308	0.692	0	0
	100	0	0.304	0.696	0	0
	130	0	0.312	0.688	0	0
	160	0	0.322	0.678	0	0
	200	0	0.279	0.721	0	0
	250	0	0.289	0.711	0	0
	300	0	0.298	0.702	0	0
	400	0	0.305	0.695	0	0
	500	0	0.322	0.678	0	0
	630	0	0.291	0.709	0	0
	800	0	0.286	0.714	0	0
	1000	0	0.331	0.669	0	0
	1300	0	0.289	0.711	0	0
	1600	0.001	0.486	0.513	0	0
	2000	0	0.365	0.634	0	0.001
	2500	0.005	0.357	0.632	0	0.006
	3000	0.024	0.327	0.619	0	0.03
	4000	0.264	0.224	0.502	0	0.01
	5000	0.402	0.384	0.059	0	0.155
	6300	0.714	0.152	0.056	0	0.078
	8000	0.93	0.031	0.012	0	0.027
	10000	0.994	0.002	0.001	0	0.003

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Continued)

TrueSigma	TrueLD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
0.5	1	0	0.329	0.1	0.409	0.162
	1.3	0	0.231	0.551	0.17	0.048
	1.6	0	0.231	0.612	0.109	0.048
	2	0	0.314	0.601	0.053	0.032
	2.5	0	0.374	0.585	0.023	0.018
	3	0	0.406	0.56	0.016	0.018
	4	0	0.179	0.816	0.004	0.001
	5	0	0.177	0.823	0	0
	6.3	0	0.184	0.816	0	0
	8	0	0.217	0.783	0	0
	10	0	0.248	0.752	0	0
	13	0	0.172	0.828	0	0
	16	0	0.161	0.839	0	0
	20	0	0.183	0.817	0	0
	25	0	0.191	0.809	0	0
	30	0	0.174	0.826	0	0
	40	0	0.174	0.826	0	0
	50	0	0.169	0.831	0	0
	63	0	0.165	0.835	0	0
	80	0	0.183	0.817	0	0
	100	0	0.171	0.829	0	0
	130	0	0.184	0.816	0	0
	160	0	0.196	0.804	0	0
	200	0	0.158	0.842	0	0
	250	0	0.163	0.837	0	0
	300	0	0.18	0.82	0	0
	400	0	0.19	0.81	0	0
	500	0	0.181	0.819	0	0
	630	0	0.181	0.819	0	0
	800	0.001	0.193	0.803	0	0.003
	1000	0	0.162	0.835	0	0.003
	1300	0.001	0.166	0.826	0	0.007
	1600	0.008	0.175	0.808	0	0.009
	2000	0.031	0.16	0.805	0	0.004
	2500	0.054	0.313	0.573	0	0.06
	3000	0.086	0.307	0.53	0	0.077
	4000	0.185	0.197	0.498	0	0.12
	5000	0.287	0.14	0.44	0	0.133
	6300	0.599	0.071	0.322	0	0.008
	8000	0.714	0.115	0.089	0	0.082
	10000	0.854	0.05	0.055	0	0.041

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Continued)

TrueSigma	TrueLD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
1	1	0	0.142	0.453	0.317	0.088
	1.3	0	0.17	0.488	0.25	0.092
	1.6	0	0.254	0.463	0.203	0.08
	2	0	0.134	0.73	0.109	0.027
	2.5	0	0.158	0.736	0.089	0.017
	3	0	0.164	0.739	0.079	0.018
	4	0	0.186	0.734	0.054	0.026
	5	0	0.205	0.745	0.033	0.017
	6.3	0	0.131	0.853	0.005	0.011
	8	0	0.157	0.826	0.002	0.015
	10	0	0.16	0.821	0.004	0.015
	13	0	0.162	0.826	0.002	0.01
	16	0	0.177	0.807	0.002	0.014
	20	0	0.143	0.85	0	0.007
	25	0	0.148	0.841	0	0.011
	30	0	0.139	0.85	0	0.011
	40	0	0.137	0.855	0	0.008
	50	0	0.151	0.841	0	0.008
	63	0	0.139	0.854	0	0.007
	80	0	0.132	0.857	0	0.011
	100	0	0.158	0.831	0	0.011
	130	0	0.127	0.857	0	0.016
	160	0	0.137	0.853	0	0.01
	200	0	0.138	0.848	0	0.014
	250	0	0.156	0.835	0	0.009
	300	0	0.153	0.826	0	0.021
	400	0.001	0.145	0.836	0	0.018
	500	0.005	0.153	0.813	0	0.029
	630	0.001	0.139	0.839	0	0.021
	800	0.003	0.13	0.828	0	0.039
	1000	0.031	0.143	0.797	0	0.029
	1300	0.025	0.18	0.73	0	0.065
	1600	0.042	0.154	0.74	0	0.064
	2000	0.081	0.152	0.691	0	0.076
	2500	0.097	0.157	0.655	0	0.091
	3000	0.118	0.14	0.664	0	0.078
	4000	0.248	0.198	0.419	0	0.135
	5000	0.275	0.154	0.458	0	0.113
	6300	0.352	0.132	0.407	0	0.109
	8000	0.403	0.106	0.364	0	0.127
	10000	0.643	0.056	0.294	0	0.007

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Continued)

TrueSigma	TrueLD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
2	1	0	0.117	0.528	0.299	0.056
	1.3	0	0.133	0.562	0.246	0.059
	1.6	0	0.176	0.512	0.23	0.082
	2	0	0.093	0.696	0.167	0.044
	2.5	0	0.134	0.681	0.153	0.032
	3	0	0.134	0.685	0.142	0.039
	4	0	0.144	0.685	0.117	0.054
	5	0	0.158	0.693	0.093	0.056
	6.3	0	0.114	0.743	0.065	0.078
	8	0	0.114	0.72	0.092	0.074
	10	0	0.121	0.747	0.067	0.065
	13	0	0.158	0.724	0.043	0.075
	16	0	0.161	0.679	0.04	0.12
	20	0	0.137	0.756	0.011	0.096
	25	0	0.121	0.757	0.011	0.111
	30	0	0.127	0.753	0.008	0.112
	40	0	0.131	0.737	0.003	0.129
	50	0.001	0.144	0.729	0.002	0.124
	63	0	0.137	0.753	0.002	0.108
	80	0	0.143	0.743	0.001	0.113
	100	0	0.128	0.756	0	0.116
	130	0.005	0.123	0.767	0	0.105
	160	0	0.123	0.743	0.001	0.133
	200	0.002	0.118	0.774	0	0.106
	250	0.002	0.151	0.72	0	0.127
	300	0.003	0.12	0.742	0	0.135
	400	0.016	0.12	0.735	0.001	0.128
	500	0.018	0.143	0.71	0	0.129
	630	0.014	0.137	0.723	0	0.126
	800	0.024	0.127	0.726	0	0.123
	1000	0.029	0.12	0.696	0	0.155
	1300	0.062	0.149	0.661	0	0.128
	1600	0.069	0.165	0.644	0	0.122
	2000	0.074	0.13	0.648	0	0.148
	2500	0.092	0.136	0.625	0	0.147
	3000	0.119	0.128	0.616	0	0.137
	4000	0.181	0.156	0.525	0	0.138
	5000	0.22	0.139	0.509	0	0.132
	6300	0.245	0.123	0.519	0	0.113
	8000	0.274	0.113	0.487	0	0.126
	10000	0.28	0.103	0.48	0	0.137

APPENDIX C

Simulation Results Simulation Set 2

Starting Dose = LD80

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Percent of Simulations by Case as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD80

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
0.125	1	0	0.137	0	0.74	0.123
	1.3	0	0.534	0	0.458	0.008
	1.6	0.064	0.457	0.412	0.067	0
	2	0.011	0.505	0.478	0.006	0
	2.5	0.001	0.523	0.476	0	0
	3	0	0.529	0.471	0	0
	4	0	0.511	0.489	0	0
	5	0	0.519	0.481	0	0
	6.3	0.002	0.489	0.509	0	0
	8	0.001	0.516	0.483	0	0
	10	0.001	0.529	0.47	0	0
	13	0	0.501	0.499	0	0
	16	0	0.527	0.473	0	0
	20	0.002	0.49	0.508	0	0
	25	0	0.518	0.482	0	0
	30	0	0.531	0.469	0	0
	40	0.002	0.516	0.482	0	0
	50	0	0.517	0.483	0	0
	63	0	0.504	0.496	0	0
	80	0.002	0.491	0.507	0	0
	100	0	0.527	0.473	0	0
	130	0	0.5	0.5	0	0
	160	0	0.527	0.473	0	0
	200	0	0.507	0.493	0	0
	250	0.001	0.521	0.478	0	0
	300	0.001	0.511	0.488	0	0
	400	0	0.531	0.469	0	0
	500	0	0.518	0.482	0	0
	630	0	0.49	0.51	0	0
	800	0.001	0.502	0.497	0	0
	1000	0	0.543	0.457	0	0
	1300	0	0.525	0.475	0	0
	1600	0.001	0.553	0.446	0	0
	2000	0.001	0.472	0.527	0	0
	2500	0.001	0.546	0.453	0	0
	3000	0	0.889	0.001	0.11	0
	4000	0.002	0.463	0.004	0.524	0.007
	5000	0.001	0.123	0	0.74	0.136
	6300	0	0.012	0	0.493	0.495
	8000	0	0	0	0.146	0.854
	10000	0	0	0	0.024	0.976

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
0.25	1	0.003	0.135	0	0.737	0.125
	1.3	0.305	0.171	0.238	0.257	0.029
	1.6	0.238	0.251	0.304	0.197	0.01
	2	0.12	0.362	0.4	0.117	0.001
	2.5	0.092	0.457	0.389	0.062	0
	3	0.049	0.47	0.449	0.032	0
	4	0.092	0.346	0.562	0	0
	5	0.092	0.381	0.527	0	0
	6.3	0.071	0.372	0.557	0	0
	8	0.118	0.359	0.523	0	0
	10	0.107	0.359	0.534	0	0
	13	0.076	0.368	0.556	0	0
	16	0.106	0.357	0.537	0	0
	20	0.095	0.346	0.559	0	0
	25	0.072	0.355	0.573	0	0
	30	0.082	0.38	0.538	0	0
	40	0.083	0.347	0.57	0	0
	50	0.088	0.345	0.567	0	0
	63	0.072	0.373	0.555	0	0
	80	0.087	0.382	0.531	0	0
	100	0.1	0.356	0.544	0	0
	130	0.08	0.344	0.576	0	0
	160	0.097	0.311	0.592	0	0
	200	0.085	0.349	0.566	0	0
	250	0.074	0.356	0.57	0	0
	300	0.08	0.359	0.561	0	0
	400	0.097	0.36	0.543	0	0
	500	0.105	0.359	0.536	0	0
	630	0.077	0.379	0.544	0	0
	800	0.126	0.352	0.522	0	0
	1000	0.082	0.397	0.521	0	0
	1300	0.093	0.363	0.544	0	0
	1600	0.087	0.408	0.505	0	0
	2000	0.123	0.348	0.527	0.001	0.001
	2500	0.09	0.471	0.222	0.216	0.001
	3000	0.117	0.374	0.195	0.299	0.015
	4000	0.176	0.177	0.105	0.494	0.048
	5000	0.177	0.101	0.049	0.525	0.148
	6300	0.118	0.025	0.021	0.547	0.289
	8000	0	0.008	0	0.5	0.492
	10000	0	0.003	0	0.283	0.714

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
0.5	1	0.346	0.082	0.149	0.295	0.128
	1.3	0.345	0.107	0.189	0.28	0.079
	1.6	0.38	0.173	0.157	0.253	0.037
	2	0.3	0.232	0.216	0.233	0.019
	2.5	0.41	0.104	0.468	0.013	0.005
	3	0.397	0.153	0.437	0.01	0.003
	4	0.326	0.141	0.521	0.01	0.002
	5	0.349	0.161	0.477	0.012	0.001
	6.3	0.308	0.162	0.525	0.005	0
	8	0.342	0.138	0.52	0	0
	10	0.323	0.143	0.534	0	0
	13	0.338	0.158	0.504	0	0
	16	0.303	0.139	0.558	0	0
	20	0.344	0.149	0.507	0	0
	25	0.324	0.165	0.511	0	0
	30	0.319	0.133	0.548	0	0
	40	0.305	0.141	0.554	0	0
	50	0.321	0.144	0.535	0	0
	63	0.305	0.14	0.555	0	0
	80	0.308	0.136	0.556	0	0
	100	0.314	0.147	0.539	0	0
	130	0.318	0.131	0.551	0	0
	160	0.32	0.16	0.52	0	0
	200	0.331	0.141	0.528	0	0
	250	0.334	0.142	0.524	0	0
	300	0.366	0.143	0.491	0	0
	400	0.307	0.154	0.539	0	0
	500	0.411	0.139	0.45	0	0
	630	0.317	0.166	0.517	0	0
	800	0.334	0.136	0.528	0.001	0.001
	1000	0.326	0.137	0.536	0	0.001
	1300	0.337	0.143	0.514	0	0.006
	1600	0.315	0.17	0.378	0.114	0.023
	2000	0.346	0.128	0.351	0.138	0.037
	2500	0.421	0.125	0.269	0.139	0.046
	3000	0.4	0.081	0.284	0.166	0.069
	4000	0.409	0.063	0.17	0.254	0.104
	5000	0.185	0.086	0.039	0.533	0.157
	6300	0.174	0.057	0.033	0.521	0.215
	8000	0.134	0.028	0.029	0.519	0.29
	10000	0.101	0.017	0.008	0.45	0.424

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
1	1	0.539	0.054	0.17	0.116	0.121
	1.3	0.547	0.062	0.2	0.103	0.088
	1.6	0.547	0.079	0.194	0.11	0.07
	2	0.553	0.081	0.228	0.072	0.066
	2.5	0.56	0.078	0.226	0.096	0.04
	3	0.611	0.075	0.284	0.013	0.017
	4	0.598	0.087	0.297	0.011	0.007
	5	0.573	0.081	0.327	0.012	0.007
	6.3	0.566	0.087	0.328	0.014	0.005
	8	0.585	0.093	0.311	0.009	0.002
	10	0.565	0.078	0.357	0	0
	13	0.575	0.094	0.331	0	0
	16	0.563	0.069	0.366	0.002	0
	20	0.581	0.091	0.328	0	0
	25	0.587	0.099	0.314	0	0
	30	0.554	0.089	0.357	0	0
	40	0.553	0.099	0.348	0	0
	50	0.575	0.089	0.335	0	0.001
	63	0.583	0.075	0.342	0	0
	80	0.558	0.091	0.351	0	0
	100	0.552	0.082	0.366	0	0
	130	0.609	0.085	0.306	0	0
	160	0.567	0.086	0.345	0	0.002
	200	0.546	0.097	0.356	0	0.001
	250	0.584	0.094	0.319	0.001	0.002
	300	0.556	0.078	0.362	0	0.004
	400	0.553	0.103	0.339	0	0.005
	500	0.577	0.073	0.337	0.003	0.01
	630	0.585	0.078	0.25	0.057	0.03
	800	0.553	0.075	0.267	0.055	0.05
	1000	0.584	0.071	0.235	0.055	0.055
	1300	0.546	0.067	0.243	0.075	0.069
	1600	0.577	0.04	0.224	0.107	0.052
	2000	0.476	0.07	0.199	0.151	0.104
	2500	0.467	0.066	0.175	0.184	0.108
	3000	0.494	0.052	0.143	0.185	0.126
	4000	0.451	0.048	0.137	0.218	0.146
	5000	0.429	0.041	0.123	0.249	0.158
	6300	0.298	0.05	0.062	0.367	0.223
	8000	0.295	0.021	0.07	0.36	0.254
	10000	0.272	0.035	0.058	0.359	0.276

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
2	1	0.596	0.051	0.157	0.087	0.109
	1.3	0.667	0.053	0.195	0.026	0.059
	1.6	0.655	0.062	0.206	0.03	0.047
	2	0.658	0.062	0.197	0.034	0.049
	2.5	0.663	0.063	0.197	0.027	0.05
	3	0.668	0.053	0.208	0.033	0.038
	4	0.703	0.066	0.209	0.006	0.016
	5	0.695	0.048	0.231	0.006	0.02
	6.3	0.707	0.053	0.216	0.007	0.017
	8	0.691	0.069	0.216	0.011	0.013
	10	0.674	0.069	0.238	0.005	0.014
	13	0.717	0.057	0.217	0	0.009
	16	0.688	0.073	0.233	0.003	0.003
	20	0.702	0.062	0.223	0.003	0.01
	25	0.727	0.069	0.195	0.002	0.007
	30	0.725	0.064	0.203	0.001	0.007
	40	0.687	0.074	0.231	0.001	0.007
	50	0.69	0.07	0.229	0	0.011
	63	0.678	0.063	0.247	0.001	0.011
	80	0.687	0.061	0.2	0.011	0.041
	100	0.694	0.06	0.173	0.032	0.041
	130	0.695	0.062	0.16	0.04	0.043
	160	0.696	0.044	0.17	0.036	0.054
	200	0.716	0.037	0.142	0.059	0.046
	250	0.652	0.062	0.177	0.036	0.073
	300	0.604	0.049	0.188	0.059	0.1
	400	0.637	0.05	0.156	0.062	0.095
	500	0.636	0.055	0.16	0.064	0.085
	630	0.605	0.066	0.149	0.091	0.089
	800	0.587	0.055	0.147	0.085	0.126
	1000	0.563	0.049	0.141	0.119	0.128
	1300	0.562	0.048	0.153	0.11	0.127
	1600	0.535	0.049	0.143	0.147	0.126
	2000	0.544	0.051	0.119	0.173	0.113
	2500	0.56	0.049	0.098	0.138	0.155
	3000	0.445	0.055	0.121	0.194	0.185
	4000	0.456	0.05	0.115	0.202	0.177
	5000	0.463	0.04	0.092	0.198	0.207
	6300	0.42	0.034	0.084	0.276	0.186
	8000	0.393	0.043	0.055	0.262	0.247
	10000	0.37	0.036	0.065	0.297	0.232

**Predicted Classification as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD80**

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
0.125	1	1.000	0.000	0.000	0.000
	1.3	1.000	0.000	0.000	0.000
	1.6	1.000	0.000	0.000	0.000
	2	1.000	0.000	0.000	0.000
	2.5	0.993	0.007	0.000	0.000
	3	0.994	0.006	0.000	0.000
	4	0.504	0.496	0.000	0.000
	5	0.513	0.487	0.000	0.000
	6.3	0.515	0.000	0.485	0.000
	8	1.000	0.000	0.000	0.000
	10	0.998	0.000	0.002	0.000
	13	1.000	0.000	0.000	0.000
	16	1.000	0.000	0.000	0.000
	20	1.000	0.000	0.000	0.000
	25	0.995	0.005	0.000	0.000
	30	0.996	0.004	0.000	0.000
	40	0.511	0.489	0.000	0.000
	50	0.507	0.493	0.000	0.000
	63	0.504	0.000	0.496	0.000
	80	0.998	0.000	0.002	0.000
	100	0.997	0.000	0.003	0.000
	130	1.000	0.000	0.000	0.000
	160	0.992	0.008	0.000	0.000
	200	0.994	0.006	0.000	0.000
	250	0.517	0.483	0.000	0.000
	300	0.506	0.494	0.000	0.000
	400	0.471	0.000	0.529	0.000
	500	0.996	0.000	0.004	0.000
	630	0.997	0.000	0.003	0.000
	800	1.000	0.000	0.000	0.000
	1000	0.988	0.012	0.000	0.000
	1300	0.988	0.012	0.000	0.000
	1600	0.549	0.451	0.000	0.000
	2000	0.468	0.532	0.000	0.000
	2500	0.457	0.000	0.543	0.000
	3000	0.999	0.000	0.001	0.000
	4000	0.996	0.000	0.004	0.000
	5000	1.000	0.000	0.000	0.000
	6300	1.000	0.000	0.000	0.000
	8000	1.000	0.000	0.000	0.000
	10000	1.000	0.000	0.000	0.000

