

Differential analysis

Metadata

Analysis

File	all_mrf_withsamplename.txt
Number of rows	2936
Date	19-06-19 12:08:40

Parameters

Normalization	T
Filter.threshold.ms	2
Filter.threshold.obs	0.5
Imputation.MNAR.model	gaussian
Imputation.MNAR.percentile	1
Imputation.MCAR.model	MNAR
Imputation.MCAR.threshold.obs	3
Imputation.MCAR.threshold.MSMS	3
Imputation.knn.min.occurrences	3
Test.type	t.test
Test.log	TRUE
Test.alternative	two.sided
Test.paired	FALSE
Test.var.equal	TRUE
Test.adjust.FDR	0.05
Test.adjust.procedure	BH
Fold.Change	fc
Volcano.threshold.pvalue	0.05
Volcano.threshold.fc	0.58
Comparisons	50fmol-25fmol;50fmol-500amol
Figure.format	SVG

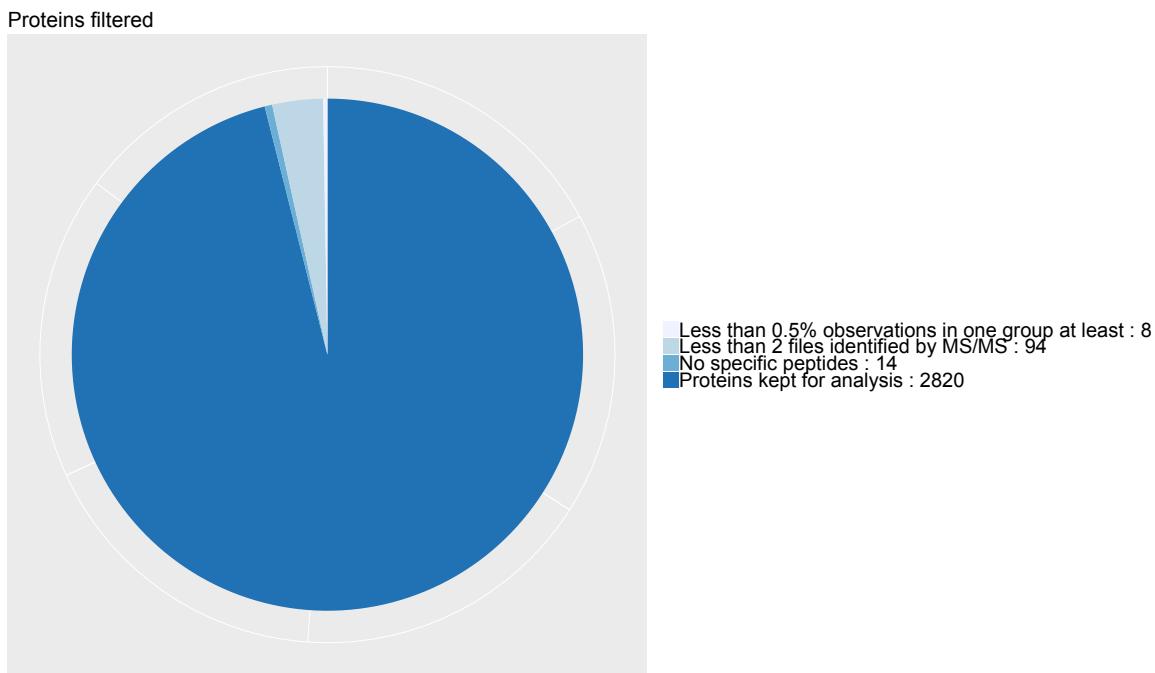
Experimental design

Intensity_10amol_1	inj1	10amol
Intensity_10amol_2	inj2	10amol

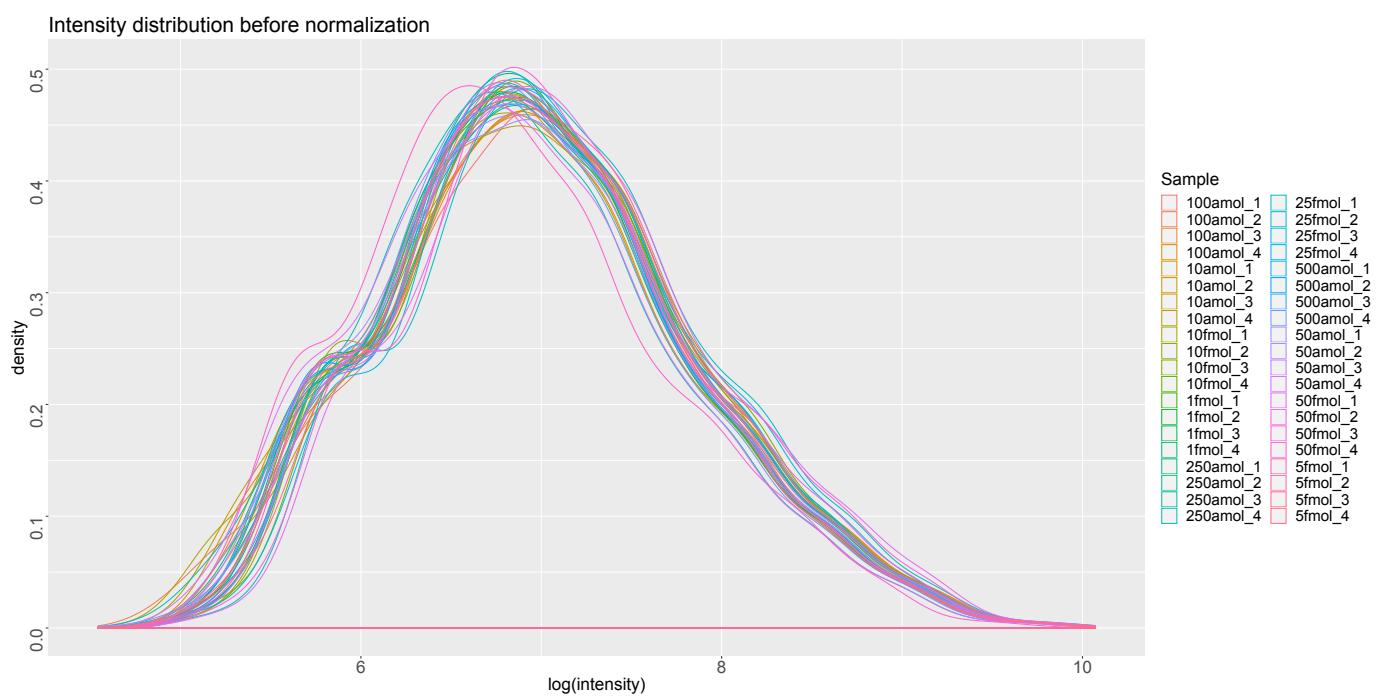
Intensity_10amol_3	inj3	10amol
Intensity_10amol_4	inj4	10amol
Intensity_50amol_1	inj1	50amol
Intensity_50amol_3	inj3	50amol
Intensity_50amol_2	inj2	50amol
