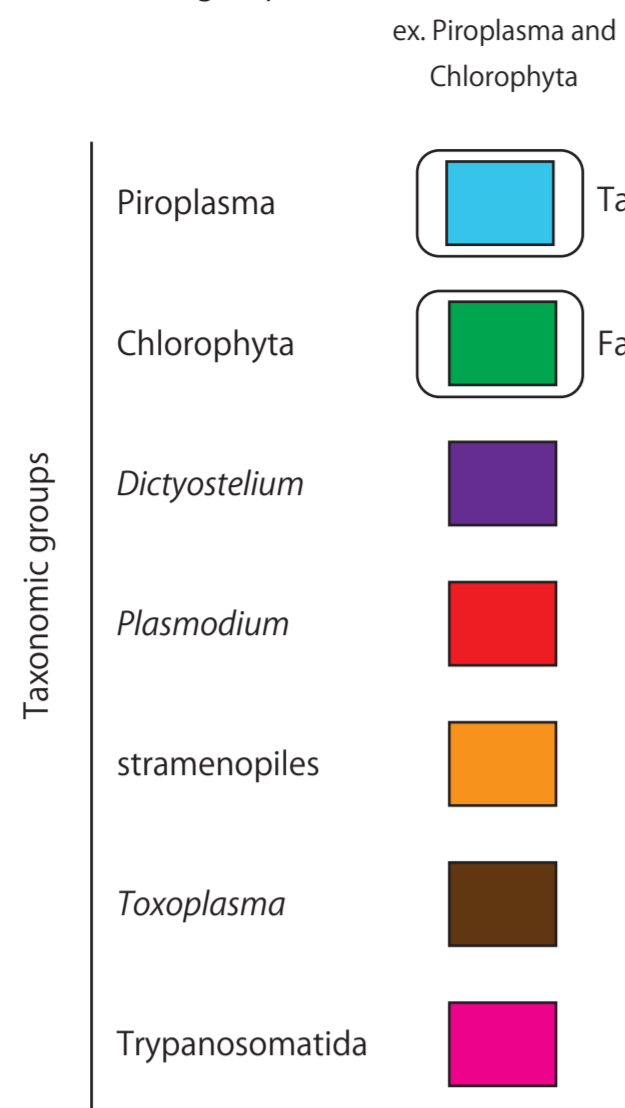


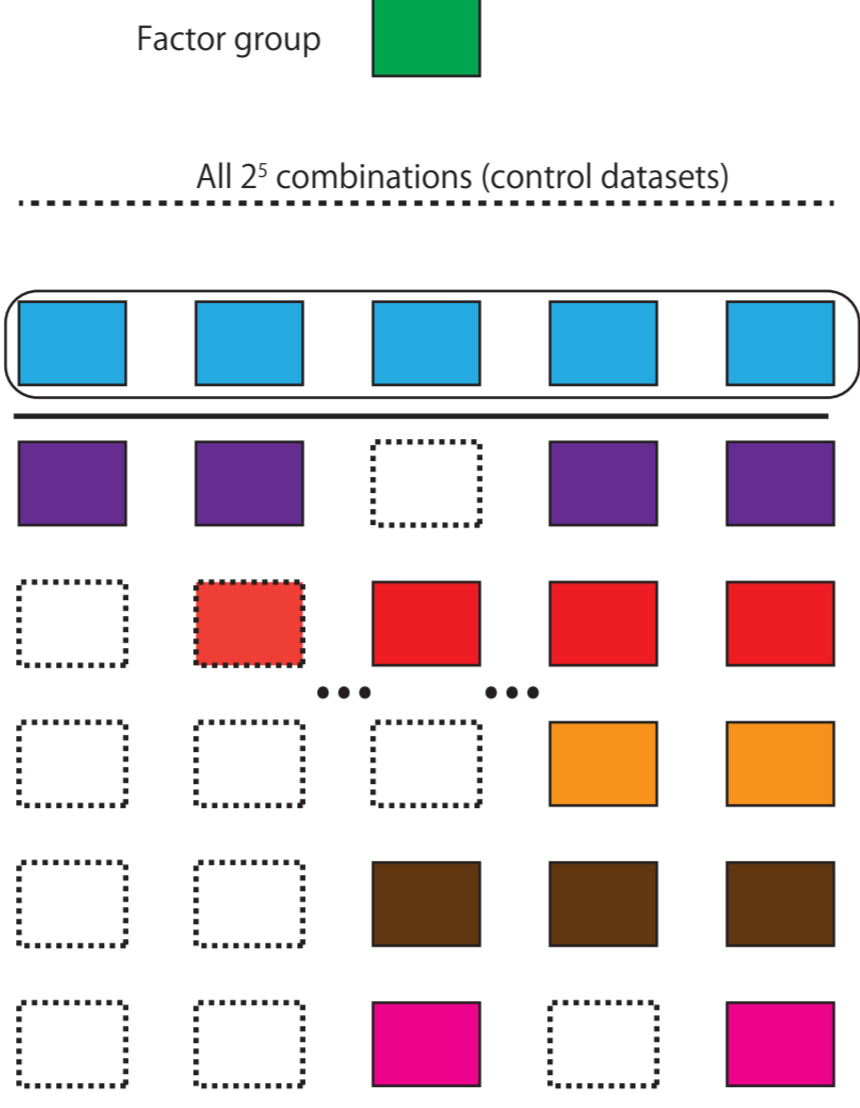
Step 1.