Predicted Classification as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
0.25	1	1.000	0.000	0.000	0.000
	1.3	1.000	0.000	0.000	0.000
	1.6	1.000	0.000	0.000	0.000
	2	0.986	0.014	0.000	0.000
	2.5	0.991	0.009	0.000	0.000
	3	0.987	0.013	0.000	0.000
	4	0.606	0.394	0.000	0.000
	5	0.625	0.375	0.000	0.000
	6.3	0.818	0.000	0.182	0.000
	8	0.829	0.000	0.171	0.000
	10	0.998	0.000	0.002	0.000
	13	0.998	0.000	0.002	0.000
	16	0.999	0.000	0.001	0.000
	20	0.989	0.011	0.000	0.000
	25	0.988	0.012	0.000	0.000
	30	0.991	0.009	0.000	0.000
	40	0.605	0.395	0.000	0.000
	50	0.595	0.405	0.000	0.000
	63	0.796	0.000	0.204	0.000
	80	0.828	0.000	0.172	0.000
	100	0.998	0.000	0.002	0.000
	130	0.994	0.004	0.002	0.000
	160	0.993	0.005	0.002	0.000
	200	0.599	0.401	0.000	0.000
	250	0.600	0.400	0.000	0.000
	300	0.604	0.396	0.000	0.000
	400	0.826	0.000	0.174	0.000
	500	0.836	0.000	0.164	0.000
	630	0.998	0.000	0.002	0.000
	800	0.994	0.005	0.001	0.000
	1000	0.981	0.016	0.003	0.000
	1300	0.613	0.387	0.000	0.000
	1600	0.653	0.347	0.000	0.000
	2000	0.585	0.415	0.000	0.000
	2500	0.767	0.000	0.232	0.001
	3000	0.785	0.000	0.205	0.010
	4000	0.983	0.000	0.000	0.017
	5000	0.983	0.000	0.003	0.014
	6300	0.987	0.000	0.000	0.013
	8000	1.000	0.000	0.000	0.000
	10000	1.000	0.000	0.000	0.000

Predicted Classification as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
0.5	1	0.998	0.000	0.000	0.002
	1.3	0.987	0.010	0.000	0.003
	1.6	0.977	0.021	0.000	0.002
	2	0.763	0.237	0.000	0.000
	2.5	0.789	0.210	0.000	0.001
	3	0.811	0.189	0.000	0.000
	4	0.592	0.408	0.000	0.000
	5	0.514	0.486	0.000	0.000
	6.3	0.843	0.001	0.156	0.000
	8	0.826	0.001	0.173	0.000
	10	0.862	0.003	0.135	0.000
	13	0.938	0.018	0.044	0.000
	16	0.945	0.011	0.044	0.000
	20	0.809	0.191	0.000	0.000
	25	0.799	0.201	0.000	0.000
	30	0.778	0.222	0.000	0.000
	40	0.638	0.362	0.000	0.000
	50	0.560	0.440	0.000	0.000
	63	0.823	0.002	0.175	0.000
	80	0.840	0.011	0.149	0.000
	100	0.849	0.019	0.132	0.000
	130	0.758	0.190	0.052	0.000
	160	0.754	0.205	0.041	0.000
	200	0.809	0.189	0.002	0.000
	250	0.601	0.395	0.004	0.000
	300	0.560	0.440	0.000	0.000
	400	0.824	0.001	0.175	0.000
	500	0.828	0.003	0.169	0.000
	630	0.847	0.016	0.137	0.000
	800	0.765	0.189	0.045	0.001
	1000	0.777	0.200	0.022	0.001
	1300	0.771	0.228	0.001	0.000
	1600	0.636	0.345	0.000	0.019
	2000	0.587	0.384	0.002	0.027
	2500	0.763	0.000	0.207	0.030
	3000	0.823	0.000	0.140	0.037
	4000	0.879	0.000	0.104	0.017
	5000	0.915	0.000	0.062	0.023
	6300	0.949	0.000	0.041	0.010
	8000	0.980	0.000	0.005	0.015
	10000	0.986	0.000	0.000	0.014

Predicted Classification as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
1	1	0.879	0.116	0.000	0.005
	1.3	0.837	0.162	0.000	0.001
	1.6	0.803	0.196	0.000	0.001
	2	0.770	0.228	0.000	0.002
	2.5	0.607	0.391	0.000	0.002
	3	0.587	0.411	0.000	0.002
	4	0.582	0.417	0.000	0.001
	5	0.438	0.562	0.000	0.000
	6.3	0.559	0.021	0.420	0.000
	8	0.676	0.113	0.211	0.000
	10	0.746	0.104	0.150	0.000
	13	0.687	0.196	0.117	0.000
	16	0.735	0.189	0.076	0.000
	20	0.729	0.202	0.069	0.000
	25	0.602	0.379	0.019	0.000
	30	0.599	0.378	0.023	0.000
	40	0.519	0.467	0.014	0.000
	50	0.396	0.598	0.006	0.000
	63	0.528	0.113	0.359	0.000
	80	0.589	0.170	0.241	0.000
	100	0.629	0.186	0.185	0.000
	130	0.664	0.210	0.126	0.000
	160	0.553	0.363	0.084	0.000
	200	0.506	0.428	0.065	0.001
	250	0.460	0.498	0.040	0.002
	300	0.423	0.549	0.025	0.003
	400	0.504	0.106	0.385	0.005
	500	0.687	0.107	0.206	0.000
	630	0.673	0.152	0.152	0.023
	800	0.676	0.188	0.096	0.040
	1000	0.538	0.327	0.090	0.045
	1300	0.499	0.416	0.045	0.040
	1600	0.464	0.472	0.032	0.032
	2000	0.471	0.463	0.010	0.056
	2500	0.530	0.000	0.423	0.047
	3000	0.711	0.000	0.234	0.055
	4000	0.744	0.000	0.193	0.063
	5000	0.809	0.000	0.159	0.032
	6300	0.809	0.000	0.129	0.062
	8000	0.847	0.000	0.106	0.047
	10000	0.922	0.000	0.038	0.040

Predicted Classification as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
2	1	0.717	0.280	0.000	0.003
	1.3	0.625	0.375	0.000	0.000
	1.6	0.586	0.414	0.000	0.000
	2	0.566	0.434	0.000	0.000
	2.5	0.492	0.507	0.000	0.001
	3	0.487	0.513	0.000	0.000
	4	0.396	0.604	0.000	0.000
	5	0.328	0.672	0.000	0.000
	6.3	0.472	0.241	0.285	0.002
	8	0.470	0.248	0.280	0.002
	10	0.453	0.298	0.247	0.002
	13	0.450	0.367	0.183	0.000
	16	0.414	0.430	0.155	0.001
	20	0.395	0.476	0.125	0.004
	25	0.412	0.470	0.116	0.002
	30	0.376	0.510	0.112	0.002
	40	0.324	0.597	0.072	0.007
	50	0.304	0.626	0.059	0.011
	63	0.394	0.327	0.274	0.005
	80	0.380	0.364	0.228	0.028
	100	0.324	0.395	0.248	0.033
	130	0.332	0.469	0.163	0.036
	160	0.353	0.478	0.132	0.037
	200	0.326	0.514	0.128	0.032
	250	0.299	0.552	0.101	0.048
	300	0.241	0.608	0.081	0.070
	400	0.438	0.240	0.257	0.065
	500	0.397	0.329	0.214	0.060
	630	0.376	0.371	0.202	0.051
	800	0.450	0.305	0.164	0.081
	1000	0.425	0.352	0.154	0.069
	1300	0.424	0.416	0.093	0.067
	1600	0.324	0.518	0.094	0.064
	2000	0.307	0.574	0.068	0.051
	2500	0.483	0.000	0.447	0.070
	3000	0.514	0.000	0.395	0.091
	4000	0.606	0.000	0.322	0.072
	5000	0.697	0.000	0.226	0.077
	6300	0.788	0.000	0.156	0.056
	8000	0.710	0.000	0.217	0.073
	10000	0.730	0.000	0.206	0.064

The cutoff points for the harmonized classification are 5, 50, 300, and 2000

**Number of Animals as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD80**

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
0.125	1	8.5	3	15	5.6	3	11
	1.3	7.3	3	15	3.8	3	11
	1.6	6.3	6	14	3.2	3	8
	2	6.0	6	11	3.0	3	6
	2.5	6.0	6	11	3.0	3	6
	3	6.9	6	8	3.5	3	4
	4	7.0	6	8	3.5	3	4
	5	6.0	6	8	3.0	3	4
	6.3	6.0	6	8	3.0	3	4
	8	6.0	6	8	3.0	3	4
	10	6.0	6	9	3.0	3	5
	13	6.0	6	9	3.0	3	5
	16	6.0	6	8	3.0	3	4
	20	6.0	6	8	3.0	3	4
	25	6.0	6	6	3.0	3	3
	30	6.0	6	8	3.0	3	4
	40	6.0	6	8	3.0	3	4
	50	6.0	6	6	3.0	3	3
	63	6.0	6	6	3.0	3	3
	80	6.0	6	8	3.0	3	4
	100	6.0	6	8	3.0	3	4
	130	6.0	6	8	3.0	3	4
	160	6.0	6	8	3.0	3	4
	200	6.0	6	8	3.0	3	4
	250	6.0	6	8	3.0	3	4
	300	6.0	6	8	3.0	3	4
	400	6.0	6	8	3.0	3	4
	500	6.0	6	8	3.0	3	4
	630	6.0	6	6	3.0	3	3
	800	6.0	6	6	3.0	3	3
	1000	6.9	6	8	3.5	3	4
	1300	6.0	6	6	3.0	3	3
	1600	6.0	6	8	3.0	3	4
	2000	6.0	6	8	3.0	3	4
	2500	6.0	6	8	3.0	3	4
	3000	6.2	6	12	3.1	3	5
	4000	7.0	3	15	3.3	0	6
	5000	8.0	3	15	2.8	0	6
	6300	5.4	3	15	0.9	0	6
	8000	3.3	3	11	0.2	0	3
	10000	3.1	3	7	0.0	0	1

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
0.25	1	8.8	3	15	5.7	3	11
	1.3	8.3	4	15	4.8	3	11
	1.6	7.7	4	15	4.2	3	11
	2	6.8	6	15	3.5	3	10
	2.5	7.3	6	15	3.7	3	10
	3	7.1	6	12	3.6	3	7
	4	6.5	6	11	3.3	3	6
	5	6.5	6	11	3.2	3	6
	6.3	6.4	6	11	3.2	3	6
	8	6.7	6	11	3.4	3	6
	10	6.7	6	11	3.4	3	6
	13	6.4	6	11	3.2	3	6
	16	6.4	6	11	3.2	3	6
	20	6.5	6	11	3.3	3	6
	25	6.4	6	11	3.2	3	6
	30	6.4	6	11	3.2	3	6
	40	6.4	6	10	3.2	3	5
	50	6.4	6	11	3.2	3	6
	63	6.4	6	11	3.2	3	6
	80	6.4	6	11	3.2	3	6
	100	6.4	6	11	3.2	3	6
	130	6.4	6	11	3.2	3	6
	160	6.5	6	11	3.2	3	6
	200	6.4	6	10	3.2	3	5
	250	6.4	6	10	3.2	3	5
	300	6.5	6	11	3.2	3	6
	400	6.4	6	11	3.2	3	6
	500	6.4	6	10	3.2	3	5
	630	6.4	6	11	3.2	3	6
	800	7.3	6	11	3.7	3	6
	1000	6.4	6	11	3.2	3	6
	1300	6.5	6	11	3.3	3	6
	1600	6.5	6	11	3.2	3	6
	2000	6.5	3	10	3.3	0	5
	2500	7.1	6	15	3.5	2	7
	3000	7.1	3	15	3.4	0	6
	4000	7.6	3	15	3.3	0	7
	5000	7.6	3	15	2.9	0	6
	6300	5.6	3	15	1.6	0	6
	8000	5.5	3	15	1.0	0	5
	10000	4.2	3	15	0.4	0	4

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
0.5	1	8.9	4	15	5.7	3	11
	1.3	8.9	4	15	5.4	3	11
	1.6	9.3	4	15	5.4	3	11
	2	8.9	4	15	5.0	3	11
	2.5	8.3	5	15	4.5	3	10
	3	8.2	5	15	4.4	3	10
	4	7.9	6	15	4.2	3	10
	5	8.2	5	15	4.3	3	10
	6.3	8.1	6	15	4.3	3	8
	8	7.8	6	15	4.1	3	8
	10	7.8	6	15	4.0	3	8
	13	7.8	6	15	4.1	3	8
	16	7.8	6	15	4.1	3	9
	20	7.8	6	13	4.1	3	7
	25	7.6	6	15	4.0	3	8
	30	7.7	6	13	4.0	3	7
	40	7.8	6	13	4.1	3	7
	50	7.8	6	15	4.1	3	8
	63	7.6	6	13	4.0	3	7
	80	7.8	6	15	4.0	3	8
	100	7.7	6	15	4.0	3	8
	130	7.8	6	13	4.1	3	7
	160	7.7	6	15	4.0	3	8
	200	7.9	6	15	4.1	3	8
	250	7.8	6	13	4.1	3	7
	300	7.8	6	15	4.1	3	8
	400	7.6	6	13	4.0	3	7
	500	8.4	6	15	4.4	3	8
	630	7.7	6	15	4.0	3	8
	800	7.8	6	13	4.1	3	7
	1000	7.9	6	15	4.1	3	7
	1300	7.8	3	15	4.0	0	8
	1600	8.2	3	15	4.3	0	8
	2000	7.9	3	15	4.0	0	9
	2500	7.9	3	15	4.0	0	8
	3000	7.7	3	15	3.7	0	8
	4000	6.9	3	15	3.1	0	7
	5000	8.0	3	15	3.0	0	7
	6300	7.7	3	15	2.5	0	6
	8000	7.1	3	15	2.0	0	6
	10000	6.1	3	15	1.4	0	6

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
1	1	9.8	5	15	6.2	3	12
	1.3	9.7	5	15	6.1	3	12
	1.6	9.7	5	15	5.9	3	11
	2	9.8	5	15	5.9	3	12
	2.5	9.9	5	15	5.9	3	11
	3	9.9	6	15	5.7	3	11
	4	9.8	6	15	5.6	3	11
	5	9.7	6	15	5.5	3	11
	6.3	9.6	6	15	5.4	3	11
	8	9.5	6	15	5.3	3	11
	10	9.5	6	15	5.3	3	11
	13	9.5	6	15	5.3	3	10
	16	9.6	6	15	5.3	3	10
	20	9.6	6	15	5.3	3	10
	25	9.6	6	15	5.3	3	10
	30	9.6	6	15	5.3	3	10
	40	9.5	6	15	5.2	3	10
	50	9.6	6	15	5.3	3	11
	63	9.7	6	15	5.3	3	10
	80	9.6	6	15	5.3	3	10
	100	9.6	6	15	5.3	3	10
	130	9.7	6	15	5.4	3	10
	160	9.6	4	15	5.3	0	10
	200	9.6	6	15	5.3	3	10
	250	9.6	6	15	5.3	3	10
	300	9.6	4	15	5.3	0	10
	400	9.5	6	15	5.3	3	10
	500	9.5	3	15	5.2	0	10
	630	9.4	3	15	5.1	0	10
	800	9.2	3	15	5.0	0	10
	1000	9.1	3	15	4.9	0	10
	1300	8.7	3	15	4.6	0	10
	1600	8.5	3	15	4.5	0	10
	2000	8.5	3	15	4.1	0	8
	2500	8.3	3	15	3.9	0	8
	3000	8.0	3	15	3.7	0	9
	4000	7.8	3	15	3.5	0	8
	5000	6.9	3	15	3.0	0	9
	6300	8.0	3	15	2.9	0	7
	8000	7.6	3	15	2.6	0	7
	10000	7.2	3	15	2.4	0	7

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
2	1	10.9	6	15	7.1	3	12
	1.3	11.3	6	15	7.2	3	12
	1.6	11.2	6	15	7.0	3	12
	2	11.3	6	15	7.2	3	13
	2.5	11.2	6	15	7.0	3	12
	3	11.3	6	15	7.1	3	12
	4	11.5	6	15	7.1	3	12
	5	11.5	6	15	7.0	3	12
	6.3	11.5	6	15	7.0	3	12
	8	11.5	6	15	7.0	3	13
	10	11.4	6	15	6.9	3	12
	13	11.6	6	15	7.0	3	12
	16	11.4	6	15	6.9	3	12
	20	11.4	6	15	6.9	3	12
	25	11.8	6	15	7.2	3	12
	30	11.5	4	15	7.0	0	12
	40	11.4	6	15	6.9	3	12
	50	11.5	6	15	7.0	3	12
	63	11.3	3	15	6.8	0	12
	80	11.2	3	15	6.6	0	11
	100	11.2	3	15	6.6	0	11
	130	11.0	3	15	6.6	0	11
	160	10.9	3	15	6.5	0	11
	200	10.8	3	15	6.4	0	12
	250	10.3	3	15	5.7	0	11
	300	9.9	3	15	5.5	0	12
	400	9.7	3	15	5.3	0	12
	500	9.5	3	15	5.2	0	11
	630	9.1	3	15	5.0	0	11
	800	9.3	3	15	4.8	0	11
	1000	9.0	3	15	4.6	0	11
	1300	8.7	3	15	4.4	0	10
	1600	8.6	3	15	4.3	0	10
	2000	8.2	3	15	4.1	0	10
	2500	8.9	3	15	4.2	0	10
	3000	8.3	3	15	3.8	0	11
	4000	8.3	3	15	3.7	0	10
	5000	8.0	3	15	3.5	0	10
	6300	7.0	3	15	3.0	0	10
	8000	8.2	3	15	3.2	0	10
	10000	8.1	3	15	3.1	0	8