Intensity_50amol_4	inj4	50amol
Intensity_100amol_1	inj1	100amol
Intensity_100amol_3	inj3	100amol
Intensity_100amol_2	inj2	100amol
Intensity_100amol_4	inj4	100amol
Intensity_250amol_1	inj1	250amol
Intensity_250amol_2	inj2	250amol
Intensity_250amol_3	inj3	250amol
Intensity_250amol_4	inj4	250amol
Intensity_500amol_1	inj1	500amol
Intensity_500amol_3	inj3	500amol
Intensity_500amol_2	inj2	500amol
Intensity_500amol_4	inj4	500amol
Intensity_1fmol_1	inj1	1fmol
Intensity_1fmol_2	inj2	1fmol
Intensity_1fmol_3	inj3	1fmol
Intensity_1fmol_4	inj4	1fmol
Intensity_5fmol_1	inj1	5fmol
Intensity_5fmol_3	inj3	5fmol
Intensity_5fmol_2	inj2	5fmol
Intensity_5fmol_4	inj4	5fmol
Intensity_10fmol_1	inj1	10fmol
Intensity_10fmol_2	inj2	10fmol
Intensity_10fmol_3	inj3	10fmol
Intensity_10fmol_4	inj4	10fmol
Intensity_25fmol_1	inj1	25fmol
Intensity_25fmol_2	inj2	25fmol
Intensity_25fmol_3	inj3	25fmol
Intensity_25fmol_4	inj4	25fmol
Intensity_50fmol_1	inj1	50fmol
Intensity_50fmol_2	inj2	50fmol
Intensity_50fmol_3	inj3	50fmol

