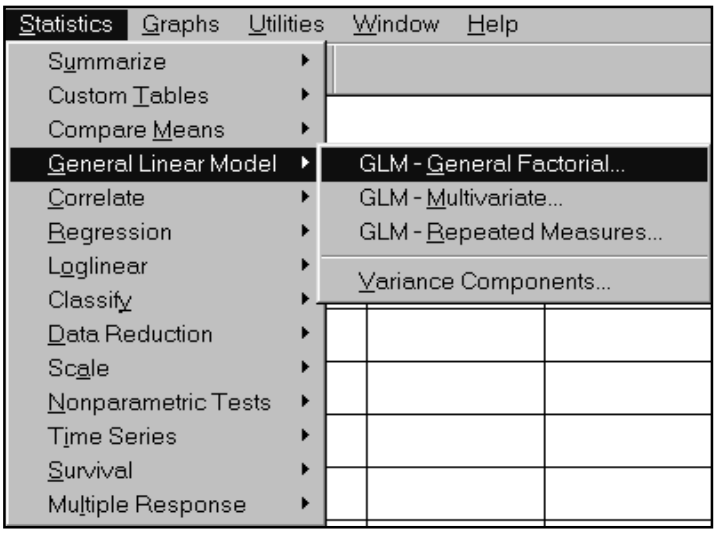
BLOOD-BRAIN BARRIER EXPERIMENT

13. The General Factorial Procedure in SPSS

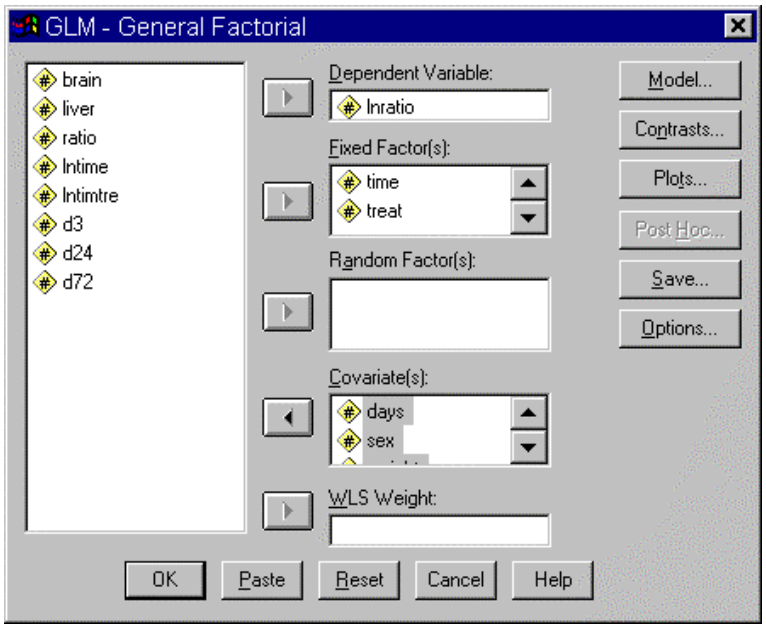
The GLM General Factorial procedure available in SPSS 8.0 provides regression analysis and analysis of variance for one dependent variable by one or more factors or variables. The brain-barrier experiment is an example of a factorial experiment because all possible combinations of the treatment levels are run in a replication.

The SPSS data file used for this study is available in the SPSS file *brain.sav* located on the FTP server in the Stat337 directory. In the data file, variables include LNRATIO, TIME and TREATMENT. The two-predictor variables in this study, TIME and TREATMENT are categorical, which means they should be entered as factors in the GLM General Factorial procedure.

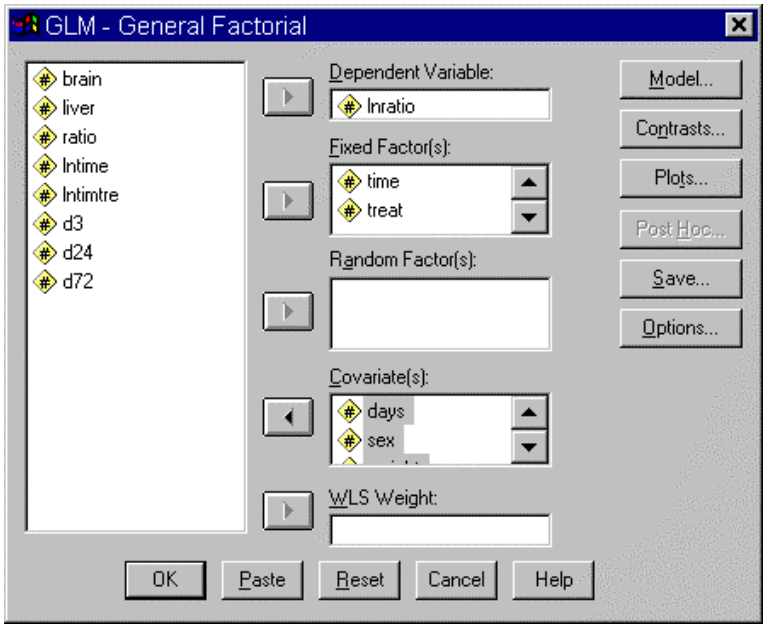
To produce the output for your data, click on *Statistics*, then *General Linear Model*, and on finally on *GLM-General Factorial….*



The *GLM-General Factorial* dialog box will be displayed. Move the response *Water* to the *Dependent Variables* list box, and *Brand*, *Time* to the *Fixed Factor(s)* list box. The dialog box should look like in the drawing below.



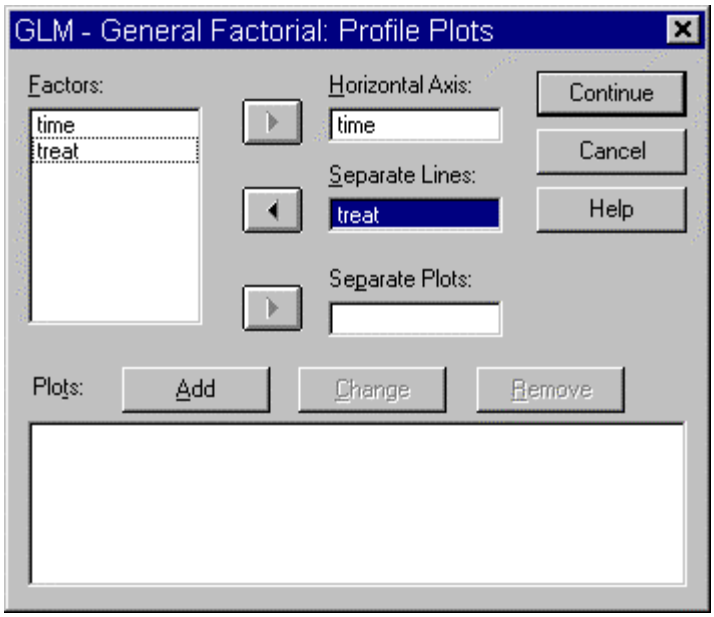
Then click on the *Model* tab and fill out the dialog box as follows:



Then click on the *Plots…* and *Options…* tabs and fill out the subsequent dialog boxes as follows:

Plots…

- Horizontal axis: time
- Separate lines: treat (Click Add)



Options…

- Display means for: time * treat

Finally click on OK in the GLM-General Factorial dialog box to obtain the output.