95% CI Coverage as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD80

True Sigma	True LD50	(-- Yes	(--- Yes	(---) Yes	---- Yes	(---) No	(--- No	(-- No	Coverage
0.125	1	0.555	0.000	0.156	0.288	0.000	0.000	0.000	1.000
	1.3	0.871	0.000	0.003	0.126	0.000	0.000	0.000	1.000
	1.6	0.925	0.000	0.000	0.059	0.000	0.000	0.016	0.984
	2	0.977	0.000	0.000	0.008	0.000	0.000	0.015	0.985
	2.5	0.993	0.000	0.000	0.000	0.000	0.000	0.007	0.993
	3	0.994	0.000	0.000	0.000	0.000	0.000	0.006	0.994
	4	0.993	0.000	0.000	0.000	0.000	0.000	0.007	0.993
	5	0.993	0.000	0.000	0.000	0.000	0.000	0.007	0.993
	6.3	0.990	0.000	0.000	0.002	0.000	0.000	0.008	0.992
	8	0.993	0.000	0.000	0.001	0.000	0.000	0.006	0.994
	10	0.993	0.000	0.000	0.001	0.000	0.000	0.006	0.994
	13	0.991	0.000	0.000	0.000	0.000	0.000	0.009	0.991
	16	0.995	0.000	0.000	0.000	0.000	0.000	0.005	0.995
	20	0.989	0.000	0.000	0.002	0.000	0.000	0.009	0.991
	25	0.995	0.000	0.000	0.000	0.000	0.000	0.005	0.995
	30	0.996	0.000	0.000	0.000	0.000	0.000	0.004	0.996
	40	0.988	0.000	0.000	0.002	0.000	0.000	0.010	0.990
	50	0.990	0.000	0.000	0.000	0.000	0.000	0.010	0.990
	63	0.992	0.000	0.000	0.000	0.000	0.000	0.008	0.992
	80	0.987	0.000	0.000	0.002	0.000	0.000	0.011	0.989
	100	0.990	0.000	0.000	0.000	0.000	0.000	0.010	0.990
	130	0.992	0.000	0.000	0.000	0.000	0.000	0.008	0.992
	160	0.992	0.000	0.000	0.000	0.000	0.000	0.008	0.992
	200	0.994	0.000	0.000	0.000	0.000	0.000	0.006	0.994
	250	0.992	0.000	0.000	0.001	0.000	0.000	0.007	0.993
	300	0.992	0.000	0.000	0.001	0.000	0.000	0.007	0.993
	400	0.997	0.000	0.000	0.000	0.000	0.000	0.003	0.997
	500	0.996	0.000	0.000	0.000	0.000	0.000	0.004	0.996
	630	0.993	0.000	0.000	0.000	0.000	0.000	0.007	0.993
	800	0.991	0.000	0.000	0.001	0.000	0.000	0.008	0.992
	1000	0.988	0.000	0.000	0.000	0.000	0.000	0.012	0.988
	1300	0.988	0.000	0.000	0.000	0.000	0.000	0.012	0.988
	1600	0.994	0.000	0.000	0.001	0.000	0.000	0.005	0.995
	2000	0.993	0.000	0.000	0.001	0.000	0.000	0.006	0.994
	2500	0.995	0.000	0.000	0.001	0.000	0.000	0.004	0.996
	3000	0.961	0.000	0.000	0.039	0.000	0.000	0.000	1.000
	4000	0.629	0.006	0.000	0.365	0.000	0.000	0.000	1.000
	5000	0.400	0.168	0.000	0.432	0.000	0.000	0.000	1.000
	6300	0.044	0.362	0.000	0.570	0.000	0.000	0.024	0.976
	8000	0.000	0.027	0.000	0.973	0.000	0.000	0.000	1.000
	10000	0.000	0.375	0.000	0.625	0.000	0.000	0.000	1.000

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(-- Yes	(--- Yes	(---) Yes	---- Yes	(---) No	(--- No	(-- No	Coverage
0.25	1	0.539	0.000	0.190	0.271	0.000	0.000	0.000	1.000
	1.3	0.660	0.000	0.047	0.266	0.019	0.000	0.008	0.973
	1.6	0.782	0.000	0.020	0.185	0.004	0.000	0.009	0.987
	2	0.890	0.000	0.004	0.085	0.000	0.000	0.021	0.979
	2.5	0.916	0.000	0.000	0.055	0.000	0.000	0.029	0.971
	3	0.961	0.000	0.001	0.028	0.000	0.000	0.010	0.990
	4	0.901	0.000	0.000	0.091	0.000	0.000	0.008	0.992
	5	0.894	0.000	0.000	0.092	0.000	0.000	0.014	0.986
	6.3	0.912	0.000	0.000	0.071	0.000	0.000	0.017	0.983
	8	0.878	0.000	0.000	0.105	0.000	0.000	0.017	0.983
	10	0.912	0.000	0.001	0.069	0.000	0.000	0.018	0.982
	13	0.908	0.000	0.000	0.075	0.000	0.000	0.017	0.983
	16	0.883	0.000	0.000	0.106	0.000	0.000	0.011	0.989
	20	0.886	0.000	0.000	0.094	0.000	0.000	0.020	0.980
	25	0.910	0.000	0.000	0.071	0.000	0.000	0.019	0.981
	30	0.905	0.000	0.000	0.081	0.000	0.000	0.014	0.986
	40	0.911	0.000	0.000	0.083	0.000	0.000	0.006	0.994
	50	0.906	0.000	0.000	0.086	0.000	0.000	0.008	0.992
	63	0.912	0.000	0.000	0.071	0.000	0.000	0.017	0.983
	80	0.904	0.000	0.000	0.086	0.000	0.000	0.010	0.990
	100	0.890	0.000	0.000	0.100	0.000	0.000	0.010	0.990
	130	0.908	0.000	0.000	0.080	0.000	0.000	0.012	0.988
	160	0.894	0.000	0.000	0.096	0.000	0.000	0.010	0.990
	200	0.897	0.000	0.000	0.085	0.000	0.000	0.018	0.982
	250	0.912	0.000	0.000	0.074	0.000	0.000	0.014	0.986
	300	0.906	0.000	0.000	0.080	0.000	0.000	0.014	0.986
	400	0.888	0.000	0.000	0.096	0.000	0.000	0.016	0.984
	500	0.879	0.000	0.000	0.105	0.000	0.000	0.016	0.984
	630	0.912	0.000	0.000	0.074	0.000	0.000	0.014	0.986
	800	0.888	0.000	0.000	0.101	0.000	0.000	0.011	0.989
	1000	0.895	0.000	0.000	0.080	0.000	0.000	0.025	0.975
	1300	0.894	0.000	0.000	0.093	0.000	0.000	0.013	0.987
	1600	0.903	0.000	0.000	0.084	0.000	0.000	0.013	0.987
	2000	0.867	0.000	0.000	0.124	0.000	0.000	0.009	0.991
	2500	0.756	0.000	0.000	0.235	0.000	0.000	0.009	0.991
	3000	0.658	0.001	0.000	0.329	0.000	0.002	0.010	0.988
	4000	0.453	0.012	0.000	0.505	0.000	0.013	0.018	0.970
	5000	0.324	0.096	0.000	0.548	0.000	0.000	0.032	0.968
	6300	0.032	0.080	0.000	0.830	0.000	0.000	0.058	0.942
	8000	0.026	0.431	0.000	0.522	0.000	0.000	0.022	0.978
	10000	0.000	0.441	0.000	0.549	0.000	0.000	0.010	0.990

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(-- Yes	(--- Yes	(---) Yes	---- Yes	(---) No	(--- No	(-- No	Coverage
0.5	1	0.487	0.000	0.169	0.339	0.000	0.000	0.005	0.995
	1.3	0.586	0.000	0.066	0.311	0.029	0.000	0.008	0.963
	1.6	0.622	0.000	0.038	0.295	0.013	0.000	0.031	0.955
	2	0.709	0.000	0.029	0.198	0.014	0.000	0.050	0.936
	2.5	0.593	0.000	0.017	0.332	0.006	0.000	0.052	0.942
	3	0.564	0.000	0.023	0.354	0.001	0.000	0.058	0.941
	4	0.652	0.000	0.001	0.281	0.001	0.000	0.065	0.934
	5	0.618	0.000	0.002	0.301	0.001	0.000	0.078	0.921
	6.3	0.717	0.000	0.002	0.201	0.000	0.000	0.080	0.920
	8	0.622	0.000	0.002	0.291	0.000	0.000	0.085	0.915
	10	0.654	0.000	0.001	0.264	0.000	0.000	0.081	0.919
	13	0.629	0.000	0.001	0.269	0.000	0.000	0.101	0.899
	16	0.670	0.000	0.000	0.245	0.000	0.000	0.085	0.915
	20	0.636	0.000	0.000	0.277	0.000	0.000	0.087	0.913
	25	0.645	0.000	0.000	0.267	0.000	0.000	0.088	0.912
	30	0.651	0.000	0.000	0.262	0.000	0.000	0.087	0.913
	40	0.678	0.000	0.001	0.236	0.000	0.000	0.085	0.915
	50	0.657	0.000	0.003	0.248	0.000	0.000	0.092	0.908
	63	0.648	0.000	0.000	0.268	0.000	0.000	0.084	0.916
	80	0.669	0.000	0.001	0.252	0.000	0.000	0.078	0.922
	100	0.649	0.000	0.000	0.256	0.000	0.000	0.095	0.905
	130	0.659	0.000	0.001	0.261	0.000	0.000	0.079	0.921
	160	0.639	0.000	0.001	0.262	0.000	0.000	0.098	0.902
	200	0.643	0.000	0.000	0.264	0.000	0.000	0.093	0.907
	250	0.658	0.000	0.002	0.266	0.000	0.000	0.074	0.926
	300	0.615	0.000	0.002	0.293	0.000	0.000	0.090	0.910
	400	0.642	0.000	0.004	0.261	0.000	0.000	0.093	0.907
	500	0.595	0.000	0.000	0.308	0.000	0.000	0.097	0.903
	630	0.649	0.000	0.000	0.258	0.000	0.000	0.093	0.907
	800	0.651	0.000	0.002	0.269	0.000	0.000	0.078	0.922
	1000	0.655	0.000	0.000	0.266	0.000	0.000	0.079	0.921
	1300	0.601	0.000	0.000	0.287	0.000	0.000	0.113	0.887
	1600	0.558	0.000	0.000	0.339	0.000	0.000	0.103	0.897
	2000	0.476	0.000	0.001	0.430	0.000	0.003	0.090	0.907
	2500	0.399	0.000	0.000	0.508	0.000	0.003	0.089	0.908
	3000	0.382	0.000	0.001	0.539	0.000	0.002	0.075	0.923
	4000	0.199	0.000	0.002	0.693	0.000	0.011	0.095	0.894
	5000	0.282	0.108	0.000	0.561	0.000	0.000	0.049	0.951
	6300	0.152	0.168	0.000	0.587	0.000	0.000	0.093	0.907
	8000	0.114	0.269	0.000	0.549	0.000	0.000	0.068	0.932
	10000	0.035	0.264	0.000	0.627	0.000	0.000	0.075	0.925

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(--) Yes	(--- Yes	(---) Yes	---- Yes	(---) No	(--- No	(--) No	Coverage
1	1	0.188	0.000	0.165	0.448	0.000	0.000	0.199	0.801
	1.3	0.252	0.000	0.114	0.462	0.019	0.000	0.154	0.828
	1.6	0.300	0.000	0.066	0.449	0.040	0.000	0.145	0.815
	2	0.285	0.000	0.059	0.450	0.028	0.000	0.179	0.793
	2.5	0.367	0.000	0.042	0.407	0.029	0.000	0.155	0.816
	3	0.322	0.000	0.033	0.429	0.018	0.000	0.197	0.784
	4	0.380	0.000	0.016	0.412	0.013	0.000	0.179	0.808
	5	0.429	0.000	0.011	0.384	0.004	0.000	0.172	0.824
	6.3	0.445	0.000	0.016	0.350	0.009	0.000	0.180	0.811
	8	0.437	0.000	0.018	0.363	0.004	0.000	0.178	0.818
	10	0.415	0.000	0.015	0.374	0.003	0.000	0.193	0.804
	13	0.416	0.000	0.013	0.354	0.011	0.000	0.206	0.783
	16	0.413	0.000	0.020	0.343	0.003	0.000	0.221	0.776
	20	0.441	0.000	0.035	0.321	0.003	0.000	0.200	0.797
	25	0.429	0.000	0.027	0.336	0.003	0.000	0.205	0.792
	30	0.453	0.000	0.018	0.309	0.001	0.000	0.219	0.780
	40	0.415	0.000	0.020	0.343	0.000	0.000	0.222	0.778
	50	0.431	0.000	0.018	0.344	0.001	0.000	0.205	0.794
	63	0.423	0.000	0.025	0.333	0.002	0.000	0.217	0.781
	80	0.442	0.000	0.012	0.308	0.000	0.000	0.238	0.762
	100	0.420	0.000	0.013	0.318	0.000	0.000	0.249	0.751
	130	0.439	0.000	0.014	0.360	0.000	0.000	0.187	0.813
	160	0.451	0.000	0.010	0.327	0.000	0.000	0.212	0.788
	200	0.454	0.000	0.012	0.313	0.000	0.000	0.220	0.780
	250	0.406	0.000	0.015	0.367	0.000	0.000	0.212	0.788
	300	0.457	0.000	0.017	0.306	0.001	0.000	0.219	0.780
	400	0.460	0.000	0.022	0.320	0.001	0.000	0.197	0.802
	500	0.437	0.000	0.013	0.351	0.000	0.001	0.198	0.801
	630	0.455	0.000	0.014	0.402	0.001	0.000	0.128	0.871
	800	0.460	0.000	0.009	0.401	0.001	0.000	0.128	0.871
	1000	0.410	0.000	0.015	0.443	0.000	0.000	0.132	0.868
	1300	0.366	0.000	0.014	0.481	0.000	0.000	0.139	0.861
	1600	0.325	0.000	0.011	0.544	0.000	0.001	0.119	0.880
	2000	0.300	0.000	0.000	0.579	0.000	0.010	0.110	0.879
	2500	0.237	0.000	0.000	0.608	0.000	0.020	0.136	0.844
	3000	0.214	0.001	0.002	0.670	0.000	0.013	0.100	0.888
	4000	0.221	0.001	0.004	0.644	0.000	0.027	0.103	0.870
	5000	0.138	0.015	0.000	0.739	0.000	0.000	0.108	0.892
	6300	0.127	0.106	0.000	0.654	0.000	0.000	0.113	0.887
	8000	0.084	0.122	0.000	0.698	0.000	0.000	0.095	0.905
	10000	0.047	0.137	0.000	0.675	0.000	0.000	0.141	0.859

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(--) Yes	(--- Yes	(---) Yes	---- Yes	(---) No	(--- No	(--) No	Coverage
2	1	0.194	0.000	0.181	0.407	0.000	0.000	0.218	0.782
	1.3	0.197	0.000	0.170	0.375	0.009	0.000	0.250	0.742
	1.6	0.226	0.000	0.115	0.400	0.013	0.000	0.247	0.741
	2	0.266	0.000	0.132	0.361	0.024	0.000	0.217	0.759
	2.5	0.231	0.000	0.118	0.389	0.023	0.000	0.239	0.738
	3	0.264	0.000	0.104	0.384	0.023	0.000	0.226	0.752
	4	0.264	0.000	0.088	0.375	0.022	0.000	0.250	0.728
	5	0.295	0.000	0.072	0.383	0.020	0.000	0.230	0.750
	6.3	0.294	0.000	0.073	0.390	0.021	0.000	0.222	0.757
	8	0.336	0.000	0.068	0.355	0.014	0.000	0.227	0.759
	10	0.318	0.000	0.070	0.344	0.017	0.000	0.251	0.732
	13	0.304	0.000	0.078	0.375	0.008	0.000	0.235	0.757
	16	0.316	0.000	0.074	0.332	0.010	0.000	0.268	0.722
	20	0.312	0.000	0.070	0.356	0.006	0.000	0.257	0.737
	25	0.355	0.000	0.069	0.332	0.012	0.000	0.231	0.757
	30	0.331	0.000	0.068	0.360	0.016	0.000	0.225	0.759
	40	0.315	0.000	0.076	0.327	0.007	0.000	0.275	0.718
	50	0.342	0.000	0.070	0.312	0.009	0.000	0.267	0.724
	63	0.323	0.000	0.070	0.336	0.009	0.000	0.263	0.728
	80	0.344	0.000	0.064	0.364	0.006	0.000	0.222	0.772
	100	0.318	0.000	0.070	0.385	0.004	0.001	0.222	0.773
	130	0.318	0.000	0.077	0.390	0.007	0.000	0.208	0.785
	160	0.310	0.000	0.079	0.413	0.011	0.000	0.187	0.802
	200	0.292	0.000	0.068	0.460	0.008	0.000	0.171	0.821
	250	0.299	0.000	0.031	0.448	0.006	0.002	0.214	0.778
	300	0.300	0.000	0.036	0.480	0.007	0.002	0.176	0.816
	400	0.264	0.000	0.031	0.529	0.002	0.002	0.171	0.824
	500	0.269	0.000	0.027	0.520	0.001	0.003	0.179	0.816
	630	0.249	0.000	0.026	0.533	0.005	0.002	0.183	0.809
	800	0.238	0.000	0.014	0.582	0.001	0.011	0.153	0.834
	1000	0.231	0.000	0.009	0.601	0.008	0.007	0.144	0.841
	1300	0.235	0.000	0.007	0.595	0.001	0.008	0.155	0.836
	1600	0.212	0.000	0.018	0.602	0.000	0.019	0.149	0.832
	2000	0.193	0.000	0.006	0.663	0.002	0.003	0.133	0.861
	2500	0.200	0.002	0.001	0.649	0.002	0.026	0.120	0.852
	3000	0.201	0.000	0.001	0.639	0.001	0.029	0.128	0.842
	4000	0.154	0.028	0.007	0.627	0.000	0.026	0.158	0.817
	5000	0.139	0.048	0.004	0.692	0.000	0.000	0.117	0.883
	6300	0.065	0.016	0.002	0.780	0.000	0.000	0.136	0.864
	8000	0.068	0.082	0.000	0.668	0.000	0.000	0.182	0.818
	10000	0.038	0.089	0.000	0.702	0.003	0.000	0.169	0.828

(--) Yes

(--- Yes

(---) Yes

---- Yes

(---) No

(--- No

(--) No

Coverage

CI is finite and covers the true LD50

CI is infinite on the high side and covers the true LD50

CI is infinite on the low side and covers the true LD50

CI is infinite on the both sides and covers the true LD50

CI is infinite on the low side and does not cover the true LD50

CI is infinite on the high side and does not cover the true LD50

CI is finite and does not cover the true LD50

Overall coverage, percent of case 2 to 5 confidence intervals covering the true LD50