Selecting one taxonomic group for a 'target' group, and selecting another taxonomic group for a 'factor' group.



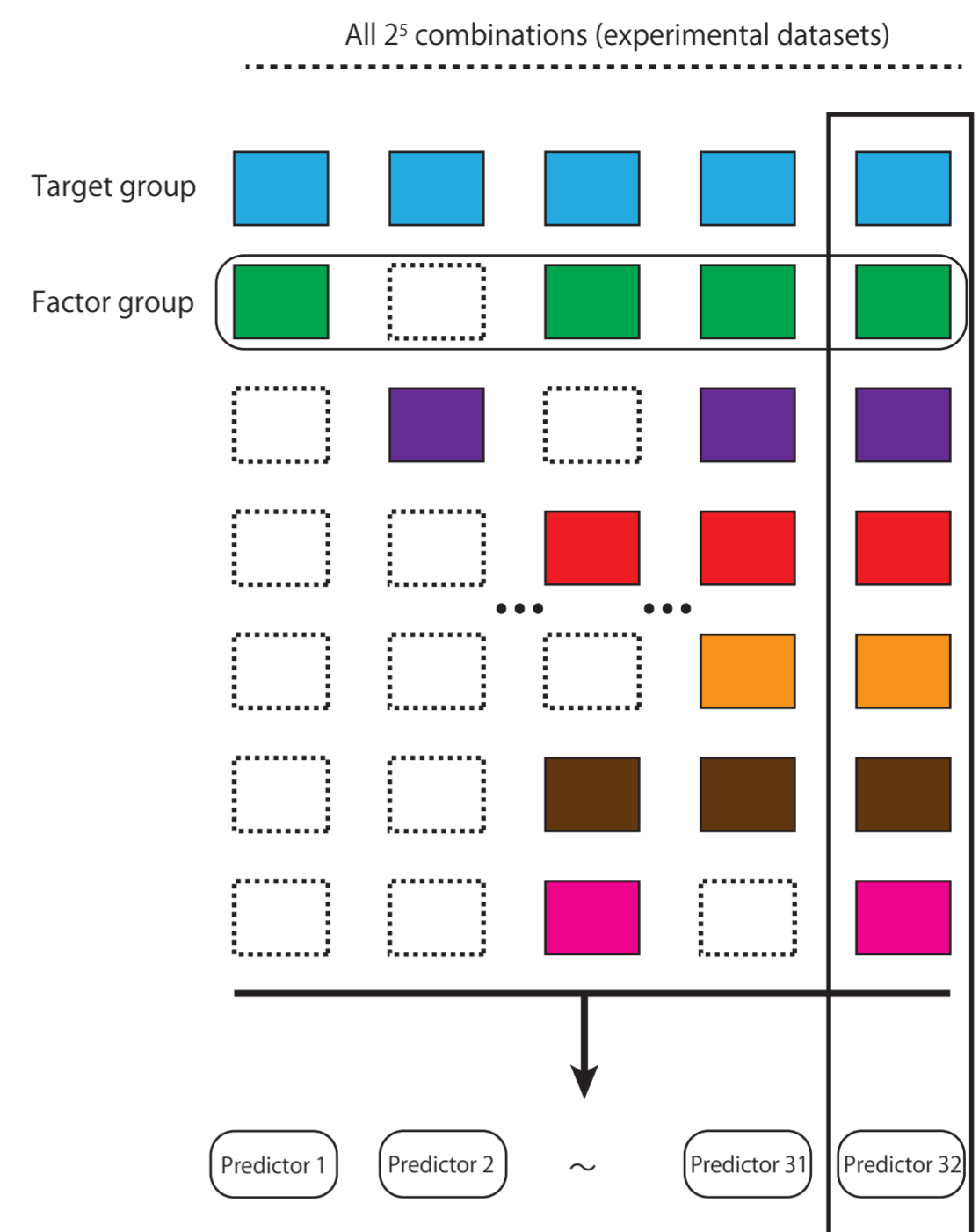
Step 2.