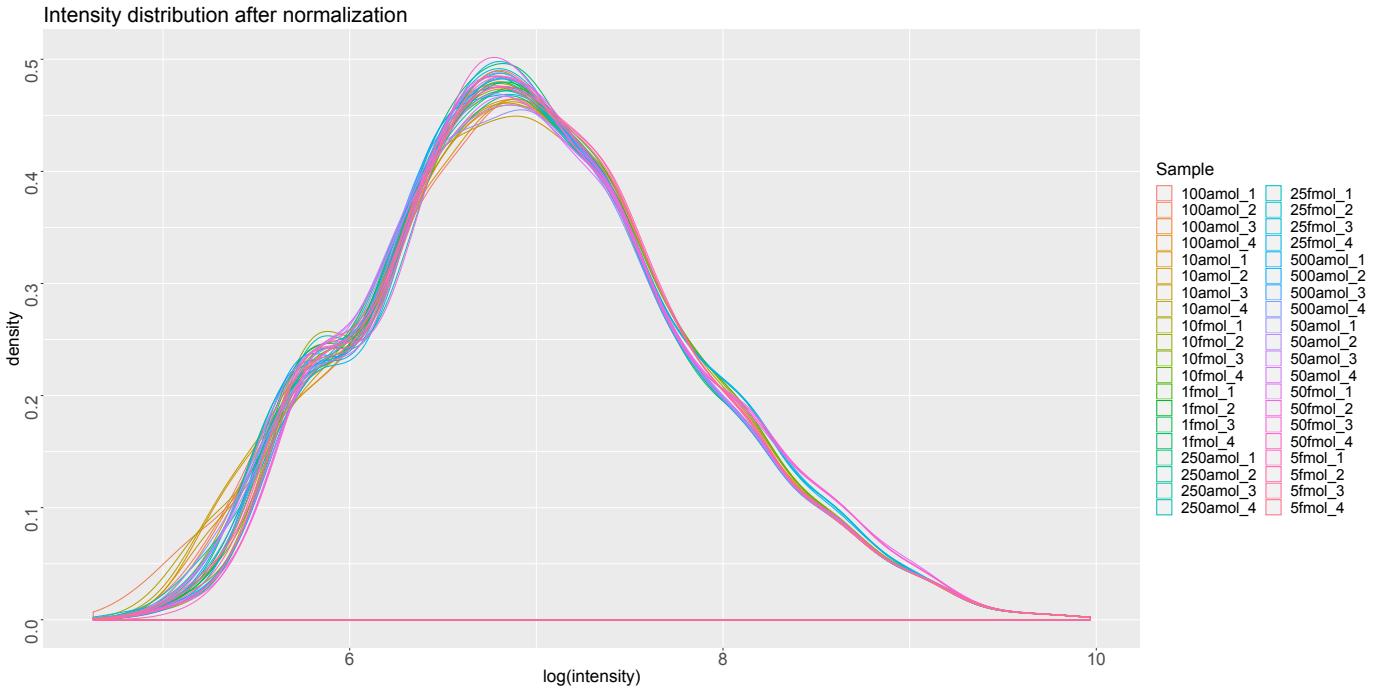
Intensity_50fmol_4 inj4 50fmol

Data filtering



Normalization





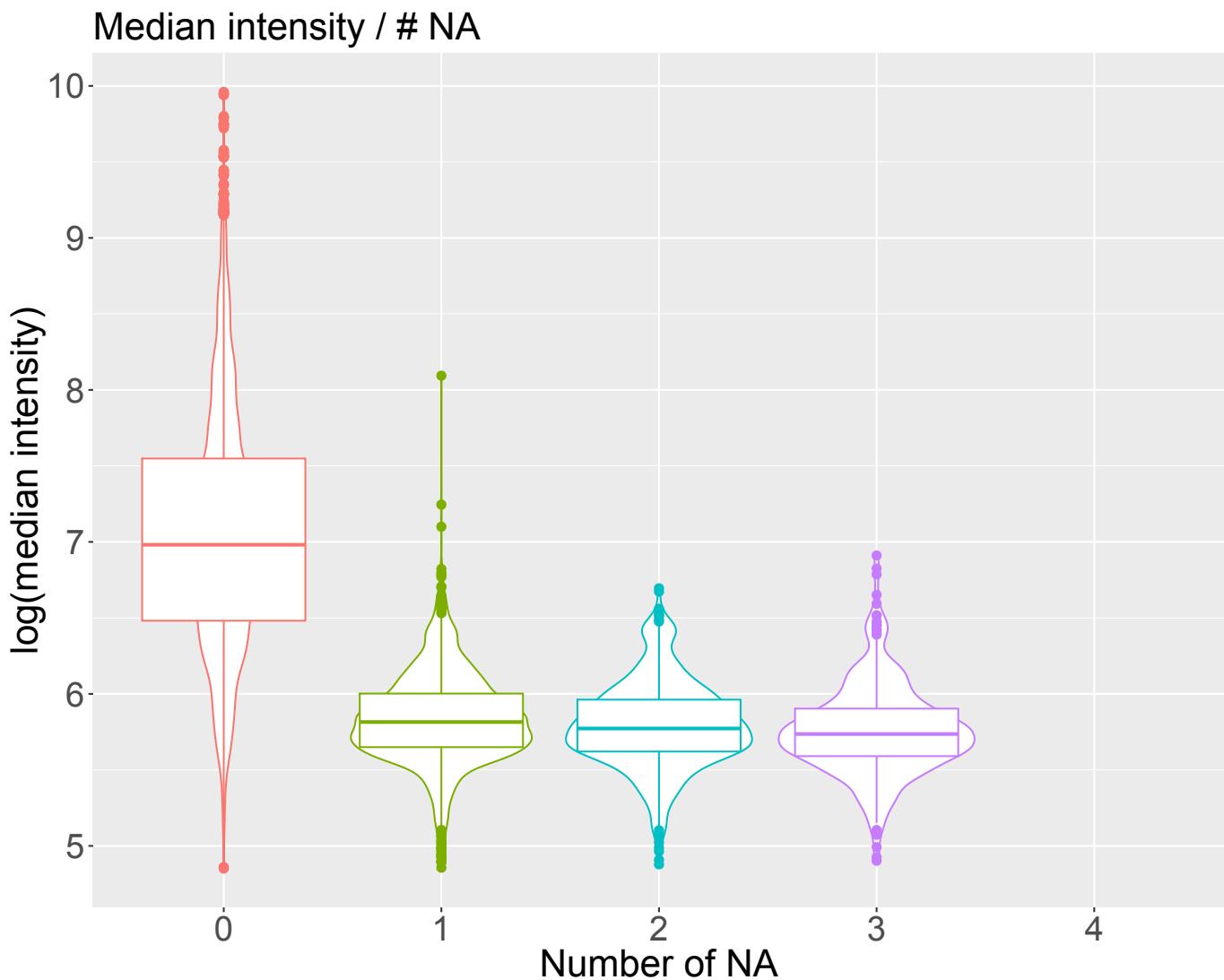
Normalization method : each intensity is expressed relatively to a reference intensity, as a ratio of intensities. Intensities of the sample with the lowest number of missing values (Intensity_5fmol_4) are used as reference intensities. Intensities are then centered by subtracting the median of the ratios for each sample.