**Relative LD50 Estimate as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD80**

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
0.125	1	4.816	-100.000	2.408	0.000	0.000
	1.3	4.816	-0.912	1.952	1.952	-0.912
	1.6	0.844	-3.108	0.844	-0.394	-1.633
	2	3.449	-2.408	0.775	-0.816	-0.816
	2.5	0.858	-3.184	0.858	-1.163	-1.163
	3	0.821	-3.817	0.821	-1.498	-1.498
	4	0.844	-4.816	0.844	-1.986	-1.986
	5	0.858	-3.166	0.858	-1.154	-1.154
	6.3	5.718	-4.055	0.830	0.830	-1.191
	8	0.844	-3.184	0.844	-1.170	-1.170
	10	0.830	-3.184	0.830	-1.177	-1.177
	13	4.816	-3.184	0.849	0.849	-1.167
	16	0.844	-3.184	0.844	-1.170	-1.170
	20	5.658	-4.114	0.775	0.775	-1.183
	25	0.858	-3.149	0.858	-1.146	-1.146
	30	0.821	-3.155	0.821	-1.167	-1.167
	40	0.844	-3.162	0.844	-1.159	-1.159
	50	0.858	-3.166	0.858	-1.154	-1.154
	63	4.789	-3.211	0.830	0.830	-1.191
	80	5.731	-4.041	0.844	0.844	-1.170
	100	0.830	-3.184	0.830	-1.177	-1.177
	130	4.816	-3.610	0.849	0.849	-1.167
	160	0.844	-3.184	0.844	-1.170	-1.170
	200	0.775	-3.140	0.775	-1.183	-1.183
	250	0.858	-3.149	0.858	-1.146	-1.146
	300	0.821	-3.155	0.821	-1.167	-1.167
	400	0.844	-3.162	0.844	-1.159	-1.159
	500	0.858	-3.166	0.858	-1.154	-1.154
	630	5.718	-4.055	0.830	0.830	-1.191
	800	4.816	-3.184	0.844	0.844	-1.170
	1000	0.830	-3.184	0.830	-1.177	-1.177
	1300	0.849	-3.184	0.849	-1.167	-1.167
	1600	0.844	-3.184	0.844	-1.170	-1.170
	2000	4.650	-3.140	0.775	0.775	-1.183
	2500	0.858	-3.149	0.858	-1.146	-1.146
	3000	1.775	-3.155	1.775	-0.690	-0.690
	4000	1.860	-3.162	0.775	0.775	-1.193
	5000	100.000	-100.000	0.000	0.000	-1.583
	6300	100.000	-100.000	-0.803	-0.803	-0.803
	8000	100.000	-100.000	-1.633	-1.633	-1.633
	10000	100.000	-100.000	-2.408	-2.408	-2.408

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
0.25	1	2.626	-100.000	1.415	0.000	0.000
	1.3	2.838	-1.399	0.841	0.193	-0.671
	1.6	3.068	-1.832	0.843	0.013	-0.816
	2	2.847	-2.329	0.816	-0.194	-1.204
	2.5	0.859	-1.592	0.859	-0.366	-1.592
	3	1.673	-1.908	0.852	-0.528	-1.908
	4	1.735	-1.793	0.843	-0.159	-1.161
	5	1.844	-1.850	0.838	-0.149	-1.136
	6.3	1.957	-1.967	0.837	-0.170	-1.177
	8	0.843	-2.024	0.843	-0.159	-1.161
	10	0.838	-2.093	0.838	-0.166	-1.170
	13	1.952	-1.935	0.841	-0.155	-1.151
	16	1.954	-1.945	0.843	-0.159	-1.161
	20	1.927	-1.936	0.816	-0.168	-1.153
	25	1.970	-1.947	0.859	-0.152	-1.163
	30	1.963	-1.943	0.852	-0.153	-1.158
	40	1.954	-1.945	0.843	-0.159	-1.161
	50	1.949	-1.919	0.838	-0.149	-1.136
	63	1.947	-1.961	0.837	-0.170	-1.177
	80	1.954	-1.945	0.843	-0.159	-1.161
	100	1.948	-1.954	0.838	-0.166	-1.170
	130	1.952	-1.935	0.841	-0.155	-1.151
	160	3.287	-2.272	0.843	-0.159	-1.161
	200	1.927	-1.936	0.816	-0.168	-1.153
	250	1.970	-1.947	0.859	-0.152	-1.163
	300	1.963	-1.943	0.852	-0.153	-1.158
	400	1.954	-1.945	0.843	-0.159	-1.161
	500	1.949	-1.919	0.838	-0.149	-1.136
	630	1.947	-1.961	0.837	-0.170	-1.177
	800	1.688	-1.161	0.843	-0.159	-1.161
	1000	0.838	-1.954	0.838	-0.166	-1.170
	1300	1.952	-1.935	0.841	-0.155	-1.151
	1600	0.843	-1.945	0.843	-0.159	-1.161
	2000	1.927	-1.890	0.823	-0.168	-1.153
	2500	1.204	-1.163	1.204	0.021	-1.163
	3000	1.169	-1.950	0.887	-0.136	-1.158
	4000	100.000	-100.000	0.388	0.388	-1.161
	5000	100.000	-100.000	1.021	0.000	-1.136
	6300	100.000	-100.000	1.105	-0.401	-1.177
	8000	100.000	-100.000	-0.816	-0.816	-0.816
	10000	100.000	-100.000	-1.204	-1.204	-1.204

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
0.5	1	1.948	-100.000	0.830	0.064	-1.813
	1.3	2.098	-5.961	0.835	0.082	-1.749
	1.6	1.226	-1.314	0.838	0.210	-1.229
	2	0.888	-0.884	0.846	0.122	-0.602
	2.5	2.065	-0.805	0.843	-0.160	-0.796
	3	2.063	-0.954	0.841	-0.155	-0.737
	4	1.405	-1.084	0.838	-0.167	-0.754
	5	1.434	-1.204	0.843	-0.044	-0.812
	6.3	0.842	-1.232	0.842	-0.167	-0.915
	8	1.398	-1.047	0.842	-0.154	-1.158
	10	1.385	-1.057	0.830	-0.162	-1.170
	13	1.390	-1.055	0.889	-0.161	-1.165
	16	1.394	-1.047	0.838	-0.161	-1.162
	20	1.402	-1.047	0.947	-0.157	-1.121
	25	1.398	-1.050	0.843	-0.032	-1.157
	30	1.396	-1.050	0.841	-0.158	-1.159
	40	1.393	-1.048	0.838	-0.167	-1.162
	50	1.398	-1.041	0.843	-0.151	-1.157
	63	1.397	-1.045	0.842	-0.167	-1.158
	80	1.398	-1.042	0.842	-0.154	-1.158
	100	1.385	-1.057	0.832	-0.162	-1.170
	130	1.390	-1.049	0.835	-0.161	-1.165
	160	1.394	-1.053	0.838	-0.161	-1.162
	200	1.402	-1.154	0.846	-0.157	-1.154
	250	1.398	-1.043	0.843	-0.160	-1.157
	300	1.396	-1.159	0.841	-0.158	-1.159
	400	1.393	-1.048	0.838	-0.164	-1.162
	500	1.262	-1.157	0.843	-0.151	-1.157
	630	1.397	-1.045	0.842	-0.167	-1.158
	800	1.398	-1.047	0.842	-0.154	-1.158
	1000	1.385	-1.057	0.954	-0.162	-0.883
	1300	1.390	-1.055	0.835	-0.161	-1.165
	1600	0.990	-1.162	0.990	-0.161	-1.162
	2000	1.337	-2.155	0.796	-0.157	-1.154
	2500	100.000	-100.000	0.602	-0.072	-1.157
	3000	100.000	-100.000	0.444	-0.081	-1.159
	4000	100.000	-100.000	0.795	-0.082	-1.117
	5000	100.000	-100.000	1.170	0.000	-1.157
	6300	100.000	-100.000	3.365	-0.201	-1.158
	8000	100.000	-100.000	1.702	-0.408	-1.158
	10000	100.000	-100.000	2.883	-0.602	-0.994

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
1	1	100.000	-100.000	0.963	0.171	-1.628
	1.3	100.000	-100.000	0.967	0.114	-3.028
	1.6	1.618	-100.000	1.091	0.126	-1.190
	2	1.620	-100.000	0.965	0.129	-1.181
	2.5	1.453	-32.298	0.843	0.071	-1.317
	3	1.452	-3.128	0.841	0.094	-0.932
	4	1.123	-2.256	0.845	0.073	-0.702
	5	1.123	-1.555	0.845	0.084	-0.699
	6.3	0.851	-1.160	0.844	0.071	-0.799
	8	1.123	-1.350	0.895	0.078	-0.829
	10	1.117	-1.315	0.839	0.083	-0.719
	13	0.859	-1.333	0.845	0.086	-0.790
	16	1.119	-1.428	0.843	0.083	-0.660
	20	0.849	-1.301	0.842	0.071	-0.698
	25	0.848	-1.398	1.052	0.085	-0.661
	30	0.846	-1.135	0.867	0.078	-0.766
	40	0.848	-1.150	0.845	0.089	-0.762
	50	0.880	-1.284	0.895	0.091	-0.719
	63	0.846	-1.513	0.932	0.085	-0.812
	80	0.847	-1.133	1.026	0.073	-0.751
	100	0.850	-1.143	0.839	0.083	-0.784
	130	0.858	-1.494	0.840	0.083	-0.704
	160	0.845	-1.148	0.939	0.083	-0.711
	200	0.842	-1.146	0.997	0.084	-0.777
	250	0.849	-1.521	0.843	0.075	-0.915
	300	0.841	-1.146	0.897	0.071	-0.779
	400	0.845	-1.146	0.862	0.073	-0.736
	500	0.848	-1.510	0.845	0.086	-0.719
	630	0.900	-2.717	0.900	0.075	-0.710
	800	0.833	-2.371	0.796	0.069	-0.708
	1000	0.938	-11.121	0.699	0.073	-0.678
	1300	100.000	-100.000	0.675	0.065	-0.652
	1600	100.000	-100.000	0.495	0.068	-0.824
	2000	100.000	-100.000	0.523	-0.055	-0.705
	2500	100.000	-100.000	0.477	-0.088	-0.788
	3000	100.000	-100.000	0.474	-0.026	-0.874
	4000	100.000	-100.000	0.628	-0.082	-0.872
	5000	100.000	-100.000	0.294	-0.123	-0.797
	6300	100.000	-100.000	1.554	-0.100	-0.852
	8000	100.000	-100.000	1.391	-0.204	-0.810
	10000	100.000	-100.000	1.389	-0.301	-0.864

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
2	1	1.230	-100.000	0.966	0.208	-1.742
	1.3	0.843	-100.000	0.967	0.205	-1.285
	1.6	0.980	-100.000	0.966	0.205	-1.036
	2	0.813	-100.000	0.964	0.148	-1.422
	2.5	0.981	-100.000	0.967	0.196	-1.390
	3	0.846	-100.000	0.967	0.155	-1.203
	4	0.842	-10.192	0.967	0.171	-1.205
	5	0.814	-7.276	0.842	0.163	-0.811
	6.3	0.846	-10.277	0.965	0.157	-0.971
	8	0.689	-1.764	0.872	0.163	-0.878
	10	0.748	-1.744	0.966	0.161	-0.768
	13	0.792	-2.248	0.843	0.163	-0.745
	16	0.755	-1.322	0.861	0.171	-0.867
	20	0.715	-2.019	0.891	0.158	-0.718
	25	0.649	-1.377	0.907	0.130	-0.753
	30	0.749	-1.926	0.895	0.128	-0.808
	40	0.692	-1.175	0.875	0.127	-0.885
	50	0.633	-1.106	0.860	0.110	-0.718
	63	0.722	-1.172	0.860	0.172	-0.648
	80	0.680	-2.314	0.745	0.156	-0.656
	100	0.743	-9.649	0.849	0.136	-0.748
	130	0.677	-56.886	0.793	0.154	-0.702
	160	0.757	-100.000	0.747	0.123	-0.781
	200	0.835	-100.000	0.699	0.130	-0.779
	250	0.814	-100.000	0.651	0.091	-0.625
	300	100.000	-100.000	0.611	0.093	-0.641
	400	100.000	-100.000	0.548	0.121	-0.545
	500	100.000	-100.000	0.500	0.125	-0.524
	630	100.000	-100.000	0.450	0.123	-0.564
	800	100.000	-100.000	0.470	0.088	-0.656
	1000	100.000	-100.000	0.481	0.069	-0.659
	1300	100.000	-100.000	0.500	0.090	-0.604
	1600	100.000	-100.000	0.247	0.067	-0.622
	2000	100.000	-100.000	0.367	0.078	-0.547
	2500	100.000	-100.000	0.551	-0.094	-0.596
	3000	100.000	-100.000	0.379	-0.051	-0.658
	4000	100.000	-100.000	0.692	-0.072	-0.658
	5000	100.000	-100.000	0.443	-0.107	-0.658
	6300	100.000	-100.000	0.174	-0.106	-0.628
	8000	100.000	-100.000	1.729	-0.141	-0.677
	10000	100.000	-100.000	0.943	-0.151	-0.696

Relative LD50 Estimate is $(\text{Log}_{10}(\text{estimated LD50}) - \text{Log}_{10}(\text{True LD50})) / \text{True Sigma}$

The following values are all converted to a relative scale

UCL is the median of the estimated upper confidence bound for a 95% (two-sided) confidence interval

LCL is the median of the estimated lower confidence bound for a 95% (two-sided) confidence interval

97.5%tile is the 97 and a half percentile of the simulated LD50 values

Median is the median of the simulated LD50 values

2.5%tile is the 2 and a half percentile of the simulated LD50 values

Extreme or infinite values appear as 100 or -100

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = LD80

True Sigma	Tue LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
0.125	1	0	0.404	0.041	0.403	0.152
	1.3	0	0.85	0.095	0.027	0.028
	1.6	0	0.508	0.492	0	0
	2	0	0.515	0.485	0	0
	2.5	0	0.524	0.476	0	0
	3	0	0.646	0.354	0	0
	4	0	0.621	0.379	0	0
	5	0	0.519	0.481	0	0
	6.3	0	0.489	0.511	0	0
	8	0	0.516	0.484	0	0
	10	0	0.53	0.47	0	0
	13	0	0.502	0.498	0	0
	16	0	0.527	0.473	0	0
	20	0	0.49	0.51	0	0
	25	0	0.518	0.482	0	0
	30	0	0.531	0.469	0	0
	40	0	0.516	0.484	0	0
	50	0	0.517	0.483	0	0
	63	0	0.504	0.496	0	0
	80	0	0.491	0.509	0	0
	100	0	0.527	0.473	0	0
	130	0	0.5	0.5	0	0
	160	0	0.527	0.473	0	0
	200	0	0.507	0.493	0	0
	250	0	0.521	0.479	0	0
	300	0	0.511	0.489	0	0
	400	0	0.531	0.469	0	0
	500	0	0.518	0.482	0	0
	630	0	0.49	0.51	0	0
	800	0	0.502	0.498	0	0
	1000	0	0.645	0.355	0	0
	1300	0	0.525	0.475	0	0
	1600	0	0.553	0.447	0	0
	2000	0	0.472	0.528	0	0
	2500	0	0.546	0.454	0	0
	3000	0	0.973	0.027	0	0
	4000	0.027	0.726	0.226	0	0.021
	5000	0.415	0.344	0.123	0	0.118
	6300	0.923	0.028	0.025	0	0.024
	8000	1	0	0	0	0
	10000	1	0	0	0	0

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
0.25	1	0	0.389	0.027	0.418	0.166
	1.3	0	0.386	0.444	0.091	0.079
	1.6	0	0.472	0.465	0.028	0.035
	2	0	0.502	0.486	0.003	0.009
	2.5	0	0.625	0.372	0	0.003
	3	0	0.603	0.397	0	0
	4	0	0.348	0.652	0	0
	5	0	0.383	0.617	0	0
	6.3	0	0.375	0.625	0	0
	8	0	0.397	0.603	0	0
	10	0	0.398	0.602	0	0
	13	0	0.369	0.631	0	0
	16	0	0.359	0.641	0	0
	20	0	0.351	0.649	0	0
	25	0	0.357	0.643	0	0
	30	0	0.383	0.617	0	0
	40	0	0.348	0.652	0	0
	50	0	0.349	0.651	0	0
	63	0	0.375	0.625	0	0
	80	0	0.386	0.614	0	0
	100	0	0.358	0.642	0	0
	130	0	0.345	0.655	0	0
	160	0	0.315	0.685	0	0
	200	0	0.351	0.649	0	0
	250	0	0.357	0.643	0	0
	300	0	0.365	0.635	0	0
	400	0	0.363	0.637	0	0
	500	0	0.362	0.638	0	0
	630	0	0.384	0.616	0	0
	800	0	0.439	0.561	0	0
	1000	0	0.402	0.598	0	0
	1300	0	0.365	0.635	0	0
	1600	0	0.414	0.586	0	0
	2000	0.002	0.349	0.649	0	0
	2500	0.002	0.638	0.356	0	0.004
	3000	0.02	0.539	0.428	0	0.013
	4000	0.121	0.38	0.447	0	0.052
	5000	0.347	0.268	0.302	0	0.083
	6300	0.787	0.068	0.14	0	0.005
	8000	0.927	0.029	0.018	0	0.026
	10000	0.984	0.007	0.004	0	0.005

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
0.5	1	0	0.22	0.306	0.322	0.152
	1.3	0	0.306	0.355	0.195	0.144
	1.6	0	0.43	0.337	0.109	0.124
	2	0	0.484	0.347	0.065	0.104
	2.5	0	0.175	0.783	0.012	0.03
	3	0	0.227	0.739	0.004	0.03
	4	0	0.237	0.744	0.005	0.014
	5	0	0.275	0.714	0.001	0.01
	6.3	0	0.268	0.732	0	0
	8	0	0.186	0.814	0	0
	10	0	0.199	0.801	0	0
	13	0	0.201	0.799	0	0
	16	0	0.192	0.807	0	0.001
	20	0	0.213	0.787	0	0
	25	0	0.208	0.792	0	0
	30	0	0.182	0.818	0	0
	40	0	0.202	0.798	0	0
	50	0	0.196	0.804	0	0
	63	0	0.174	0.826	0	0
	80	0	0.18	0.82	0	0
	100	0	0.192	0.808	0	0
	130	0	0.182	0.818	0	0
	160	0	0.212	0.788	0	0
	200	0	0.203	0.797	0	0
	250	0	0.194	0.806	0	0
	300	0	0.186	0.814	0	0
	400	0	0.191	0.809	0	0
	500	0	0.216	0.784	0	0
	630	0	0.215	0.785	0	0
	800	0	0.181	0.819	0	0
	1000	0	0.187	0.812	0	0.001
	1300	0.01	0.169	0.821	0	0
	1600	0.016	0.304	0.677	0	0.003
	2000	0.031	0.238	0.728	0	0.003
	2500	0.034	0.229	0.72	0	0.017
	3000	0.078	0.193	0.715	0	0.014
	4000	0.299	0.135	0.562	0	0.004
	5000	0.368	0.259	0.263	0	0.11
	6300	0.546	0.162	0.177	0	0.115
	8000	0.667	0.091	0.159	0	0.083
	10000	0.823	0.051	0.092	0	0.034