Creating all 2^5 combinations of the other taxonomic groups ('control' datasets).



Step 3.

Adding factor group for all combinations and creating each predictor of the all 2^5 combinations ('experimental' datasets).



Step 4.

On control and experimental datasets, each predictor was trained in three-fold cross validation repeatedly 100 times. ex. Predictor 32

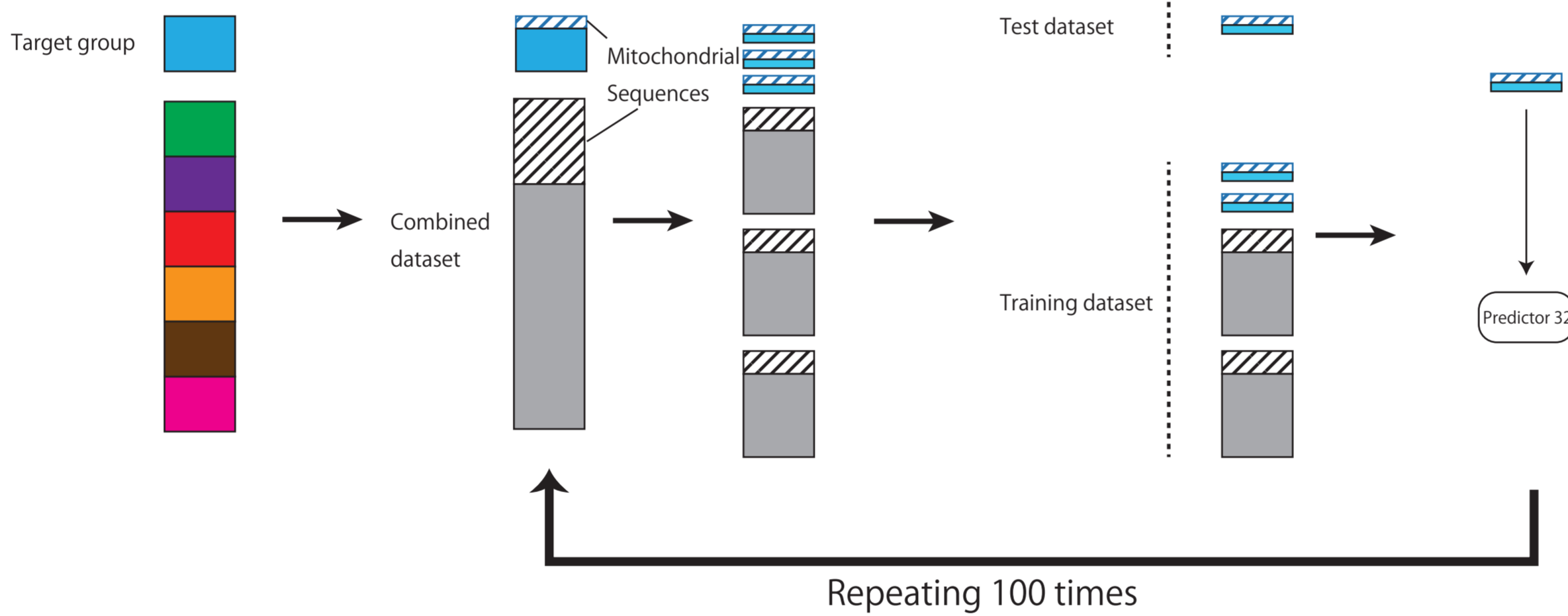
4.1. Datasets were combined except for target group.

4.2. These two datasets were randomly divided into three subsets.

4.3. Randomly selecting one of the three subsets of target group as test dataset. Next, merging the other two of the three subsets of target group with two of the three subsets of combined dataset for training dataset.

4.4. Training the predictor, and calculating a ROC AUC score using the test dataset.

Control Dataset



Step 5.

Calculating a mean of 100 ROC AUC scores for each of the paired $2^5 + 2^5$ predictors.