Missing values imputation

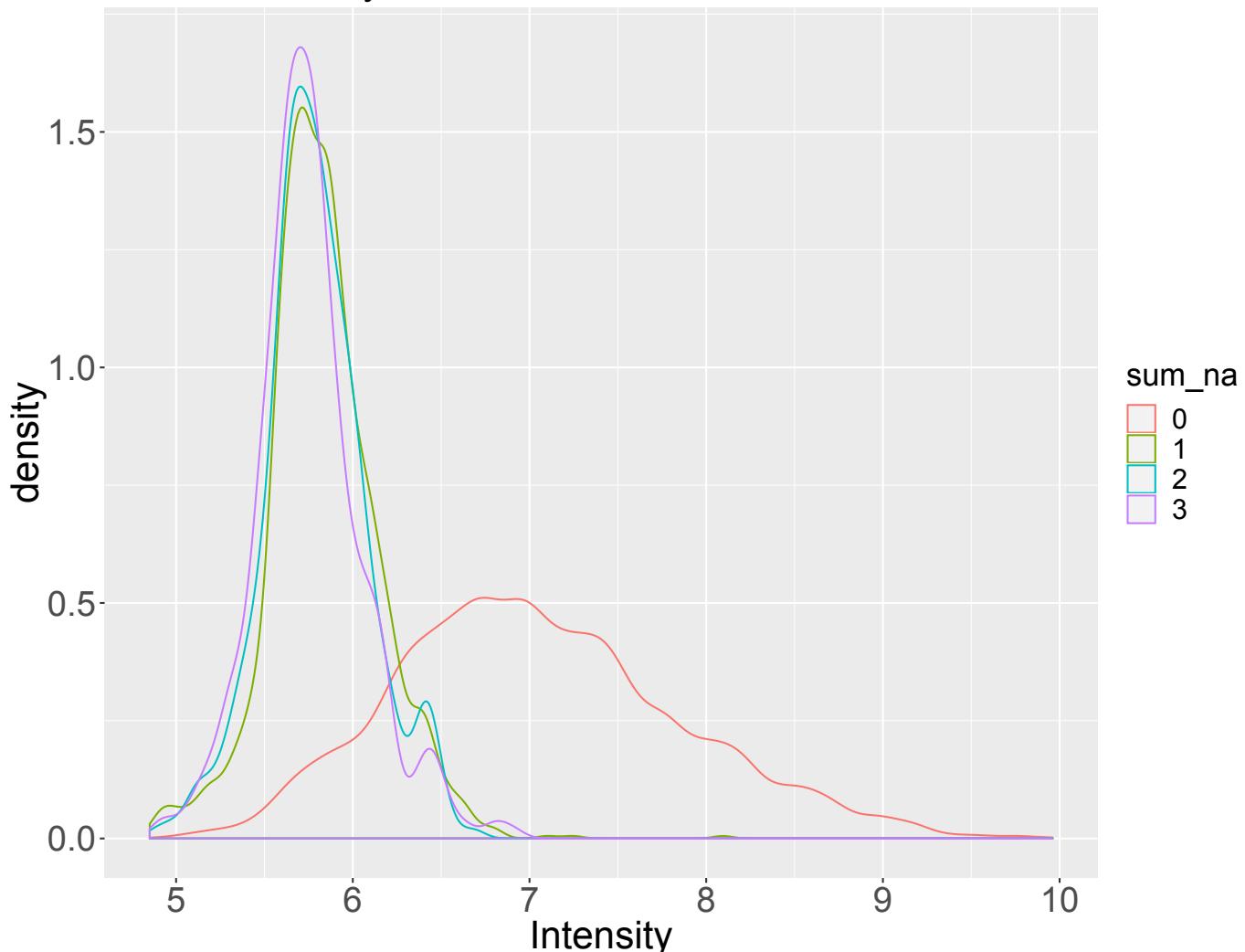
Distribution of NA values accross groups

Group	NA_percentage	na_count
10amol	4.796099	541
50amol	4.406028	497
100amol	4.104610	463
250amol	4.069149	459
500amol	3.599291	406
1fmol	3.484043	393
5fmol	3.625887	409
10fmol	3.581560	404
25fmol	4.343972	490
50fmol	4.822695	544
All groups	3.983740	4606

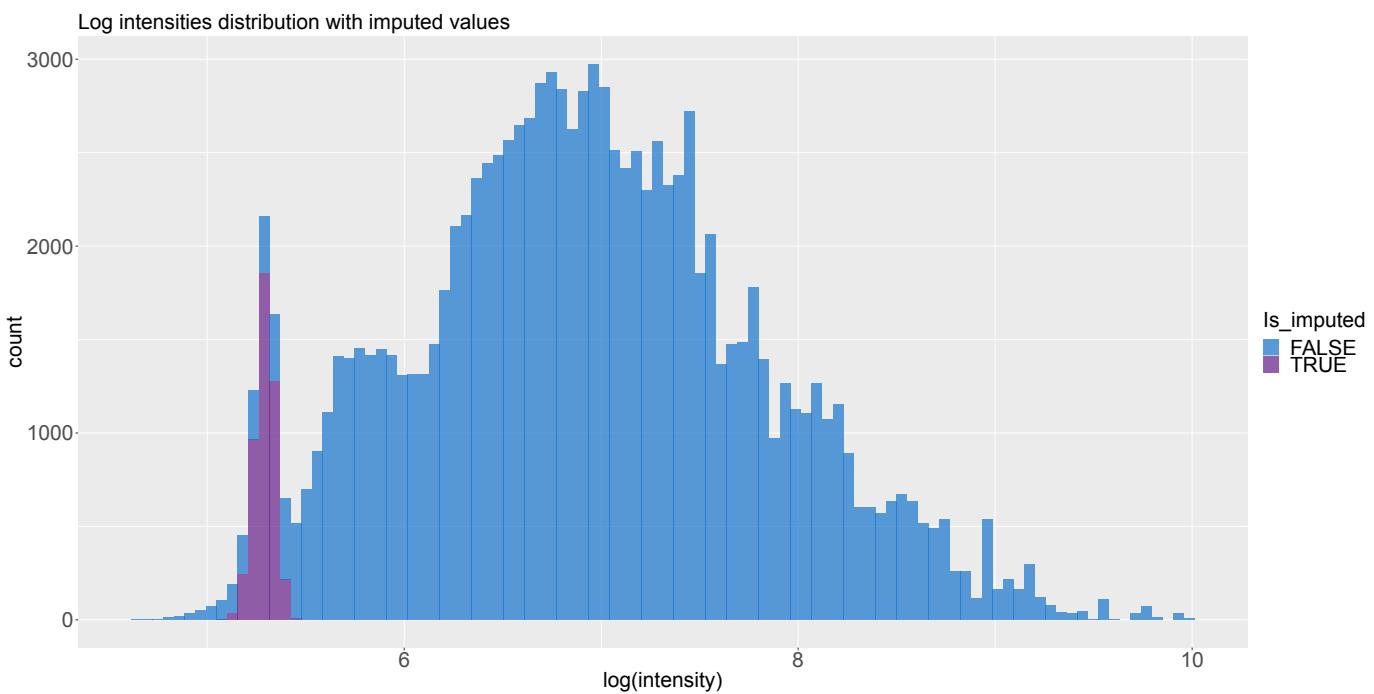
Distribution of NA values accross median intensities