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
1	1	0	0.14	0.445	0.247	0.168
	1.3	0	0.172	0.469	0.204	0.155
	1.6	0	0.222	0.48	0.152	0.146
	2	0	0.208	0.526	0.129	0.137
	2.5	0	0.255	0.522	0.097	0.126
	3	0	0.159	0.692	0.033	0.116
	4	0	0.174	0.715	0.016	0.095
	5	0	0.178	0.722	0.012	0.088
	6.3	0	0.17	0.738	0.012	0.08
	8	0	0.185	0.749	0.005	0.061
	10	0	0.141	0.807	0	0.052
	13	0	0.153	0.794	0.001	0.052
	16	0	0.136	0.825	0	0.039
	20	0	0.169	0.781	0.001	0.049
	25	0	0.169	0.792	0	0.039
	30	0	0.148	0.813	0	0.039
	40	0	0.166	0.799	0	0.035
	50	0	0.154	0.798	0	0.048
	63	0	0.146	0.811	0	0.043
	80	0	0.157	0.797	0	0.046
	100	0	0.145	0.813	0	0.042
	130	0	0.148	0.802	0	0.05
	160	0.002	0.147	0.806	0	0.045
	200	0	0.161	0.799	0	0.04
	250	0	0.15	0.808	0	0.042
	300	0.001	0.139	0.813	0	0.047
	400	0	0.159	0.78	0	0.061
	500	0.016	0.134	0.819	0	0.031
	630	0.017	0.166	0.785	0	0.032
	800	0.017	0.151	0.807	0	0.025
	1000	0.023	0.149	0.805	0	0.023
	1300	0.092	0.126	0.761	0	0.021
	1600	0.105	0.103	0.783	0	0.009
	2000	0.114	0.189	0.659	0	0.038
	2500	0.143	0.167	0.659	0	0.031
	3000	0.153	0.135	0.679	0	0.033
	4000	0.22	0.114	0.64	0	0.026
	5000	0.373	0.087	0.531	0	0.009
	6300	0.425	0.152	0.326	0	0.097
	8000	0.512	0.108	0.309	0	0.071
	10000	0.55	0.096	0.292	0	0.062

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
2	1	0	0.147	0.41	0.211	0.232
	1.3	0	0.123	0.509	0.126	0.242
	1.6	0	0.139	0.516	0.088	0.257
	2	0	0.151	0.497	0.095	0.257
	2.5	0	0.131	0.538	0.094	0.237
	3	0	0.137	0.51	0.076	0.277
	4	0	0.133	0.549	0.033	0.285
	5	0	0.114	0.584	0.026	0.276
	6.3	0	0.122	0.569	0.026	0.283
	8	0	0.149	0.582	0.021	0.248
	10	0	0.141	0.6	0.016	0.243
	13	0	0.12	0.596	0.006	0.278
	16	0	0.14	0.593	0.004	0.263
	20	0	0.128	0.622	0.005	0.245
	25	0	0.15	0.571	0.003	0.276
	30	0.001	0.118	0.607	0.006	0.268
	40	0	0.149	0.593	0	0.258
	50	0	0.131	0.599	0	0.27
	63	0.007	0.132	0.622	0	0.239
	80	0.013	0.129	0.663	0	0.195
	100	0.01	0.123	0.658	0	0.209
	130	0.016	0.143	0.64	0	0.201
	160	0.026	0.126	0.641	0	0.207
	200	0.049	0.098	0.65	0	0.203
	250	0.038	0.164	0.696	0	0.102
	300	0.046	0.122	0.727	0	0.105
	400	0.043	0.128	0.737	0	0.092
	500	0.042	0.126	0.754	0	0.078
	630	0.105	0.122	0.706	0	0.067
	800	0.104	0.141	0.698	0	0.057
	1000	0.115	0.134	0.697	0	0.054
	1300	0.112	0.124	0.714	0	0.05
	1600	0.13	0.123	0.709	0	0.038
	2000	0.221	0.107	0.647	0	0.025
	2500	0.197	0.13	0.624	0	0.049
	3000	0.217	0.144	0.591	0	0.048
	4000	0.252	0.134	0.551	0	0.063
	5000	0.274	0.106	0.579	0	0.041
	6300	0.398	0.073	0.517	0	0.012
	8000	0.403	0.139	0.386	0	0.072
	10000	0.404	0.105	0.411	0	0.08

APPENDIX D

Simulation Results Simulation Set 2

Starting Dose = 175 mg/kg

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Percent of Simulations by Case as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = 175 mg/kg

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
0.125	1	0	0.122	0	0.752	0.126
	1.3	0	0.559	0	0.433	0.008
	1.6	0	0.85	0	0.15	0
	2	0	0.974	0	0.026	0
	2.5	0	0.991	0.007	0.002	0
	3	0	0.951	0.048	0.001	0
	4	0	0.645	0.355	0	0
	5	0	0.308	0.692	0	0
	6.3	0	0.351	0.649	0	0
	8	0.003	0.697	0.3	0	0
	10	0.005	0.873	0.122	0	0
	13	0.002	0.624	0.374	0	0
	16	0	0.307	0.693	0	0
	20	0	0.35	0.65	0	0
	25	0	0.742	0.258	0	0
	30	0.008	0.871	0.121	0	0
	40	0.001	0.647	0.352	0	0
	50	0.001	0.3	0.699	0	0
	63	0.001	0.351	0.648	0	0
	80	0.001	0.726	0.273	0	0
	100	0.002	0.882	0.116	0	0
	130	0	0.613	0.387	0	0
	160	0	0.304	0.696	0	0
	200	0.001	0.365	0.634	0	0
	250	0.003	0.688	0.309	0	0
	300	0.001	0.859	0.14	0	0
	400	0	0.645	0.355	0	0
	500	0	0.325	0.675	0	0
	630	0	0.355	0.645	0	0
	800	0.004	0.726	0.27	0	0
	1000	0.004	0.852	0.144	0	0
	1300	0.003	0.611	0.386	0	0
	1600	0	0.299	0.701	0	0
	2000	0	0.343	0.657	0	0
	2500	0.01	0.695	0.281	0.014	0
	3000	0.013	0.808	0.09	0.089	0
	4000	0.002	0.474	0.007	0.506	0.011
	5000	0	0.122	0	0.744	0.134
	6300	0	0.009	0	0.503	0.488
	8000	0	0.001	0	0.139	0.86
	10000	0	0	0	0.019	0.981

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
0.25	1	0.007	0.119	0	0.724	0.15
	1.3	0.018	0.303	0.003	0.637	0.039
	1.6	0.034	0.455	0.025	0.477	0.009
	2	0.039	0.601	0.093	0.267	0
	2.5	0.039	0.647	0.206	0.108	0
	3	0.038	0.564	0.362	0.036	0
	4	0.031	0.369	0.594	0.006	0
	5	0.038	0.239	0.723	0	0
	6.3	0.068	0.255	0.677	0	0
	8	0.134	0.34	0.526	0	0
	10	0.131	0.362	0.507	0	0
	13	0.089	0.279	0.632	0	0
	16	0.066	0.249	0.685	0	0
	20	0.078	0.25	0.672	0	0
	25	0.122	0.303	0.575	0	0
	30	0.136	0.358	0.506	0	0
	40	0.101	0.293	0.606	0	0
	50	0.065	0.227	0.708	0	0
	63	0.067	0.245	0.688	0	0
	80	0.083	0.345	0.572	0	0
	100	0.105	0.358	0.537	0	0
	130	0.06	0.283	0.657	0	0
	160	0.046	0.251	0.703	0	0
	200	0.038	0.236	0.726	0	0
	250	0.072	0.32	0.608	0	0
	300	0.099	0.352	0.549	0	0
	400	0.08	0.331	0.589	0	0
	500	0.062	0.24	0.698	0	0
	630	0.073	0.246	0.681	0	0
	800	0.114	0.318	0.568	0	0
	1000	0.139	0.348	0.513	0	0
	1300	0.108	0.288	0.603	0.001	0
	1600	0.086	0.221	0.691	0.002	0
	2000	0.118	0.253	0.605	0.024	0
	2500	0.18	0.265	0.465	0.09	0
	3000	0.22	0.284	0.284	0.206	0.006
	4000	0.152	0.207	0.064	0.534	0.043
	5000	0.097	0.1	0.018	0.641	0.144
	6300	0.029	0.037	0	0.649	0.285
	8000	0.01	0.008	0	0.493	0.489
	10000	0.003	0.002	0	0.273	0.722

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
0.5	1	0.192	0.107	0.04	0.537	0.124
	1.3	0.262	0.143	0.058	0.477	0.06
	1.6	0.287	0.189	0.129	0.367	0.028
	2	0.328	0.219	0.179	0.258	0.016
	2.5	0.35	0.183	0.273	0.183	0.011
	3	0.336	0.206	0.359	0.096	0.003
	4	0.371	0.163	0.427	0.039	0
	5	0.352	0.16	0.468	0.02	0
	6.3	0.364	0.152	0.476	0.008	0
	8	0.383	0.153	0.461	0.003	0
	10	0.405	0.141	0.452	0.002	0
	13	0.395	0.134	0.47	0.001	0
	16	0.407	0.144	0.449	0	0
	20	0.39	0.144	0.466	0	0
	25	0.397	0.112	0.491	0	0
	30	0.378	0.137	0.485	0	0
	40	0.378	0.145	0.477	0	0
	50	0.355	0.146	0.499	0	0
	63	0.352	0.132	0.516	0	0
	80	0.332	0.132	0.536	0	0
	100	0.279	0.171	0.55	0	0
	130	0.285	0.162	0.553	0	0
	160	0.262	0.167	0.571	0	0
	200	0.26	0.16	0.58	0	0
	250	0.264	0.148	0.588	0	0
	300	0.315	0.128	0.557	0	0
	400	0.318	0.153	0.529	0	0
	500	0.376	0.146	0.478	0	0
	630	0.349	0.136	0.515	0	0
	800	0.365	0.14	0.495	0	0
	1000	0.367	0.145	0.486	0.002	0
	1300	0.392	0.143	0.453	0.009	0.003
	1600	0.414	0.133	0.423	0.024	0.006
	2000	0.468	0.116	0.37	0.043	0.003
	2500	0.445	0.138	0.313	0.093	0.011
	3000	0.476	0.121	0.252	0.128	0.023
	4000	0.47	0.087	0.13	0.256	0.057
	5000	0.394	0.083	0.077	0.34	0.106
	6300	0.301	0.048	0.027	0.453	0.171
	8000	0.204	0.038	0.011	0.495	0.252
	10000	0.141	0.021	0.004	0.473	0.361

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
1	1	0.492	0.057	0.106	0.251	0.094
	1.3	0.552	0.058	0.096	0.205	0.089
	1.6	0.576	0.065	0.155	0.151	0.053
	2	0.586	0.073	0.195	0.11	0.036
	2.5	0.635	0.085	0.184	0.074	0.022
	3	0.616	0.092	0.207	0.068	0.017
	4	0.648	0.074	0.22	0.045	0.013
	5	0.666	0.072	0.231	0.022	0.009
	6.3	0.625	0.078	0.28	0.015	0.002
	8	0.601	0.076	0.313	0.007	0.003
	10	0.589	0.095	0.311	0.003	0.002
	13	0.629	0.079	0.287	0.003	0.002
	16	0.578	0.097	0.324	0	0.001
	20	0.586	0.085	0.328	0.001	0
	25	0.577	0.094	0.328	0.001	0
	30	0.541	0.081	0.377	0	0.001
	40	0.536	0.091	0.373	0	0
	50	0.522	0.082	0.396	0	0
	63	0.491	0.111	0.398	0	0
	80	0.476	0.107	0.417	0	0
	100	0.497	0.09	0.413	0	0
	130	0.431	0.104	0.465	0	0
	160	0.469	0.111	0.42	0	0
	200	0.437	0.113	0.45	0	0
	250	0.491	0.102	0.407	0	0
	300	0.472	0.081	0.447	0	0
	400	0.499	0.093	0.404	0.002	0.002
	500	0.489	0.105	0.404	0	0.002
	630	0.519	0.091	0.386	0.002	0.002
	800	0.523	0.097	0.37	0.003	0.007
	1000	0.543	0.099	0.344	0.007	0.007
	1300	0.57	0.087	0.314	0.018	0.011
	1600	0.577	0.091	0.291	0.026	0.015
	2000	0.61	0.079	0.246	0.037	0.028
	2500	0.631	0.077	0.202	0.056	0.034
	3000	0.6	0.081	0.196	0.075	0.048
	4000	0.631	0.058	0.118	0.121	0.072
	5000	0.609	0.049	0.117	0.134	0.091
	6300	0.541	0.045	0.109	0.176	0.129
	8000	0.474	0.037	0.075	0.237	0.177
	10000	0.457	0.031	0.055	0.26	0.197

Percent of Simulations by Case as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Case 2	Case 3	Case 4	Case 5	Case 1
2	1	0.647	0.046	0.131	0.081	0.095
	1.3	0.672	0.041	0.13	0.074	0.083
	1.6	0.655	0.047	0.168	0.061	0.069
	2	0.682	0.06	0.151	0.045	0.062
	2.5	0.687	0.065	0.172	0.035	0.041
	3	0.69	0.049	0.182	0.033	0.046
	4	0.666	0.055	0.223	0.019	0.037
	5	0.656	0.061	0.238	0.02	0.025
	6.3	0.644	0.066	0.247	0.018	0.025
	8	0.651	0.07	0.256	0.009	0.014
	10	0.632	0.073	0.271	0.008	0.016
	13	0.655	0.063	0.268	0.001	0.013
	16	0.639	0.069	0.285	0	0.007
	20	0.599	0.082	0.308	0.003	0.008
	25	0.627	0.08	0.287	0	0.006
	30	0.601	0.067	0.328	0.001	0.003
	40	0.591	0.078	0.322	0.002	0.007
	50	0.584	0.071	0.34	0	0.005
	63	0.578	0.072	0.344	0.001	0.005
	80	0.56	0.09	0.345	0	0.005
	100	0.557	0.074	0.366	0	0.003
	130	0.584	0.085	0.32	0.003	0.008
	160	0.558	0.083	0.354	0	0.005
	200	0.553	0.078	0.358	0.003	0.008
	250	0.557	0.078	0.36	0.002	0.003
	300	0.557	0.078	0.354	0.005	0.006
	400	0.589	0.076	0.327	0.002	0.006
	500	0.53	0.088	0.361	0.008	0.013
	630	0.565	0.066	0.335	0.014	0.02
	800	0.595	0.067	0.309	0.011	0.018
	1000	0.59	0.085	0.287	0.011	0.027
	1300	0.622	0.061	0.276	0.017	0.024
	1600	0.594	0.069	0.261	0.021	0.055
	2000	0.585	0.073	0.241	0.033	0.068
	2500	0.61	0.077	0.23	0.033	0.05
	3000	0.625	0.063	0.214	0.038	0.06
	4000	0.616	0.05	0.201	0.068	0.065
	5000	0.591	0.052	0.194	0.066	0.097
	6300	0.632	0.041	0.164	0.063	0.1
	8000	0.573	0.06	0.158	0.087	0.122
	10000	0.58	0.039	0.122	0.108	0.151

Predicted Classification as a Function of True LD50 and True Sigma

Assumed sigma = 0.5, Starting dose = 175 mg/kg

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
0.125	1	1.000	0.000	0.000	0.000
	1.3	1.000	0.000	0.000	0.000
	1.6	1.000	0.000	0.000	0.000
	2	1.000	0.000	0.000	0.000
	2.5	0.993	0.007	0.000	0.000
	3	0.952	0.048	0.000	0.000
	4	0.644	0.356	0.000	0.000
	5	0.259	0.741	0.000	0.000
	6.3	0.965	0.000	0.035	0.000
	8	0.999	0.000	0.001	0.000
	10	1.000	0.000	0.000	0.000
	13	1.000	0.000	0.000	0.000
	16	1.000	0.000	0.000	0.000
	20	0.999	0.001	0.000	0.000
	25	0.992	0.008	0.000	0.000
	30	0.952	0.048	0.000	0.000
	40	0.646	0.354	0.000	0.000
	50	0.256	0.744	0.000	0.000
	63	0.966	0.000	0.034	0.000
	80	1.000	0.000	0.000	0.000
	100	1.000	0.000	0.000	0.000
	130	0.997	0.003	0.000	0.000
	160	0.924	0.076	0.000	0.000
	200	0.672	0.328	0.000	0.000
	250	0.302	0.698	0.000	0.000
	300	0.090	0.910	0.000	0.000
	400	0.996	0.000	0.004	0.000
	500	0.999	0.000	0.001	0.000
	630	1.000	0.000	0.000	0.000
	800	1.000	0.000	0.000	0.000
	1000	1.000	0.000	0.000	0.000
	1300	0.996	0.004	0.000	0.000
	1600	0.945	0.055	0.000	0.000
	2000	0.696	0.304	0.000	0.000
	2500	0.717	0.000	0.283	0.000
	3000	0.910	0.000	0.090	0.000
	4000	0.993	0.000	0.007	0.000
	5000	1.000	0.000	0.000	0.000
	6300	1.000	0.000	0.000	0.000
	8000	1.000	0.000	0.000	0.000
	10000	1.000	0.000	0.000	0.000

Predicted Classification as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
0.25	1	1.000	0.000	0.000	0.000
	1.3	0.997	0.003	0.000	0.000
	1.6	0.975	0.025	0.000	0.000
	2	0.907	0.093	0.000	0.000
	2.5	0.793	0.207	0.000	0.000
	3	0.635	0.365	0.000	0.000
	4	0.375	0.625	0.000	0.000
	5	0.180	0.820	0.000	0.000
	6.3	0.924	0.000	0.076	0.000
	8	0.981	0.000	0.019	0.000
	10	0.999	0.000	0.001	0.000
	13	1.000	0.000	0.000	0.000
	16	0.998	0.002	0.000	0.000
	20	0.967	0.033	0.000	0.000
	25	0.904	0.096	0.000	0.000
	30	0.781	0.219	0.000	0.000
	40	0.461	0.539	0.000	0.000
	50	0.226	0.774	0.000	0.000
	63	0.899	0.000	0.101	0.000
	80	0.985	0.000	0.015	0.000
	100	0.992	0.003	0.005	0.000
	130	0.972	0.028	0.000	0.000
	160	0.901	0.099	0.000	0.000
	200	0.788	0.212	0.000	0.000
	250	0.528	0.472	0.000	0.000
	300	0.346	0.654	0.000	0.000
	400	0.887	0.000	0.113	0.000
	500	0.966	0.000	0.034	0.000
	630	0.990	0.000	0.010	0.000
	800	0.998	0.002	0.000	0.000
	1000	0.996	0.004	0.000	0.000
	1300	0.968	0.032	0.000	0.000
	1600	0.899	0.101	0.000	0.000
	2000	0.695	0.305	0.000	0.000
	2500	0.518	0.000	0.482	0.000
	3000	0.713	0.000	0.287	0.000
	4000	0.936	0.000	0.064	0.000
	5000	0.982	0.000	0.018	0.000
	6300	1.000	0.000	0.000	0.000
	8000	1.000	0.000	0.000	0.000
	10000	1.000	0.000	0.000	0.000

