









Graphical representation of ANOVA p-values 0.98801 PC6-0.28036 0.54112 0 PC5 -0.97359 0.6912 0.99994 0

1.00

0.75

0.50

0.25



Plate

Sex

Slide

DĖX

Array

# **Summary table of P-values for PCs**

	Plate	Slide	Array	DEX	Sex
PC1	0.9993232	1.0000000	0.99763724	3.829981e-65	9.212460e-01
PC2	0.9412618	0.9999814	0.01575053	1.586547e-01	4.826909e-01
PC3	0.9853525	0.9999992	0.16007909	2.477742e-04	8.792224e-01
PC4	0.9961937	0.9983832	0.02411414	2.506286e-01	9.772478e-01
PC5	0.9999384	1.0000000	0.97359020	6.912009e-01	1.228389e-16
PC6	0.9880057	1.0000000	0.28035526	5.411160e-01	7.750014e-11

#### **ANOVA** results for Plate

```
$PC1
Analysis of Variance Table
Response: pc
                    Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Plate 4 5685 1421 0.0186 0.9993
Residuals
                   398 30443374 76491
$PC2
Analysis of Variance Table
Response: pc
                    Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Plate 4 14390 3597.4 0.1944 0.9413
                   398 7364614 18504.1
Residuals
SPC3
Analysis of Variance Table
Response: pc
                    Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Plate 4 4528 1132 0.0907 0.9854
                   398 4967513 12481
Residuals
SPC4
Analysis of Variance Table
Response: pc
                    Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Plate 4 1148 286.9 0.0448 0.9962
                   398 2546519 6398.3
Residuals
$PC5
Analysis of Variance Table
Response: pc
                    Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Plate 4 129 32.4 0.0056 0.9999
                   398 2317575 5823.1
Residuals
$PC6
Analysis of Variance Table
Response: pc
                    Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Plate 4 1724 431.1 0.0816 0.988
Residuals
                   398 2103316 5284.7
```

#### **ANOVA** results for Slide

```
SPC1
Analysis of Variance Table
Response: pc
                                       Df Sum Sq Mean Sq F value Pr(>F)
as.factor(as.character(prin.comp$Slide)) 50 297169 5943 0.0694 1
Residuals
                                      352 30151890 85659
$PC2
Analysis of Variance Table
Response: pc
                                      Df Sum Sq Mean Sq F value Pr(>F)
as.factor(as.character(prin.comp$Slide)) 50 361436 7228.7 0.3626 1
                                      352 7017568 19936.3
Residuals
$PC3
Analysis of Variance Table
Response: pc
                                      Df Sum Sq Mean Sq F value Pr(>F)
as.factor(as.character(prin.comp$Slide)) 50 202479 4049.6 0.2989 1
Residuals
                                     352 4769562 13549.9
SPC4
Analysis of Variance Table
Response: pc
                                       Df Sum Sq Mean Sq F value Pr(>F)
as.factor(as.character(prin.comp$Slide)) 50 167756 3355.1 0.4962 0.9984
Residuals
                                      352 2379911 6761.1
$PC5
Analysis of Variance Table
Response: pc
                                      Df Sum Sq Mean Sq F value Pr(>F)
as.factor(as.character(prin.comp$Slide)) 50 44552 891.0 0.138 1
Residuals
                                     352 2273152 6457.8
SPC6
Analysis of Variance Table
Response: pc
                                       Df Sum Sq Mean Sq F value Pr(>F)
as.factor(as.character(prin.comp$Slide)) 50 73253 1465.1 0.2538 1
Residuals
                                     352 2031788 5772.1
```

## **ANOVA results for Array**

```
SPC1
Analysis of Variance Table
Response: pc
               Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Array 7 59735 8534 0.1109 0.9976
             395 30389324 76935
Residuals
Analysis of Variance Table
Response: pc
               Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Array 7 313693 44813 2.5054 0.01575 *
              395 7065311 17887
Residuals
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
$PC3
Analysis of Variance Table
Response: pc
               Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Array 7 130084 18583 1.516 0.1601
Residuals
            395 4841957 12258
SPC4
Analysis of Variance Table
Response: pc
               Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Array 7 101203 14457.5 2.3343 0.02411 *
Residuals 395 2446464 6193.6
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
$PC5
Analysis of Variance Table
Response: pc
               Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Array 7 10022 1431.8 0.2451 0.9736
Residuals
              395 2307682 5842.2
$PC6
Analysis of Variance Table
Response: pc
               Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Array 7 45208 6458.3 1.2385 0.2804
             395 2059832 5214.8
Residuals
```

### **ANOVA results for Sample Group**

```
SPC1
Analysis of Variance Table
Response: pc
                     Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Group 1 15706828 15706828 427.24 < 2.2e-16 ***
                   401 14742231 36764
Residuals
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
SPC2
Analysis of Variance Table
Response: pc
                     Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample Group 1 36519 36519 1.9944 0.1587
                    401 7342485 18310
Residuals
$PC3
Analysis of Variance Table
Response: pc
                     Df Sum Sq Mean Sq F value
prin.comp$Sample_Group 1 163950 163950 13.674 0.0002478 ***
Residuals
                    401 4808091 11990
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
Analysis of Variance Table
Response: pc
                     Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Group 1 8382 8381.7 1.3236 0.2506
                   401 2539285 6332.4
Residuals
$PC5
Analysis of Variance Table
Response: pc
                     Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Group 1 913 912.9 0.158 0.6912
Residuals
                    401 2316791 5777.5
$PC6
Analysis of Variance Table
Response: pc
                     Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Group 1 1962 1962.1 0.3741 0.5411
                    401 2103078 5244.6
Residuals
```

### **ANOVA** results for Sex

```
SPC1
Analysis of Variance Table
Response: pc
             Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$sex 1 743 743 0.0098 0.9212
Residuals 401 30448316 75931
Analysis of Variance Table
Response: pc
             Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$sex 1 9074 9073.6 0.4937 0.4827
           401 7369930 18378.9
Residuals
SPC3
Analysis of Variance Table
Response: pc
             Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$sex 1 287 286.6 0.0231 0.8792
           401 4971754 12398.4
Residuals
SPC4
Analysis of Variance Table
Response: pc
             Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$sex 1 5 5.2 8e-04 0.9772
Residuals 401 2547662 6353.3
$PC5
Analysis of Variance Table
Response: pc
             Df Sum Sq Mean Sq F value
                                        Pr(>F)
prin.comp$sex 1 364669 364669 74.874 < 2.2e-16 ***
Residuals 401 1953035
                        4870
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
$PC6
Analysis of Variance Table
Response: pc
             Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$sex 1 211083 211083 44.692 7.75e-11 ***
Residuals
           401 1893957
                        4723
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 0.1 ... 1
```