Median intensity / # NA



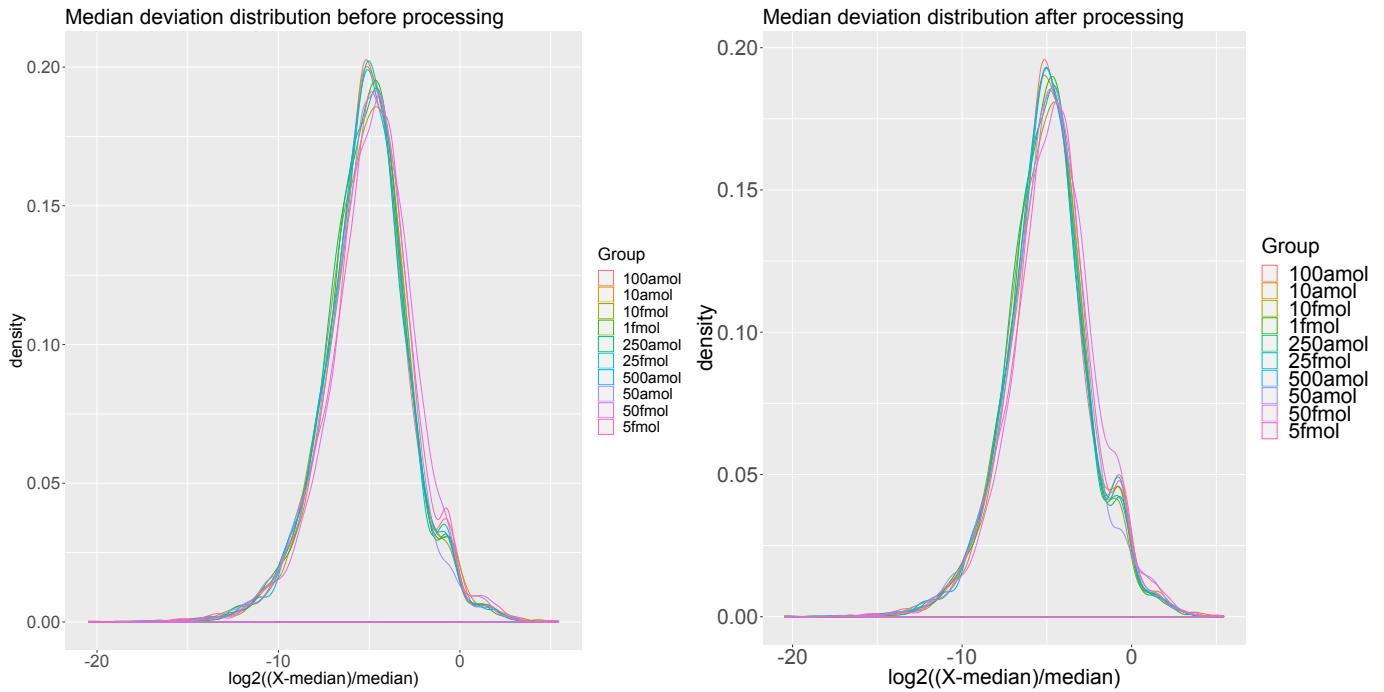
Imputed values distribution



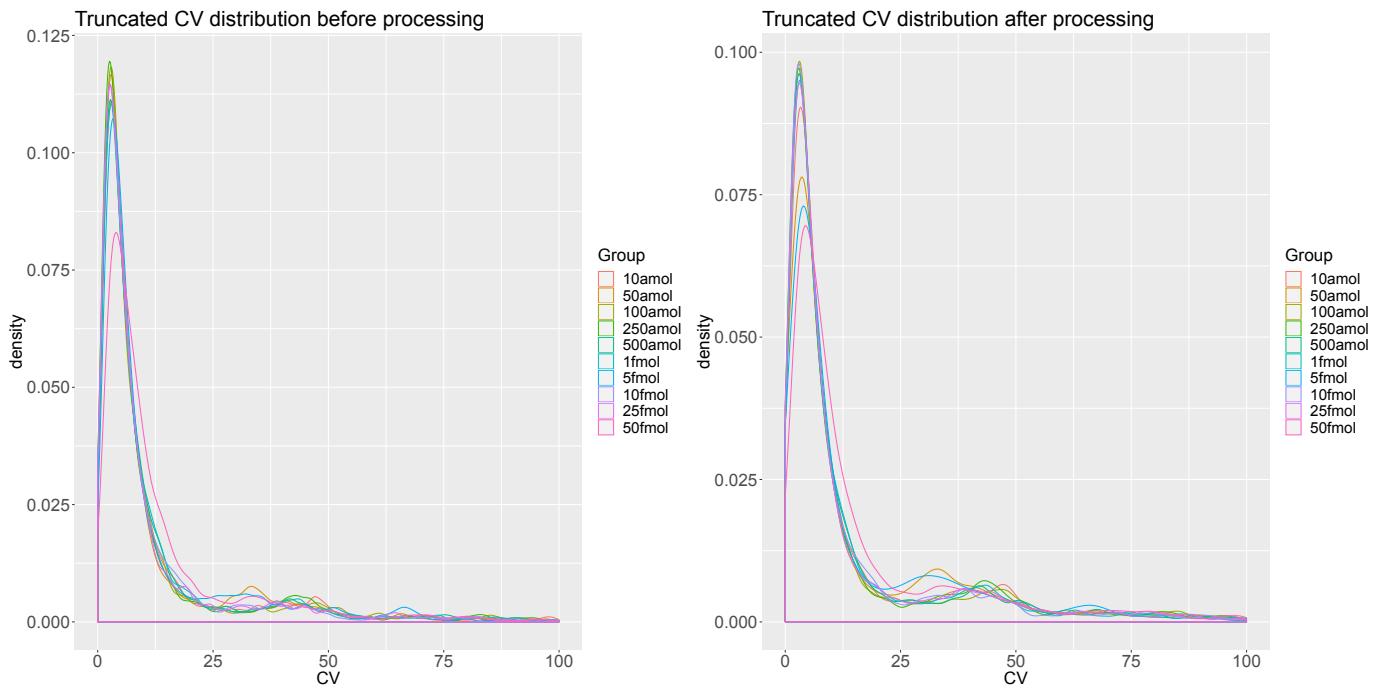
The gaussian model has a median of $1.96e+05$ and a sd of $2.30e+04$.