Predicted Classification as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
0.5	1	0.959	0.041	0.000	0.000
	1.3	0.934	0.066	0.000	0.000
	1.6	0.861	0.139	0.000	0.000
	2	0.798	0.202	0.000	0.000
	2.5	0.681	0.319	0.000	0.000
	3	0.546	0.454	0.000	0.000
	4	0.396	0.604	0.000	0.000
	5	0.263	0.737	0.000	0.000
	6.3	0.843	0.001	0.156	0.000
	8	0.924	0.004	0.072	0.000
	10	0.952	0.011	0.037	0.000
	13	0.947	0.039	0.014	0.000
	16	0.927	0.071	0.002	0.000
	20	0.887	0.112	0.001	0.000
	25	0.791	0.209	0.000	0.000
	30	0.685	0.315	0.000	0.000
	40	0.511	0.489	0.000	0.000
	50	0.372	0.628	0.000	0.000
	63	0.777	0.012	0.211	0.000
	80	0.851	0.024	0.125	0.000
	100	0.880	0.054	0.066	0.000
	130	0.841	0.137	0.022	0.000
	160	0.772	0.216	0.012	0.000
	200	0.691	0.308	0.001	0.000
	250	0.566	0.434	0.000	0.000
	300	0.448	0.552	0.000	0.000
	400	0.752	0.001	0.247	0.000
	500	0.821	0.003	0.176	0.000
	630	0.909	0.010	0.081	0.000
	800	0.931	0.021	0.048	0.000
	1000	0.924	0.058	0.018	0.000
	1300	0.866	0.128	0.006	0.000
	1600	0.763	0.236	0.001	0.000
	2000	0.627	0.373	0.000	0.000
	2500	0.551	0.000	0.449	0.000
	3000	0.649	0.000	0.351	0.000
	4000	0.837	0.000	0.163	0.000
	5000	0.906	0.000	0.094	0.000
	6300	0.967	0.000	0.033	0.000
	8000	0.989	0.000	0.011	0.000
	10000	0.996	0.000	0.004	0.000

Predicted Classification as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
1	1	0.859	0.141	0.000	0.000
	1.3	0.822	0.178	0.000	0.000
	1.6	0.746	0.254	0.000	0.000
	2	0.670	0.330	0.000	0.000
	2.5	0.625	0.375	0.000	0.000
	3	0.545	0.455	0.000	0.000
	4	0.451	0.549	0.000	0.000
	5	0.351	0.649	0.000	0.000
	6.3	0.702	0.053	0.245	0.000
	8	0.736	0.080	0.184	0.000
	10	0.736	0.108	0.155	0.001
	13	0.729	0.165	0.106	0.000
	16	0.726	0.220	0.054	0.000
	20	0.674	0.296	0.030	0.000
	25	0.649	0.322	0.029	0.000
	30	0.560	0.423	0.017	0.000
	40	0.450	0.544	0.006	0.000
	50	0.386	0.610	0.004	0.000
	63	0.582	0.090	0.328	0.000
	80	0.623	0.146	0.231	0.000
	100	0.641	0.166	0.193	0.000
	130	0.650	0.245	0.105	0.000
	160	0.595	0.322	0.083	0.000
	200	0.581	0.373	0.046	0.000
	250	0.513	0.450	0.037	0.000
	300	0.476	0.499	0.025	0.000
	400	0.563	0.036	0.400	0.001
	500	0.622	0.043	0.335	0.000
	630	0.672	0.064	0.263	0.001
	800	0.686	0.104	0.210	0.000
	1000	0.683	0.155	0.161	0.001
	1300	0.687	0.217	0.091	0.005
	1600	0.634	0.282	0.083	0.001
	2000	0.558	0.384	0.057	0.001
	2500	0.512	0.000	0.486	0.002
	3000	0.537	0.000	0.461	0.002
	4000	0.715	0.000	0.284	0.001
	5000	0.747	0.000	0.252	0.001
	6300	0.806	0.000	0.192	0.002
	8000	0.877	0.000	0.122	0.001
	10000	0.910	0.000	0.090	0.000

Predicted Classification as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	True Class	Less Toxic than True Class	More Toxic Than True Class	Unknown Class
2	1	0.680	0.320	0.000	0.000
	1.3	0.618	0.382	0.000	0.000
	1.6	0.558	0.442	0.000	0.000
	2	0.525	0.475	0.000	0.000
	2.5	0.477	0.523	0.000	0.000
	3	0.408	0.592	0.000	0.000
	4	0.369	0.631	0.000	0.000
	5	0.312	0.687	0.000	0.001
	6.3	0.476	0.252	0.271	0.001
	8	0.469	0.294	0.237	0.000
	10	0.497	0.304	0.198	0.001
	13	0.475	0.365	0.159	0.001
	16	0.469	0.405	0.125	0.001
	20	0.431	0.457	0.112	0.000
	25	0.427	0.485	0.087	0.001
	30	0.419	0.517	0.064	0.000
	40	0.348	0.589	0.063	0.000
	50	0.325	0.630	0.044	0.001
	63	0.439	0.233	0.328	0.000
	80	0.463	0.251	0.284	0.002
	100	0.464	0.279	0.255	0.002
	130	0.435	0.313	0.249	0.003
	160	0.454	0.368	0.175	0.003
	200	0.432	0.407	0.159	0.002
	250	0.414	0.459	0.126	0.001
	300	0.420	0.484	0.095	0.001
	400	0.410	0.082	0.506	0.002
	500	0.462	0.101	0.435	0.002
	630	0.460	0.143	0.394	0.003
	800	0.458	0.166	0.371	0.005
	1000	0.463	0.219	0.315	0.003
	1300	0.483	0.262	0.253	0.002
	1600	0.469	0.307	0.216	0.008
	2000	0.474	0.323	0.196	0.007
	2500	0.366	0.000	0.633	0.001
	3000	0.386	0.000	0.611	0.003
	4000	0.484	0.000	0.514	0.002
	5000	0.531	0.000	0.466	0.003
	6300	0.586	0.000	0.412	0.002
	8000	0.615	0.000	0.381	0.004
	10000	0.680	0.000	0.317	0.003

The cutoff points for the harmonized classification are 5, 50, 300, and 2000

Number of Animals as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = 175 mg/kg

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
0.125	1	11.7	7	15	9.0	6	13
	1.3	10.6	7	15	7.2	6	12
	1.6	9.5	9	15	6.3	6	11
	2	9.1	9	15	6.1	6	10
	2.5	9.0	9	14	6.0	6	9
	3	9.1	9	12	6.1	6	8
	4	9.7	8	13	6.3	5	8
	5	10.1	8	13	6.4	5	8
	6.3	9.4	8	13	5.9	5	8
	8	8.6	8	14	5.3	5	8
	10	8.2	8	12	5.1	5	7
	13	8.7	7	12	5.3	4	7
	16	9.1	7	12	5.4	4	7
	20	8.3	7	12	4.8	4	7
	25	7.4	7	12	4.2	4	7
	30	7.2	7	11	4.1	4	6
	40	7.7	6	11	4.3	3	6
	50	8.1	6	11	4.4	3	6
	63	7.4	6	11	3.8	3	6
	80	6.4	6	11	3.2	3	6
	100	6.1	6	10	3.0	3	5
	130	6.0	6	8	3.0	3	4
	160	6.0	6	6	3.0	3	3
	200	6.0	6	8	3.0	3	4
	250	6.0	6	8	3.0	3	4
	300	6.1	6	8	3.0	3	4
	400	6.6	6	11	3.3	3	5
	500	7.5	6	11	3.6	3	5
	630	8.1	6	11	3.6	3	5
	800	7.5	6	11	3.3	3	5
	1000	7.3	6	11	3.1	3	5
	1300	7.6	7	13	3.3	3	6
	1600	8.4	7	12	3.6	3	5
	2000	8.9	7	12	3.6	3	5
	2500	8.6	7	15	3.3	3	6
	3000	8.5	7	15	3.2	3	5
	4000	10.1	6	15	3.5	0	5
	5000	11.1	6	15	2.9	0	5
	6300	8.5	6	15	1.0	0	5
	8000	6.5	6	15	0.2	0	4
	10000	6.1	6	11	0.0	0	2

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
0.25	1	11.6	7	15	9.0	6	13
	1.3	11.7	7	15	8.3	6	12
	1.6	11.0	7	15	7.5	6	12
	2	10.3	9	15	6.9	6	12
	2.5	9.9	8	15	6.5	5	10
	3	10.0	8	15	6.5	5	11
	4	10.2	8	15	6.5	5	10
	5	10.1	8	15	6.4	5	10
	6.3	9.9	7	15	6.2	4	9
	8	9.6	7	15	5.9	4	9
	10	9.4	7	15	5.7	4	9
	13	9.3	7	14	5.5	4	8
	16	9.1	7	15	5.4	4	9
	20	8.9	6	15	5.1	3	9
	25	8.5	6	15	4.8	3	9
	30	8.3	6	15	4.7	3	8
	40	8.2	6	15	4.5	3	8
	50	8.1	6	13	4.4	3	7
	63	7.6	6	13	4.0	3	7
	80	7.0	6	11	3.6	3	6
	100	6.6	6	11	3.3	3	6
	130	6.2	6	11	3.1	3	6
	160	6.1	6	10	3.0	3	5
	200	6.1	6	10	3.0	3	5
	250	6.3	6	10	3.1	3	5
	300	6.5	6	11	3.2	3	5
	400	7.1	6	11	3.5	3	5
	500	7.7	6	12	3.7	3	6
	630	8.1	6	13	3.7	3	6
	800	8.3	6	13	3.7	3	6
	1000	8.3	6	15	3.7	3	7
	1300	8.5	6	15	3.7	3	7
	1600	8.9	6	15	3.8	3	7
	2000	9.2	7	15	3.8	3	6
	2500	9.7	7	15	3.8	2	6
	3000	10.1	6	15	3.8	0	6
	4000	11.0	6	15	3.5	0	6
	5000	11.0	6	15	2.9	0	5
	6300	10.1	6	15	1.9	0	5
	8000	8.4	6	15	0.9	0	5
	10000	7.1	6	15	0.4	0	5

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
0.5	1	11.9	7	15	8.9	5	13
	1.3	12.1	7	15	8.7	5	12
	1.6	11.7	7	15	8.2	5	12
	2	11.6	7	15	7.9	5	12
	2.5	11.5	7	15	7.6	4	12
	3	11.2	7	15	7.3	4	11
	4	11.0	7	15	7.0	4	11
	5	10.8	7	15	6.7	4	10
	6.3	10.6	7	15	6.5	4	11
	8	10.4	7	15	6.3	4	10
	10	10.2	6	15	6.1	3	10
	13	10.1	6	15	5.9	3	9
	16	9.8	6	15	5.7	3	9
	20	9.6	6	15	5.5	3	9
	25	9.4	6	15	5.3	3	9
	30	9.0	6	15	5.0	3	9
	40	8.6	6	15	4.7	3	9
	50	8.2	6	15	4.4	3	8
	63	7.9	6	14	4.1	3	8
	80	7.5	6	15	3.8	3	8
	100	7.0	6	13	3.6	3	7
	130	6.8	6	13	3.4	3	7
	160	6.7	6	12	3.4	3	6
	200	6.7	6	12	3.3	3	6
	250	6.8	6	12	3.4	3	6
	300	7.1	6	13	3.5	3	6
	400	7.5	6	15	3.6	3	7
	500	8.0	6	15	3.8	3	7
	630	8.4	6	15	3.9	3	7
	800	8.6	6	15	3.9	3	7
	1000	9.1	6	15	4.1	1	7
	1300	9.5	6	15	4.1	0	7
	1600	9.7	6	15	4.1	0	7
	2000	10.3	6	15	4.2	0	7
	2500	10.6	6	15	4.0	0	7
	3000	10.7	6	15	3.9	0	6
	4000	11.2	6	15	3.6	0	6
	5000	11.1	6	15	3.2	0	6
	6300	10.8	6	15	2.6	0	6
	8000	10.2	6	15	2.0	0	6
	10000	9.3	6	15	1.5	0	5

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
1	1	12.0	6	15	8.7	3	13
	1.3	12.2	7	15	8.6	4	12
	1.6	12.2	6	15	8.4	3	12
	2	12.1	7	15	8.1	4	12
	2.5	12.1	6	15	7.9	3	12
	3	11.8	6	15	7.7	3	12
	4	11.8	6	15	7.4	3	12
	5	11.7	6	15	7.2	3	12
	6.3	11.2	6	15	6.8	3	11
	8	11.1	6	15	6.6	3	11
	10	10.8	6	15	6.4	3	11
	13	10.6	6	15	6.1	3	12
	16	10.1	6	15	5.8	3	11
	20	9.9	6	15	5.5	3	10
	25	9.7	6	15	5.4	3	10
	30	9.3	6	15	5.1	3	11
	40	8.9	6	15	4.8	3	10
	50	8.6	6	15	4.6	3	9
	63	8.3	6	15	4.4	3	9
	80	8.0	6	15	4.1	3	9
	100	7.9	6	15	4.0	3	9
	130	7.6	6	15	3.8	3	8
	160	7.6	6	15	3.8	3	8
	200	7.6	6	15	3.8	3	8
	250	7.8	6	15	3.8	3	8
	300	7.9	6	15	3.8	3	7
	400	8.2	6	15	3.9	1	7
	500	8.3	6	15	3.9	0	7
	630	8.7	6	15	4.0	2	7
	800	8.9	6	15	4.0	0	7
	1000	9.2	6	15	4.1	0	7
	1300	9.7	6	15	4.2	0	7
	1600	10.0	6	15	4.2	0	7
	2000	10.4	6	15	4.2	0	7
	2500	10.8	6	15	4.1	0	7
	3000	10.7	6	15	4.0	0	7
	4000	11.3	6	15	3.8	0	7
	5000	11.2	6	15	3.6	0	7
	6300	11.2	6	15	3.4	0	6
	8000	10.9	6	15	3.0	0	7
	10000	10.8	6	15	2.7	0	7

Number of Animals as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	Number of Animals			Number of Dead Animals		
		Average	Min	Max	Average	Min	Max
2	1	12.1	6	15	8.2	3	12
	1.3	11.9	6	15	8.0	3	13
	1.6	11.7	6	15	7.7	3	12
	2	11.7	6	15	7.6	3	12
	2.5	11.7	6	15	7.4	3	12
	3	11.5	6	15	7.1	3	12
	4	11.2	6	15	6.9	3	12
	5	11.0	6	15	6.6	3	12
	6.3	10.7	6	15	6.4	3	12
	8	10.6	6	15	6.2	3	11
	10	10.3	6	15	6.0	3	12
	13	10.1	6	15	5.8	3	11
	16	10.0	6	15	5.6	3	11
	20	9.7	6	15	5.4	3	11
	25	9.5	6	15	5.3	3	11
	30	9.3	6	15	5.1	3	12
	40	9.1	6	15	4.9	3	12
	50	9.0	6	15	4.8	0	11
	63	9.0	6	15	4.7	1	10
	80	8.6	6	15	4.5	3	10
	100	8.6	6	15	4.4	0	10
	130	8.6	6	15	4.4	0	10
	160	8.6	6	15	4.3	1	10
	200	8.6	6	15	4.3	2	10
	250	8.6	6	15	4.2	0	10
	300	8.6	6	15	4.2	0	10
	400	8.7	6	15	4.2	0	8
	500	8.8	6	15	4.2	0	9
	630	9.0	6	15	4.1	0	8
	800	9.2	6	15	4.2	0	8
	1000	9.3	6	15	4.1	0	8
	1300	9.6	6	15	4.1	0	7
	1600	9.8	6	15	4.1	0	8
	2000	9.8	6	15	4.0	0	7
	2500	10.0	6	15	4.0	0	9
	3000	10.1	6	15	4.0	0	7
	4000	10.5	6	15	4.0	0	7
	5000	10.5	6	15	3.8	0	7
	6300	10.7	6	15	3.8	0	7
	8000	10.7	6	15	3.7	0	7
	10000	10.7	6	15	3.4	0	7

95% CI Coverage as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = 175 mg/kg

True Sigma	True LD50	(-) Yes	(--- Yes	(---) Yes	---- Yes	(---) No	(--- No	(-) No	Coverage
0.125	1	0.755	0.000	0.245	0.000	0.000	0.000	0.000	1.000
	1.3	0.992	0.000	0.008	0.000	0.000	0.000	0.000	1.000
	1.6	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	2	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	2.5	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	3	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	4	0.999	0.000	0.000	0.000	0.000	0.000	0.001	0.999
	5	0.951	0.000	0.000	0.000	0.000	0.000	0.049	0.951
	6.3	0.965	0.000	0.000	0.000	0.000	0.000	0.035	0.965
	8	0.999	0.000	0.000	0.000	0.000	0.000	0.001	0.999
	10	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	13	0.996	0.000	0.000	0.000	0.000	0.000	0.004	0.996
	16	0.954	0.000	0.000	0.000	0.000	0.000	0.046	0.954
	20	0.965	0.000	0.000	0.000	0.000	0.000	0.035	0.965
	25	0.996	0.000	0.000	0.000	0.000	0.000	0.004	0.996
	30	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	40	0.996	0.000	0.000	0.000	0.000	0.000	0.004	0.996
	50	0.954	0.000	0.000	0.001	0.000	0.000	0.045	0.955
	63	0.965	0.000	0.000	0.001	0.000	0.000	0.034	0.966
	80	0.997	0.000	0.000	0.001	0.000	0.000	0.002	0.998
	100	0.998	0.000	0.000	0.002	0.000	0.000	0.000	1.000
	130	0.997	0.000	0.000	0.000	0.000	0.000	0.003	0.997
	160	0.924	0.000	0.000	0.000	0.000	0.000	0.076	0.924
	200	0.961	0.000	0.000	0.001	0.000	0.000	0.038	0.962
	250	0.997	0.000	0.000	0.003	0.000	0.000	0.000	1.000
	300	0.999	0.000	0.000	0.001	0.000	0.000	0.000	1.000
	400	0.995	0.000	0.000	0.000	0.000	0.000	0.005	0.995
	500	0.952	0.000	0.000	0.000	0.000	0.000	0.048	0.952
	630	0.972	0.000	0.000	0.000	0.000	0.000	0.028	0.972
	800	0.997	0.000	0.000	0.000	0.000	0.000	0.003	0.997
	1000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	1300	0.996	0.000	0.000	0.000	0.000	0.000	0.004	0.996
	1600	0.945	0.000	0.000	0.000	0.000	0.000	0.055	0.945
	2000	0.961	0.000	0.000	0.000	0.000	0.000	0.039	0.961
	2500	0.997	0.000	0.000	0.001	0.000	0.000	0.002	0.998
	3000	0.994	0.001	0.000	0.005	0.000	0.000	0.000	1.000
	4000	0.972	0.021	0.000	0.001	0.000	0.006	0.000	0.994
	5000	0.760	0.240	0.000	0.000	0.000	0.000	0.000	1.000
	6300	0.160	0.818	0.000	0.000	0.000	0.000	0.021	0.979
	8000	0.021	0.971	0.000	0.000	0.000	0.000	0.007	0.993
	10000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	1.000

