Using a one-way analysis of variance test, we are able to compare each of the different vials to the control. This allows us to make conclusions as to whether there is in fact a significant difference between the intensity of an electromagnetic field and the number of fruit flies that reproduced.

For every ANOVA test, our hypotheses are as follows:

Ho: There is no difference in the mean yield of fruit flies between living in an electromagnetic field and not living in an electromagnetic field.

Ha: There is a difference in the mean yield of fruit flies between living in an electromagnetic field and not living in an electromagnetic field.

All tests will be conducted at a 5% alpha level.

# **Female 3/30/02**

Control/ 5 coil

F= 3.753

P= .0887

With a p-value of .0887, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

Control/ 10 coil

F= 1.138

P= .317

With a p-value of .317, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

Control/ 20 coil

F= 4.905

P= .058

With a p-value of .058, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

Control/ 50 coil

F= .007

P= .934.

With a p-value of .934, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

# **Male 3/30/02**

Control/ 5 coil

F= 1.132

P= .318

With a p-value of .318, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

Control/ 10 coil

F= 6.704

P= .032

With a p-value of .032, we would **reject** our null hypothesis. There appears to be a significant difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

Control/ 20 coil

F= 14.707

P= .005

With a p-value of .005, we would **reject** our null hypothesis. There appears to be a significant difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

Control/ 50 coil

F= .015

P= .904

With a p-value of .904, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

# **Female 4/06/02**

Control/ 5 coil

F= 17.308

P= .003

With a p-value of .003, we would **reject** our null hypothesis. There appears to be a significant difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

Control/ 10 coil

F= .852

P= .383

With a p-value of .383, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

Control/ 20 coil

F= .026

P= .875

With a p-value of .875, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

Control/ 50 coil

F= 3.808

P= .087

With a p-value of .087, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

# **Male 4/06/02**

Control/ 5 coil

F= 3.556

P= .096

With a p-value of .096, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

Control/ 10 coil

F= .356

P= .567

With a p-value of .567, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

Control/ 20 coil

F= 1.619

P= .239

With a p-value of .239, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.

Control/ 50 coil

F= .662

P= .440

With a p-value of .440, we would **fail to reject** our null hypothesis. There appears to be no difference in the reproduction of flies living in an electromagnetic field and the reproduction of flies not living in an electromagnetic field.