CV distribution

Median deviation

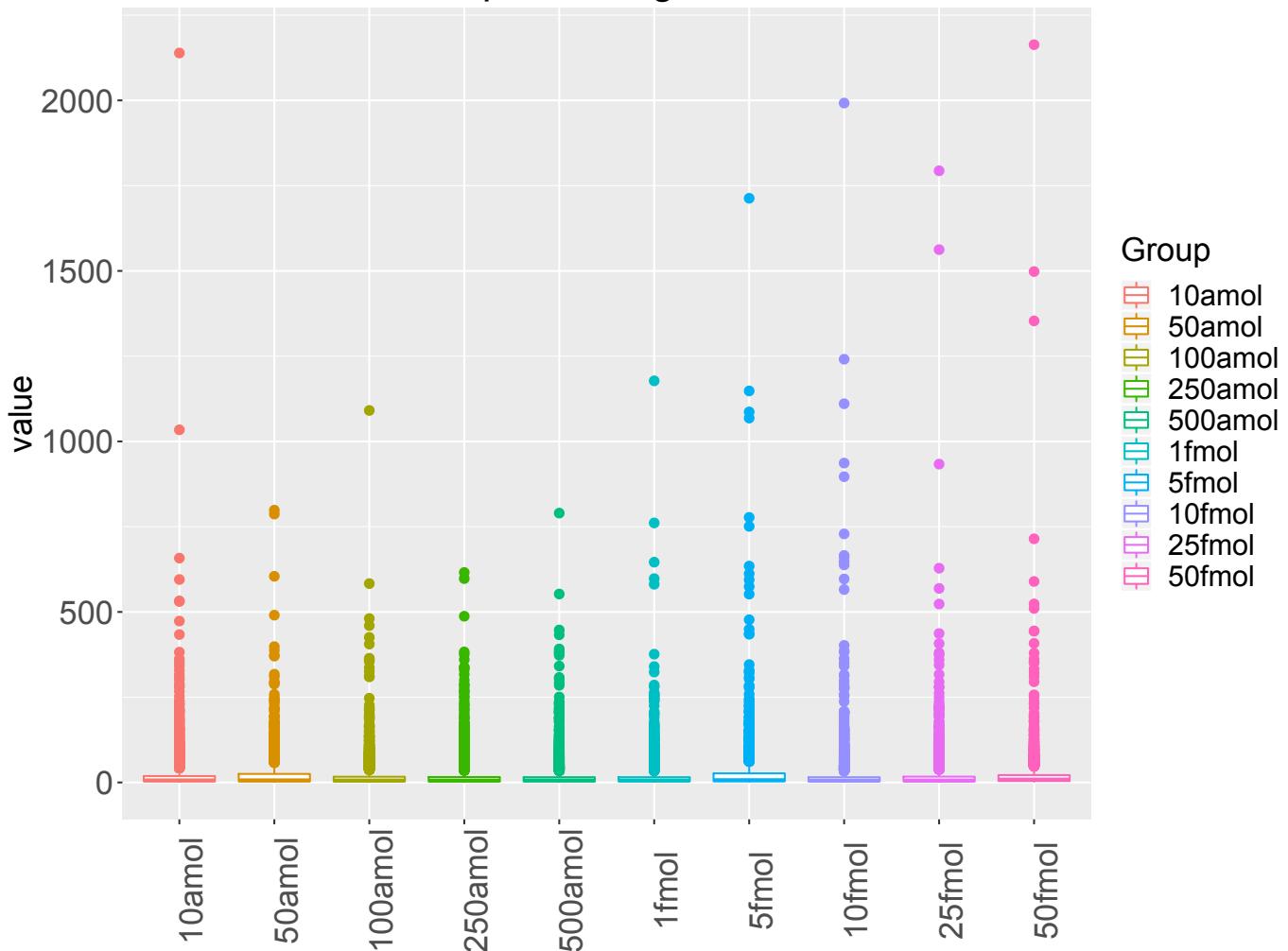


CV distribution

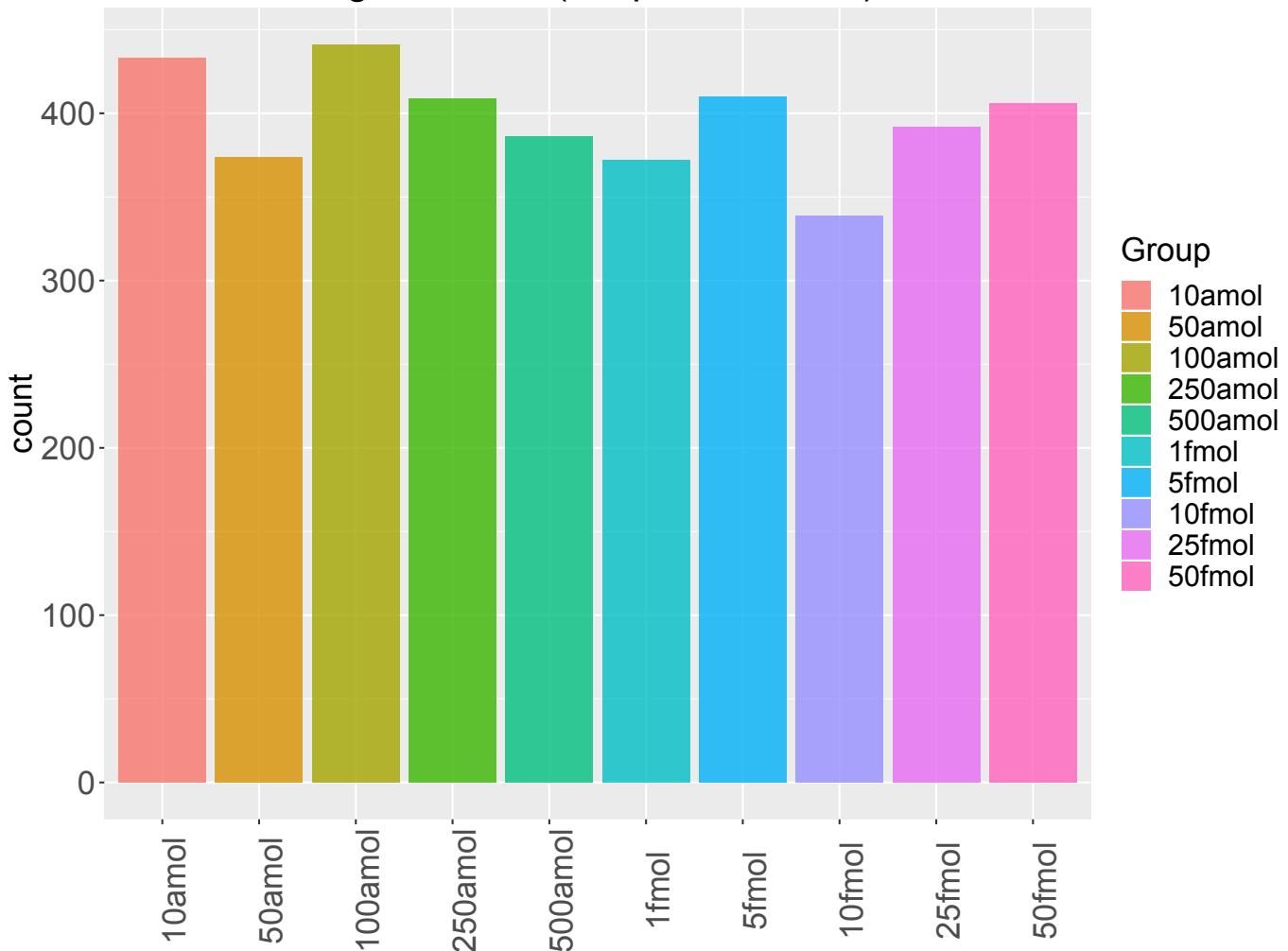