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(--) Yes	(--- Yes	(---) Yes	---- Yes	(---) No	(--- No	(-- No	Coverage
0.25	1	0.742	0.000	0.258	0.000	0.000	0.000	0.000	1.000
	1.3	0.930	0.000	0.065	0.000	0.005	0.000	0.000	0.995
	1.6	0.979	0.000	0.015	0.000	0.003	0.000	0.003	0.994
	2	0.990	0.000	0.006	0.000	0.002	0.000	0.002	0.996
	2.5	0.993	0.000	0.002	0.000	0.000	0.000	0.005	0.995
	3	0.992	0.000	0.002	0.000	0.000	0.000	0.006	0.994
	4	0.977	0.000	0.000	0.000	0.000	0.000	0.023	0.977
	5	0.917	0.000	0.001	0.000	0.000	0.000	0.082	0.918
	6.3	0.923	0.000	0.000	0.000	0.000	0.000	0.077	0.923
	8	0.982	0.000	0.001	0.000	0.000	0.000	0.017	0.983
	10	0.976	0.000	0.004	0.000	0.000	0.000	0.020	0.980
	13	0.941	0.000	0.006	0.001	0.000	0.000	0.052	0.948
	16	0.895	0.000	0.002	0.003	0.000	0.000	0.100	0.900
	20	0.924	0.000	0.001	0.003	0.000	0.000	0.072	0.928
	25	0.940	0.000	0.000	0.011	0.000	0.000	0.049	0.951
	30	0.960	0.000	0.001	0.022	0.000	0.000	0.017	0.983
	40	0.950	0.000	0.000	0.022	0.000	0.000	0.028	0.972
	50	0.881	0.000	0.000	0.028	0.000	0.000	0.091	0.909
	63	0.873	0.000	0.000	0.049	0.000	0.000	0.078	0.922
	80	0.869	0.000	0.000	0.079	0.000	0.000	0.052	0.948
	100	0.878	0.000	0.000	0.104	0.000	0.000	0.018	0.982
	130	0.913	0.000	0.000	0.060	0.000	0.000	0.027	0.973
	160	0.855	0.000	0.000	0.046	0.000	0.000	0.099	0.901
	200	0.887	0.000	0.000	0.038	0.000	0.000	0.075	0.925
	250	0.904	0.000	0.000	0.072	0.000	0.000	0.024	0.976
	300	0.891	0.000	0.000	0.098	0.000	0.000	0.011	0.989
	400	0.902	0.000	0.000	0.075	0.000	0.000	0.023	0.977
	500	0.855	0.000	0.000	0.055	0.000	0.000	0.090	0.910
	630	0.892	0.000	0.000	0.029	0.000	0.000	0.079	0.921
	800	0.946	0.000	0.000	0.028	0.000	0.000	0.026	0.974
	1000	0.967	0.000	0.000	0.017	0.000	0.000	0.016	0.984
	1300	0.960	0.000	0.000	0.014	0.000	0.000	0.026	0.974
	1600	0.898	0.001	0.000	0.019	0.000	0.000	0.082	0.918
	2000	0.864	0.004	0.000	0.032	0.000	0.000	0.100	0.900
	2500	0.914	0.017	0.000	0.038	0.000	0.001	0.030	0.969
	3000	0.888	0.031	0.000	0.044	0.000	0.010	0.026	0.964
	4000	0.856	0.091	0.000	0.028	0.000	0.024	0.001	0.975
	5000	0.678	0.289	0.000	0.013	0.000	0.000	0.021	0.979
	6300	0.338	0.589	0.000	0.003	0.000	0.000	0.070	0.930
	8000	0.145	0.836	0.000	0.000	0.000	0.000	0.020	0.980
	10000	0.058	0.924	0.000	0.000	0.000	0.000	0.018	0.982

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(--) Yes	(--- Yes	(---) Yes	---- Yes	(---) No	(--- No	(-- No	Coverage
0.5	1	0.650	0.000	0.305	0.000	0.000	0.000	0.046	0.954
	1.3	0.751	0.000	0.214	0.001	0.010	0.000	0.024	0.966
	1.6	0.785	0.000	0.153	0.005	0.015	0.000	0.041	0.943
	2	0.843	0.000	0.096	0.010	0.021	0.000	0.029	0.949
	2.5	0.848	0.000	0.064	0.010	0.014	0.000	0.064	0.922
	3	0.827	0.000	0.057	0.016	0.004	0.000	0.095	0.901
	4	0.843	0.000	0.053	0.029	0.004	0.000	0.071	0.925
	5	0.822	0.000	0.027	0.021	0.002	0.000	0.128	0.870
	6.3	0.826	0.000	0.036	0.017	0.000	0.000	0.121	0.879
	8	0.884	0.000	0.028	0.022	0.000	0.000	0.066	0.934
	10	0.851	0.000	0.026	0.030	0.000	0.000	0.093	0.907
	13	0.790	0.000	0.035	0.045	0.000	0.000	0.130	0.870
	16	0.762	0.000	0.025	0.053	0.000	0.000	0.160	0.840
	20	0.778	0.000	0.016	0.082	0.000	0.000	0.124	0.876
	25	0.742	0.000	0.014	0.125	0.000	0.000	0.119	0.881
	30	0.736	0.000	0.007	0.145	0.000	0.000	0.112	0.888
	40	0.694	0.000	0.004	0.196	0.000	0.000	0.106	0.894
	50	0.624	0.000	0.005	0.243	0.000	0.000	0.128	0.872
	63	0.642	0.000	0.002	0.271	0.000	0.000	0.085	0.915
	80	0.618	0.000	0.000	0.293	0.000	0.000	0.089	0.911
	100	0.655	0.000	0.000	0.265	0.000	0.000	0.080	0.920
	130	0.603	0.000	0.000	0.277	0.000	0.000	0.120	0.880
	160	0.589	0.000	0.000	0.260	0.000	0.000	0.151	0.849
	200	0.626	0.000	0.000	0.257	0.000	0.000	0.117	0.883
	250	0.657	0.000	0.000	0.257	0.000	0.000	0.086	0.914
	300	0.636	0.000	0.000	0.294	0.000	0.000	0.070	0.930
	400	0.636	0.001	0.000	0.286	0.000	0.000	0.077	0.923
	500	0.598	0.005	0.000	0.305	0.000	0.000	0.092	0.908
	630	0.638	0.003	0.000	0.246	0.000	0.000	0.113	0.887
	800	0.712	0.004	0.000	0.198	0.000	0.000	0.086	0.914
	1000	0.720	0.004	0.000	0.174	0.000	0.002	0.100	0.898
	1300	0.745	0.013	0.000	0.162	0.000	0.004	0.075	0.921
	1600	0.679	0.027	0.000	0.158	0.000	0.005	0.131	0.864
	2000	0.662	0.055	0.000	0.144	0.000	0.007	0.131	0.862
	2500	0.650	0.083	0.000	0.146	0.000	0.021	0.100	0.879
	3000	0.631	0.118	0.000	0.136	0.000	0.030	0.086	0.884
	4000	0.587	0.251	0.000	0.099	0.000	0.023	0.039	0.937
	5000	0.501	0.357	0.000	0.066	0.000	0.000	0.076	0.924
	6300	0.335	0.533	0.000	0.030	0.000	0.000	0.101	0.899
	8000	0.277	0.631	0.000	0.012	0.000	0.000	0.080	0.920
	10000	0.155	0.737	0.000	0.017	0.000	0.000	0.091	0.909

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(--) Yes	(--- Yes	---) Yes	---- Yes	---) No	(--- No	(--) No	Coverage
1	1	0.407	0.000	0.407	0.057	0.000	0.000	0.128	0.872
	1.3	0.480	0.000	0.330	0.086	0.009	0.000	0.095	0.896
	1.6	0.488	0.000	0.279	0.101	0.018	0.000	0.114	0.868
	2	0.520	0.000	0.244	0.116	0.018	0.000	0.103	0.880
	2.5	0.542	0.000	0.207	0.116	0.020	0.000	0.116	0.864
	3	0.534	0.000	0.162	0.150	0.019	0.000	0.135	0.845
	4	0.520	0.000	0.133	0.171	0.024	0.000	0.152	0.824
	5	0.543	0.000	0.116	0.156	0.011	0.000	0.174	0.815
	6.3	0.547	0.000	0.085	0.175	0.015	0.000	0.177	0.808
	8	0.580	0.000	0.060	0.228	0.005	0.000	0.127	0.868
	10	0.515	0.000	0.068	0.221	0.002	0.000	0.193	0.805
	13	0.473	0.000	0.052	0.280	0.002	0.000	0.193	0.805
	16	0.481	0.000	0.038	0.270	0.001	0.000	0.209	0.790
	20	0.482	0.000	0.043	0.281	0.001	0.000	0.193	0.806
	25	0.427	0.000	0.029	0.343	0.002	0.000	0.199	0.799
	30	0.450	0.000	0.024	0.328	0.002	0.000	0.195	0.803
	40	0.425	0.000	0.014	0.374	0.001	0.000	0.186	0.813
	50	0.415	0.000	0.014	0.409	0.000	0.000	0.162	0.838
	63	0.454	0.000	0.013	0.387	0.001	0.000	0.145	0.854
	80	0.406	0.000	0.005	0.416	0.001	0.000	0.172	0.827
	100	0.446	0.001	0.006	0.437	0.000	0.000	0.110	0.890
	130	0.421	0.000	0.001	0.405	0.000	0.000	0.173	0.827
	160	0.355	0.000	0.001	0.435	0.000	0.000	0.209	0.791
	200	0.420	0.000	0.000	0.410	0.000	0.000	0.170	0.830
	250	0.388	0.002	0.000	0.465	0.000	0.000	0.145	0.855
	300	0.416	0.003	0.000	0.436	0.000	0.001	0.144	0.855
	400	0.391	0.000	0.000	0.455	0.000	0.003	0.151	0.846
	500	0.434	0.004	0.000	0.411	0.000	0.003	0.148	0.849
	630	0.432	0.006	0.000	0.402	0.000	0.005	0.155	0.840
	800	0.450	0.004	0.001	0.374	0.000	0.007	0.164	0.829
	1000	0.398	0.012	0.000	0.411	0.000	0.007	0.172	0.821
	1300	0.401	0.027	0.000	0.407	0.000	0.006	0.158	0.836
	1600	0.351	0.038	0.000	0.377	0.000	0.027	0.207	0.765
	2000	0.350	0.071	0.000	0.365	0.000	0.022	0.192	0.786
	2500	0.353	0.110	0.000	0.350	0.000	0.026	0.161	0.813
	3000	0.353	0.109	0.000	0.348	0.000	0.035	0.155	0.810
	4000	0.347	0.219	0.000	0.317	0.000	0.019	0.098	0.883
	5000	0.286	0.310	0.000	0.272	0.000	0.000	0.132	0.868
	6300	0.204	0.362	0.000	0.235	0.000	0.000	0.199	0.801
	8000	0.250	0.424	0.000	0.164	0.000	0.000	0.162	0.838
	10000	0.173	0.553	0.000	0.120	0.000	0.000	0.154	0.846

95% CI Coverage as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	(--) Yes	(--- Yes	---) Yes	---- Yes	---) No	(--- No	(--) No	Coverage
2	1	0.228	0.000	0.305	0.281	0.000	0.000	0.187	0.813
	1.3	0.244	0.000	0.267	0.309	0.007	0.000	0.173	0.820
	1.6	0.253	0.000	0.214	0.317	0.010	0.000	0.206	0.784
	2	0.277	0.000	0.190	0.330	0.015	0.000	0.188	0.797
	2.5	0.259	0.000	0.158	0.353	0.022	0.000	0.208	0.771
	3	0.289	0.000	0.130	0.363	0.013	0.000	0.205	0.782
	4	0.258	0.000	0.104	0.371	0.028	0.000	0.240	0.732
	5	0.247	0.000	0.099	0.362	0.022	0.000	0.270	0.709
	6.3	0.274	0.000	0.069	0.379	0.019	0.000	0.258	0.722
	8	0.288	0.000	0.060	0.415	0.012	0.000	0.225	0.763
	10	0.259	0.000	0.045	0.420	0.013	0.000	0.263	0.724
	13	0.241	0.000	0.044	0.441	0.013	0.000	0.261	0.725
	16	0.248	0.000	0.027	0.455	0.014	0.000	0.256	0.730
	20	0.241	0.000	0.030	0.424	0.014	0.000	0.290	0.696
	25	0.240	0.001	0.021	0.444	0.007	0.000	0.287	0.706
	30	0.290	0.000	0.017	0.431	0.013	0.000	0.249	0.738
	40	0.244	0.000	0.018	0.462	0.006	0.001	0.269	0.724
	50	0.317	0.000	0.008	0.468	0.005	0.000	0.202	0.793
	63	0.337	0.000	0.015	0.461	0.005	0.001	0.181	0.813
	80	0.328	0.000	0.006	0.460	0.001	0.001	0.204	0.794
	100	0.337	0.001	0.005	0.466	0.000	0.000	0.191	0.809
	130	0.264	0.001	0.007	0.502	0.001	0.001	0.224	0.774
	160	0.266	0.000	0.002	0.499	0.000	0.003	0.229	0.768
	200	0.299	0.000	0.003	0.471	0.003	0.005	0.219	0.773
	250	0.293	0.001	0.002	0.487	0.003	0.005	0.209	0.783
	300	0.278	0.001	0.001	0.489	0.002	0.002	0.227	0.769
	400	0.278	0.004	0.000	0.508	0.000	0.009	0.201	0.790
	500	0.328	0.001	0.000	0.458	0.001	0.011	0.201	0.787
	630	0.346	0.004	0.000	0.472	0.000	0.019	0.158	0.822
	800	0.254	0.010	0.000	0.518	0.000	0.012	0.206	0.782
	1000	0.233	0.021	0.000	0.498	0.000	0.021	0.227	0.752
	1300	0.226	0.035	0.001	0.484	0.000	0.024	0.231	0.746
	1600	0.211	0.034	0.000	0.471	0.000	0.039	0.246	0.715
	2000	0.176	0.045	0.000	0.489	0.000	0.027	0.263	0.710
	2500	0.196	0.063	0.000	0.453	0.001	0.035	0.253	0.712
	3000	0.207	0.076	0.000	0.472	0.000	0.020	0.224	0.755
	4000	0.216	0.132	0.000	0.428	0.000	0.013	0.212	0.775
	5000	0.192	0.143	0.000	0.422	0.000	0.000	0.244	0.756
	6300	0.139	0.184	0.000	0.440	0.000	0.000	0.237	0.763
	8000	0.130	0.210	0.000	0.397	0.000	0.000	0.263	0.737
	10000	0.126	0.251	0.000	0.389	0.000	0.000	0.234	0.766

(--- Yes

---- Yes

---) Yes

---) No

(--- No

(--) No

Coverage

CI is infinite on the high side and covers the true LD50

CI is infinite on the low side and covers the true LD50

CI is infinite on the both sides and covers the true LD50

CI is infinite on the low side and does not cover the true LD50

CI is infinite on the high side and does not cover the true LD50

CI is finite and does not cover the true LD50

Overall coverage, percent of case 2 to 5 confidence intervals covering the true LD50

**Relative LD50 Estimate as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = 175 mg/kg**

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
0.125	1	2.865	-10.196	2.821	0.000	0.000
	1.3	5.011	-0.912	1.910	1.910	-0.912
	1.6	4.290	-1.633	1.189	1.189	-1.633
	2	3.515	-2.408	0.413	0.413	-2.408
	2.5	2.739	-3.184	-0.362	-0.362	-0.362
	3	2.106	-3.817	2.106	-0.995	-0.995
	4	1.106	-4.816	1.106	-1.995	-1.995
	5	1.679	-4.794	2.154	0.331	-2.770
	6.3	2.971	-2.325	1.351	-0.472	-3.573
	8	2.720	-1.302	0.521	0.521	-1.302
	10	1.944	-2.077	1.944	-0.254	-2.077
	13	1.033	-2.989	1.033	-1.166	-1.166
	16	1.535	-3.244	2.134	0.311	-1.887
	20	2.942	-2.563	1.358	-0.464	-2.662
	25	2.739	-1.239	0.583	0.583	-1.239
	30	2.106	-1.873	2.106	-0.050	-1.873
	40	1.106	-2.872	1.106	-1.050	-1.050
	50	1.572	-3.192	2.342	0.331	-1.825
	63	3.130	-2.040	1.539	-0.472	-2.628
	80	2.720	-1.302	0.709	0.709	-1.302
	100	1.944	-2.077	1.944	-0.066	-2.077
	130	1.033	-2.989	1.033	-0.978	-0.978
	160	5.198	-4.574	2.301	0.311	-1.699
	200	4.423	-5.349	1.525	-0.464	-2.475
	250	2.739	-1.239	0.750	0.750	-1.239
	300	2.106	-1.873	2.106	0.117	-1.873
	400	1.106	-2.872	1.106	-0.883	-0.883
	500	2.443	-3.235	2.511	0.331	-1.658
	630	3.086	-1.708	1.708	-0.472	-2.461
	800	2.720	-1.302	0.878	0.878	-1.302
	1000	1.944	-2.077	1.944	0.103	-2.077
	1300	1.033	-2.989	1.033	-0.809	-0.809
	1600	3.332	-3.120	2.330	0.311	-1.530
	2000	2.779	-1.663	1.555	-0.464	-2.306
	2500	2.408	-1.239	0.780	0.780	-1.239
	3000	1.775	-1.873	1.775	0.146	-1.873
	4000	0.978	-2.380	0.775	0.775	-0.853
	5000	5.731	-2.004	0.000	0.000	-1.628
	6300	100.000	-3.959	-0.803	-0.803	-0.803
	8000	100.000	-100.000	-1.633	-1.633	-1.633
	10000	100.000	-100.000	-2.408	-2.408	-2.408

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
0.25	1	1.433	-5.098	1.411	0.000	0.000
	1.3	1.770	-1.178	0.955	-0.456	-0.456
	1.6	2.145	-0.981	2.145	0.547	-0.816
	2	1.757	-1.204	1.757	0.207	-1.204
	2.5	1.370	-1.592	1.370	-0.181	-1.592
	3	1.053	-1.908	1.053	-0.498	-1.908
	4	1.227	-2.009	1.027	0.553	-0.997
	5	1.414	-2.191	1.077	0.166	-1.385
	6.3	1.339	-2.375	1.119	-0.236	-1.787
	8	1.360	-1.503	1.360	0.261	-0.651
	10	0.972	-1.039	0.972	-0.127	-1.039
	13	1.128	-1.261	1.427	0.516	-1.494
	16	1.366	-1.622	1.067	0.156	-0.944
	20	1.471	-1.846	1.757	-0.232	-1.331
	25	1.370	-1.396	1.370	-0.484	-0.620
	30	1.053	-0.936	1.053	-0.025	-0.936
	40	1.174	-1.436	1.100	0.553	-1.436
	50	1.427	-1.596	1.171	0.166	-1.824
	63	1.565	-1.861	1.775	-0.236	-1.314
	80	1.360	-1.435	1.360	0.354	-0.651
	100	0.972	-1.823	0.972	-0.033	-1.039
	130	2.960	-2.278	1.511	0.516	-1.494
	160	2.599	-2.287	1.150	0.156	-0.850
	200	2.212	-2.675	1.220	-0.232	-1.237
	250	2.153	-3.062	1.370	-0.620	-0.620
	300	1.837	-2.047	1.053	0.058	-0.936
	400	1.664	-1.436	1.147	0.553	-1.436
	500	1.798	-1.617	1.255	0.166	-1.824
	630	1.543	-1.487	0.980	-0.236	-1.231
	800	1.360	-1.269	1.360	-0.058	-0.651
	1000	0.972	-1.039	0.972	0.051	-1.039
	1300	1.263	-1.494	1.286	0.516	-1.494
	1600	1.775	-1.526	1.165	0.156	-0.826
	2000	1.390	-1.443	1.063	-0.232	-1.153
	2500	1.204	-1.219	1.204	-0.050	-0.620
	3000	0.887	-0.936	0.887	0.073	-0.936
	4000	1.448	-1.190	0.521	0.388	-1.436
	5000	3.588	-1.195	0.311	0.000	-0.908
	6300	100.000	-1.131	-0.091	-0.401	-1.216
	8000	100.000	-2.394	-0.816	-0.816	-0.816
	10000	100.000	-100.000	-1.204	-1.204	-1.204