Control	Experimental
Predictor 1 0.91145	Predictor 1 0.92916
Predictor 2 0.91979	Predictor 2 0.93125
...	...
Predictor 31 0.92708	Predictor 31 0.93281
Predictor 32 0.92812	Predictor 32 0.93489

Step 6.

Performing Wilcoxon signed rank test for between the mean scores of the above paired predictors.

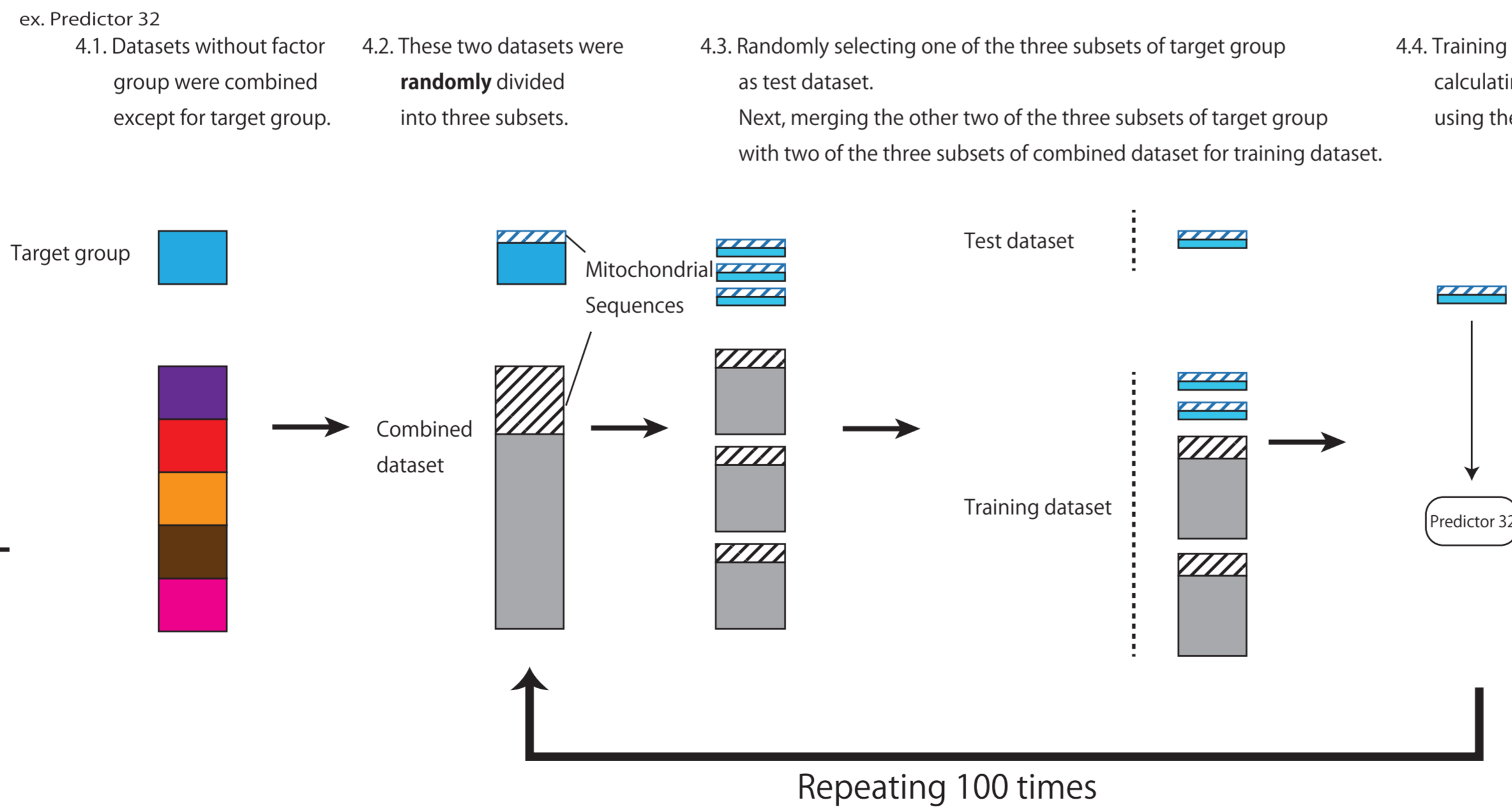
Step 7.

Showing results as table.

Step 8.

Repeating the steps until all combinations of taxonomic groups were selected.

Experimental Dataset



Repeating for the other taxonomic groups

Repeating the steps