Heterogeneity of biological error

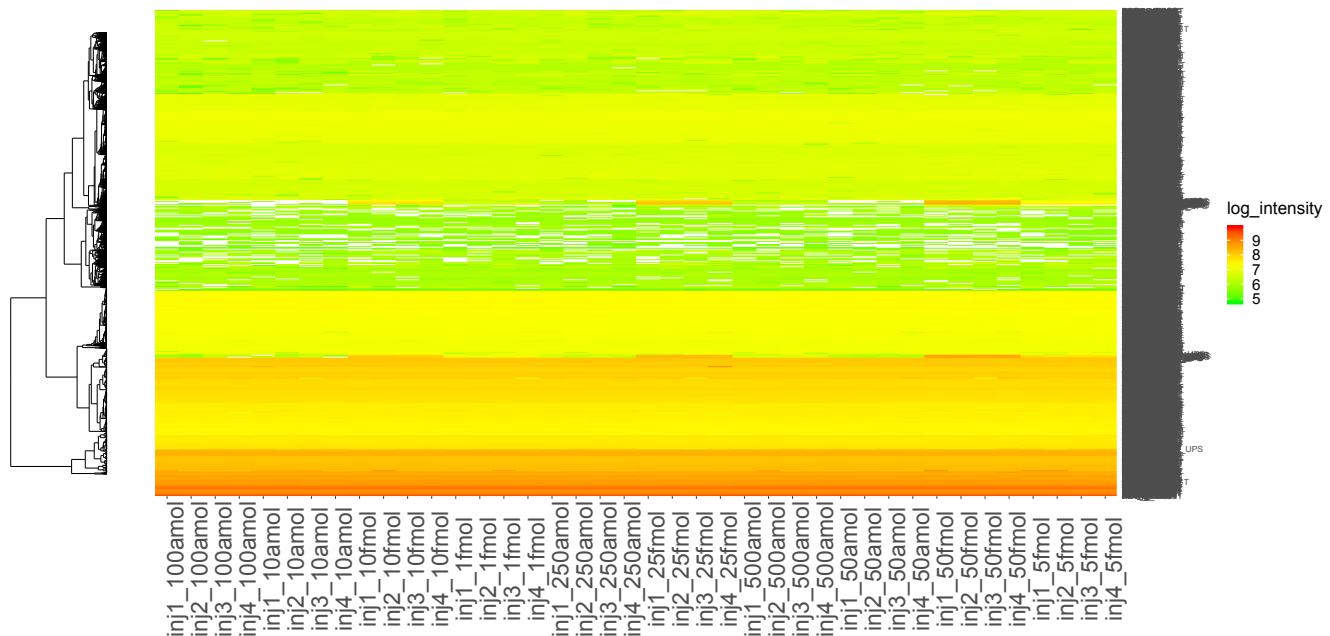
CV distribution after processing



Extreme biological errors (boxplot's outliers)