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
0.5	1	1.089	-2.549	1.481	0.000	-1.200
	1.3	0.949	-2.174	1.253	-0.228	-1.428
	1.6	1.072	-1.289	1.072	0.076	-0.995
	2	0.879	-1.204	0.879	0.103	-0.693
	2.5	1.000	-1.081	0.922	-0.091	-0.796
	3	0.863	-0.954	0.997	-0.017	-0.954
	4	0.901	-1.204	0.959	0.277	-1.204
	5	0.870	-1.198	1.088	0.083	-0.920
	6.3	0.887	-1.296	0.887	-0.118	-0.893
	8	0.903	-1.395	1.135	0.115	-1.101
	10	0.817	-1.478	0.942	-0.049	-0.832
	13	0.864	-0.748	1.253	0.258	-0.747
	16	0.929	-0.928	1.072	0.078	-0.928
	20	0.879	-1.121	0.879	-0.116	-1.121
	25	0.983	-1.176	1.188	0.014	-0.859
	30	0.927	-1.275	1.029	0.014	-1.003
	40	1.009	-1.106	1.282	0.185	-0.826
	50	1.088	-1.139	1.088	0.083	-0.912
	63	1.443	-1.113	0.887	-0.118	-1.113
	80	1.902	-1.206	0.922	0.177	-0.865
	100	1.708	-1.074	0.983	-0.017	-1.051
	130	1.480	-1.302	1.253	0.258	-0.747
	160	1.628	-1.483	1.072	0.078	-0.928
	200	1.434	-1.513	0.879	-0.116	-1.121
	250	1.240	-1.531	0.873	-0.310	-0.914
	300	1.082	-1.690	1.041	0.029	-0.971
	400	1.166	-1.654	1.018	-0.018	-0.772
	500	1.088	-1.467	1.088	0.083	-0.912
	630	1.103	-1.023	0.887	-0.118	-1.113
	800	1.053	-1.215	0.743	-0.085	-1.320
	1000	1.162	-0.915	0.967	0.003	-1.017
	1300	1.069	-0.898	0.864	0.100	-0.777
	1600	0.990	-0.928	0.990	0.078	-0.928
	2000	0.851	-0.974	0.796	-0.116	-1.121
	2500	1.052	-1.067	0.817	-0.034	-1.072
	3000	1.252	-0.892	1.121	-0.004	-0.951
	4000	3.546	-0.881	1.363	-0.055	-0.764
	5000	40.059	-0.893	2.793	0.000	-0.912
	6300	100.000	-0.869	3.507	-0.201	-1.113
	8000	100.000	-0.966	8.701	-0.408	-0.862
	10000	100.000	-1.155	8.507	-0.602	-1.033

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
1	1	0.740	-100.000	0.968	0.031	-6.111
	1.3	0.795	-28.942	0.872	0.128	-3.520
	1.6	0.837	-4.965	1.039	0.130	-1.687
	2	0.781	-1.651	0.942	0.061	-1.708
	2.5	0.773	-1.576	0.845	0.021	-1.549
	3	0.766	-1.477	0.994	0.134	-1.600
	4	0.752	-1.587	1.092	0.138	-0.895
	5	0.725	-1.472	1.041	0.056	-0.745
	6.3	0.746	-0.997	1.065	0.129	-0.799
	8	0.762	-1.058	1.089	0.072	-0.819
	10	0.742	-1.097	0.992	0.078	-0.739
	13	0.827	-1.269	1.129	0.129	-0.811
	16	0.852	-1.204	1.039	0.039	-0.849
	20	0.890	-1.296	0.942	0.049	-0.660
	25	0.848	-1.522	0.845	0.073	-0.782
	30	1.038	-1.200	1.015	0.096	-0.737
	40	1.252	-1.264	0.890	0.138	-0.832
	50	1.155	-1.512	0.920	0.041	-0.892
	63	1.055	-1.001	0.941	-0.033	-0.750
	80	1.115	-1.012	0.837	0.089	-0.700
	100	1.018	-1.260	0.740	-0.008	-0.757
	130	0.904	-0.818	0.775	0.129	-0.758
	160	1.039	-0.961	0.814	0.039	-0.733
	200	0.886	-0.838	0.857	-0.058	-0.753
	250	1.032	-1.155	0.845	-0.155	-0.787
	300	0.953	-1.014	0.766	-0.067	-0.759
	400	1.124	-1.139	0.779	-0.110	-0.862
	500	1.000	-1.236	0.697	-0.080	-0.959
	630	0.927	-1.167	0.696	-0.059	-0.983
	800	0.854	-1.271	0.673	-0.163	-0.911
	1000	1.446	-1.368	0.659	-0.138	-1.008
	1300	1.556	-1.149	0.585	-0.101	-0.871
	1600	1.937	-0.972	0.949	-0.082	-0.961
	2000	4.250	-1.036	1.182	-0.058	-1.058
	2500	100.000	-0.931	1.374	-0.105	-1.155
	3000	100.000	-0.988	1.415	-0.160	-1.234
	4000	100.000	-0.891	4.651	-0.107	-1.110
	5000	100.000	-0.912	4.554	-0.170	-0.959
	6300	100.000	-0.935	4.454	-0.183	-1.059
	8000	100.000	-0.807	4.350	-0.204	-1.163
	10000	100.000	-0.839	4.253	-0.301	-0.987

Relative LD50 Estimate as a Function of True LD50 and True Sigma (Continued)

True Sigma	True LD50	UCL	LCL	97.5%tile	Median	2.5%tile
2	1	0.730	-100.000	0.996	0.178	-3.056
	1.3	0.754	-100.000	1.065	0.169	-3.113
	1.6	0.779	-100.000	1.019	0.205	-3.158
	2	0.877	-100.000	0.971	0.203	-1.986
	2.5	0.835	-100.000	0.923	0.171	-1.562
	3	0.857	-100.000	1.007	0.191	-0.703
	4	0.820	-100.000	0.945	0.183	-1.252
	5	0.791	-34.344	0.896	0.190	-0.676
	6.3	0.861	-3.208	0.846	0.203	-0.787
	8	0.975	-30.376	0.891	0.170	-0.598
	10	0.927	-4.108	0.810	0.122	-0.647
	13	0.952	-100.000	0.787	0.135	-0.580
	16	0.907	-100.000	0.768	0.140	-0.632
	20	0.858	-1.905	0.744	0.145	-0.578
	25	0.810	-2.040	0.671	0.148	-0.578
	30	0.770	-1.153	0.692	0.132	-0.588
	40	0.874	-2.142	0.698	0.131	-0.622
	50	0.826	-1.940	0.656	0.083	-0.634
	63	0.776	-1.575	0.693	0.096	-0.619
	80	0.724	-1.040	0.670	0.044	-0.581
	100	0.765	-1.078	0.629	0.060	-0.630
	130	100.000	-100.000	0.584	0.064	-0.585
	160	100.000	-100.000	0.609	0.019	-0.594
	200	1.185	-1.228	0.593	-0.029	-0.620
	250	1.628	-1.583	0.549	-0.077	-0.652
	300	2.637	-1.631	0.503	-0.056	-0.617
	400	100.000	-100.000	0.514	-0.108	-0.680
	500	0.986	-0.785	0.494	-0.104	-0.728
	630	100.000	-0.955	0.489	-0.103	-0.664
	800	100.000	-100.000	0.553	-0.120	-0.718
	1000	100.000	-100.000	0.536	-0.130	-0.653
	1300	100.000	-1.260	0.882	-0.126	-0.729
	1600	100.000	-78.641	0.844	-0.145	-0.732
	2000	100.000	-100.000	0.842	-0.198	-0.780
	2500	100.000	-1.000	0.544	-0.193	-0.829
	3000	100.000	-100.000	1.038	-0.178	-0.794
	4000	100.000	-1.070	1.265	-0.180	-0.856
	5000	100.000	-1.118	2.277	-0.214	-0.854
	6300	100.000	-1.252	2.227	-0.207	-0.904
	8000	100.000	-1.220	2.175	-0.252	-0.956
	10000	100.000	-1.269	2.127	-0.256	-0.878

Relative LD50 Estimate is $(\text{Log}_{10}(\text{estimated LD50}) - \text{Log}_{10}(\text{True Ld50}))/\text{True Sigma}$

The following values are all converted to a relative scale

UCL is the median of the estimated upper confidence bound for a 95% (two-sided) confidence interval

LCL is the median of the estimated lower confidence bound for a 95% (two-sided) confidence interval

97.5%tile is the 97 and a half percentile of the simulated LD50 values

Median is the median of the simulated LD50 values

Extreme or infinite values appear as 100 or -100

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma
Assumed sigma = 0.5, Starting dose = 175 mg/kg

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
0.125	1	0	0.33	0	0.377	0.293
	1.3	0	0.9	0	0.018	0.082
	1.6	0	0.99	0	0	0.01
	2	0	1	0	0	0
	2.5	0	0.994	0.006	0	0
	3	0	0.966	0.034	0	0
	4	0	0.751	0.249	0	0
	5	0	0.444	0.556	0	0
	6.3	0	0.48	0.52	0	0
	8	0	0.773	0.227	0	0
	10	0	0.917	0.083	0	0
	13	0	0.722	0.278	0	0
	16	0	0.418	0.582	0	0
	20	0	0.385	0.615	0	0
	25	0	0.746	0.254	0	0
	30	0	0.888	0.112	0	0
	40	0	0.74	0.26	0	0
	50	0	0.438	0.562	0	0
	63	0	0.381	0.619	0	0
	80	0	0.727	0.273	0	0
	100	0	0.882	0.118	0	0
	130	0	0.613	0.387	0	0
	160	0	0.304	0.696	0	0
	200	0	0.365	0.635	0	0
	250	0	0.688	0.312	0	0
	300	0	0.859	0.141	0	0
	400	0	0.652	0.348	0	0
	500	0	0.373	0.627	0	0
	630	0	0.481	0.519	0	0
	800	0	0.806	0.194	0	0
	1000	0	0.873	0.127	0	0
	1300	0	0.617	0.383	0	0
	1600	0	0.35	0.65	0	0
	2000	0	0.478	0.522	0	0
	2500	0	0.805	0.195	0	0
	3000	0	0.92	0.076	0	0.004
	4000	0.042	0.83	0.004	0	0.124
	5000	0.357	0.37	0	0	0.273
	6300	0.897	0.035	0	0	0.068
	8000	0.998	0.001	0	0	0.001
	10000	1	0	0	0	0

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
0.25	1	0	0.314	0.001	0.403	0.282
	1.3	0	0.636	0.005	0.115	0.244
	1.6	0	0.808	0.025	0.023	0.144
	2	0	0.869	0.074	0.003	0.054
	2.5	0	0.828	0.152	0	0.02
	3	0	0.725	0.266	0	0.009
	4	0	0.562	0.435	0	0.003
	5	0	0.402	0.593	0	0.005
	6.3	0	0.405	0.594	0	0.001
	8	0	0.476	0.521	0	0.003
	10	0	0.487	0.511	0	0.002
	13	0	0.408	0.592	0	0
	16	0	0.352	0.647	0	0.001
	20	0	0.328	0.67	0	0.002
	25	0	0.35	0.649	0	0.001
	30	0	0.435	0.565	0	0
	40	0	0.395	0.605	0	0
	50	0	0.334	0.666	0	0
	63	0	0.302	0.698	0	0
	80	0	0.369	0.631	0	0
	100	0	0.364	0.636	0	0
	130	0	0.284	0.716	0	0
	160	0	0.251	0.749	0	0
	200	0	0.236	0.764	0	0
	250	0	0.32	0.68	0	0
	300	0	0.354	0.646	0	0
	400	0	0.353	0.647	0	0
	500	0	0.305	0.695	0	0
	630	0	0.344	0.656	0	0
	800	0	0.425	0.575	0	0
	1000	0	0.423	0.576	0	0.001
	1300	0	0.356	0.64	0	0.004
	1600	0	0.302	0.693	0	0.005
	2000	0	0.41	0.576	0	0.014
	2500	0.003	0.481	0.478	0	0.038
	3000	0.02	0.581	0.326	0	0.073
	4000	0.14	0.544	0.109	0	0.207
	5000	0.375	0.325	0.036	0	0.264
	6300	0.698	0.13	0.003	0	0.169
	8000	0.914	0.024	0	0	0.062
	10000	0.984	0.005	0	0	0.011

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
0.5	1	0	0.292	0.067	0.325	0.316
	1.3	0	0.377	0.101	0.211	0.311
	1.6	0	0.463	0.209	0.108	0.22
	2	0	0.49	0.242	0.058	0.21
	2.5	0	0.451	0.367	0.03	0.152
	3	0	0.437	0.438	0.011	0.114
	4	0	0.345	0.574	0.002	0.079
	5	0	0.337	0.615	0.003	0.045
	6.3	0	0.29	0.658	0	0.052
	8	0	0.262	0.694	0	0.044
	10	0	0.231	0.735	0	0.034
	13	0	0.217	0.76	0	0.023
	16	0	0.229	0.743	0	0.028
	20	0	0.214	0.764	0	0.022
	25	0	0.179	0.808	0	0.013
	30	0	0.213	0.78	0	0.007
	40	0	0.221	0.775	0	0.004
	50	0	0.216	0.784	0	0
	63	0	0.178	0.822	0	0
	80	0	0.178	0.822	0	0
	100	0	0.196	0.804	0	0
	130	0	0.173	0.827	0	0
	160	0	0.179	0.821	0	0
	200	0	0.163	0.837	0	0
	250	0	0.158	0.842	0	0
	300	0	0.149	0.851	0	0
	400	0	0.192	0.808	0	0
	500	0	0.207	0.792	0	0.001
	630	0	0.194	0.803	0	0.003
	800	0	0.224	0.773	0	0.003
	1000	0.002	0.229	0.747	0	0.022
	1300	0.006	0.251	0.706	0	0.037
	1600	0.013	0.235	0.695	0	0.057
	2000	0.013	0.258	0.642	0	0.087
	2500	0.043	0.29	0.501	0	0.166
	3000	0.083	0.296	0.438	0	0.183
	4000	0.204	0.277	0.283	0	0.236
	5000	0.33	0.248	0.17	0	0.252
	6300	0.518	0.157	0.081	0	0.244
	8000	0.66	0.11	0.03	0	0.2
	10000	0.806	0.058	0.025	0	0.111

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
1	1	0	0.189	0.212	0.279	0.32
	1.3	0	0.197	0.247	0.226	0.33
	1.6	0	0.232	0.293	0.145	0.33
	2	0	0.242	0.364	0.108	0.286
	2.5	0	0.256	0.406	0.063	0.275
	3	0	0.231	0.462	0.062	0.245
	4	0	0.22	0.507	0.032	0.241
	5	0	0.188	0.574	0.021	0.217
	6.3	0	0.206	0.63	0.014	0.15
	8	0	0.184	0.668	0.006	0.142
	10	0	0.202	0.665	0.002	0.131
	13	0	0.174	0.715	0.003	0.108
	16	0	0.191	0.743	0.002	0.064
	20	0	0.177	0.779	0	0.044
	25	0	0.155	0.799	0	0.046
	30	0	0.154	0.815	0.001	0.03
	40	0	0.144	0.841	0	0.015
	50	0	0.133	0.85	0	0.017
	63	0	0.16	0.833	0	0.007
	80	0	0.138	0.857	0	0.005
	100	0	0.117	0.878	0	0.005
	130	0	0.125	0.874	0	0.001
	160	0	0.134	0.864	0	0.002
	200	0	0.143	0.856	0	0.001
	250	0	0.127	0.871	0	0.002
	300	0	0.121	0.876	0	0.003
	400	0.003	0.136	0.85	0	0.011
	500	0.002	0.153	0.829	0	0.016
	630	0.002	0.139	0.821	0	0.038
	800	0.012	0.151	0.79	0	0.047
	1000	0.011	0.171	0.754	0	0.064
	1300	0.015	0.168	0.721	0	0.096
	1600	0.042	0.178	0.653	0	0.127
	2000	0.066	0.183	0.602	0	0.149
	2500	0.091	0.191	0.515	0	0.203
	3000	0.121	0.185	0.482	0	0.212
	4000	0.21	0.165	0.355	0	0.27
	5000	0.27	0.138	0.337	0	0.255
	6300	0.343	0.147	0.255	0	0.255
	8000	0.431	0.125	0.198	0	0.246
	10000	0.527	0.106	0.133	0	0.234

Percent of Simulations by Stopping Criterion as a Function of True LD50 and True Sigma (Cont.)

True Sigma	True LD50	3 at Limit Dose	5 Reversals in 6 animals	LR criterion	3 at Smallest Dose	15 Animals
2	1	0	0.154	0.307	0.218	0.321
	1.3	0	0.131	0.367	0.182	0.32
	1.6	0	0.132	0.418	0.147	0.303
	2	0	0.169	0.435	0.112	0.284
	2.5	0	0.169	0.473	0.085	0.273
	3	0	0.154	0.514	0.076	0.256
	4	0	0.142	0.563	0.06	0.235
	5	0	0.15	0.6	0.044	0.206
	6.3	0	0.15	0.634	0.044	0.172
	8	0	0.157	0.66	0.019	0.164
	10	0	0.137	0.698	0.021	0.144
	13	0	0.12	0.73	0.017	0.133
	16	0	0.133	0.757	0.01	0.1
	20	0	0.156	0.753	0.012	0.079
	25	0	0.145	0.768	0.008	0.079
	30	0	0.128	0.8	0.005	0.067
	40	0.001	0.123	0.816	0.007	0.053
	50	0.002	0.107	0.848	0.001	0.042
	63	0.001	0.117	0.845	0.002	0.035
	80	0.001	0.142	0.826	0.002	0.029
	100	0.001	0.108	0.868	0	0.023
	130	0.005	0.133	0.843	0	0.019
	160	0.003	0.124	0.843	0	0.03
	200	0.006	0.115	0.861	0	0.018
	250	0.004	0.123	0.848	0	0.025
	300	0.005	0.126	0.845	0	0.024
	400	0.009	0.131	0.826	0	0.034
	500	0.018	0.141	0.8	0	0.041
	630	0.034	0.119	0.788	0	0.059
	800	0.03	0.109	0.791	0	0.07
	1000	0.045	0.141	0.722	0	0.092
	1300	0.05	0.127	0.711	0	0.112
	1600	0.084	0.134	0.652	0	0.13
	2000	0.101	0.141	0.63	0	0.128
	2500	0.108	0.148	0.609	0	0.135
	3000	0.112	0.128	0.605	0	0.155
	4000	0.142	0.131	0.53	0	0.197
	5000	0.183	0.147	0.464	0	0.206
	6300	0.219	0.108	0.452	0	0.221
	8000	0.257	0.134	0.4	0	0.209
	10000	0.331	0.118	0.332	0	0.219