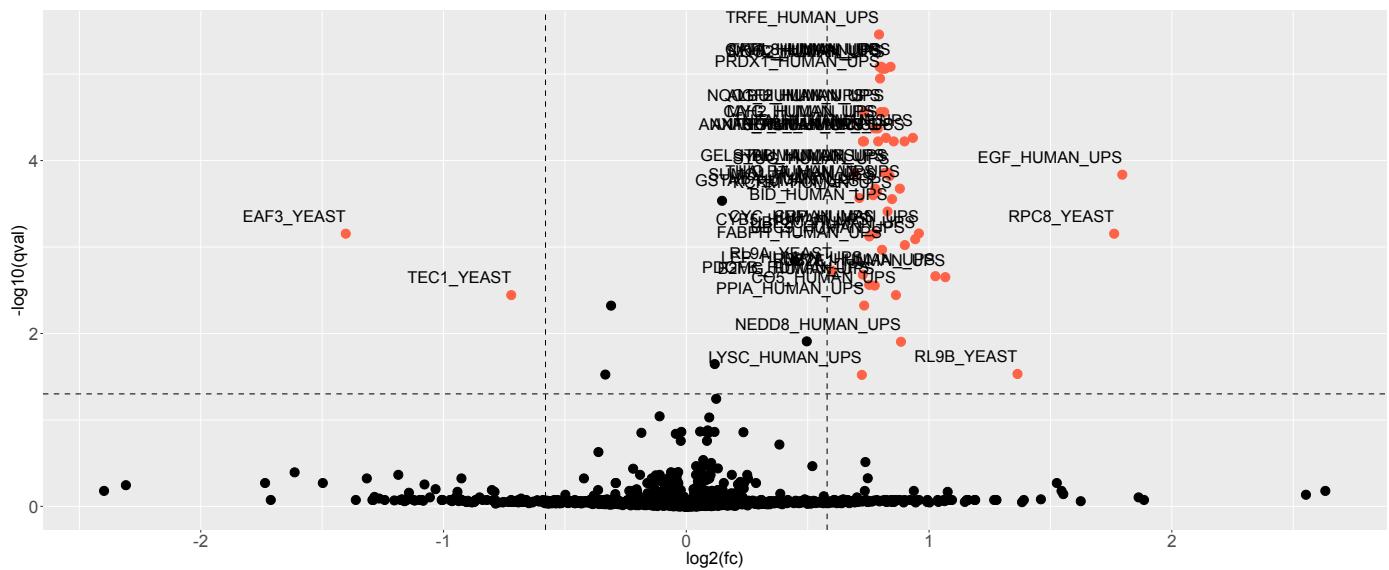
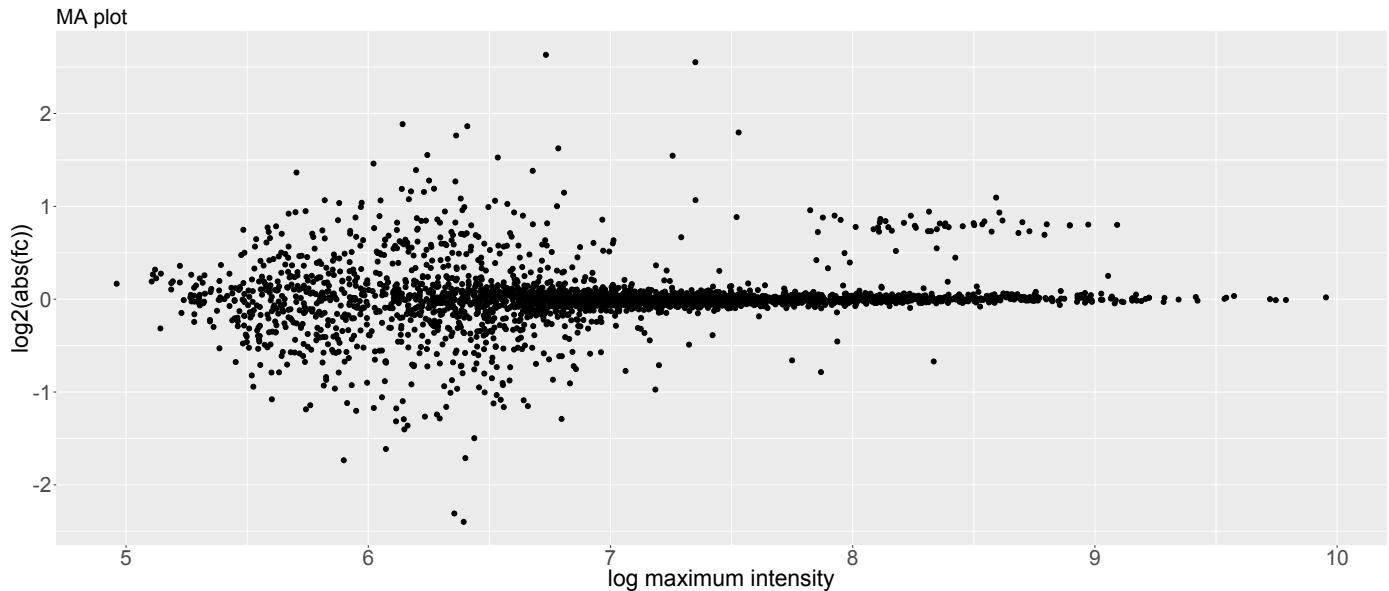


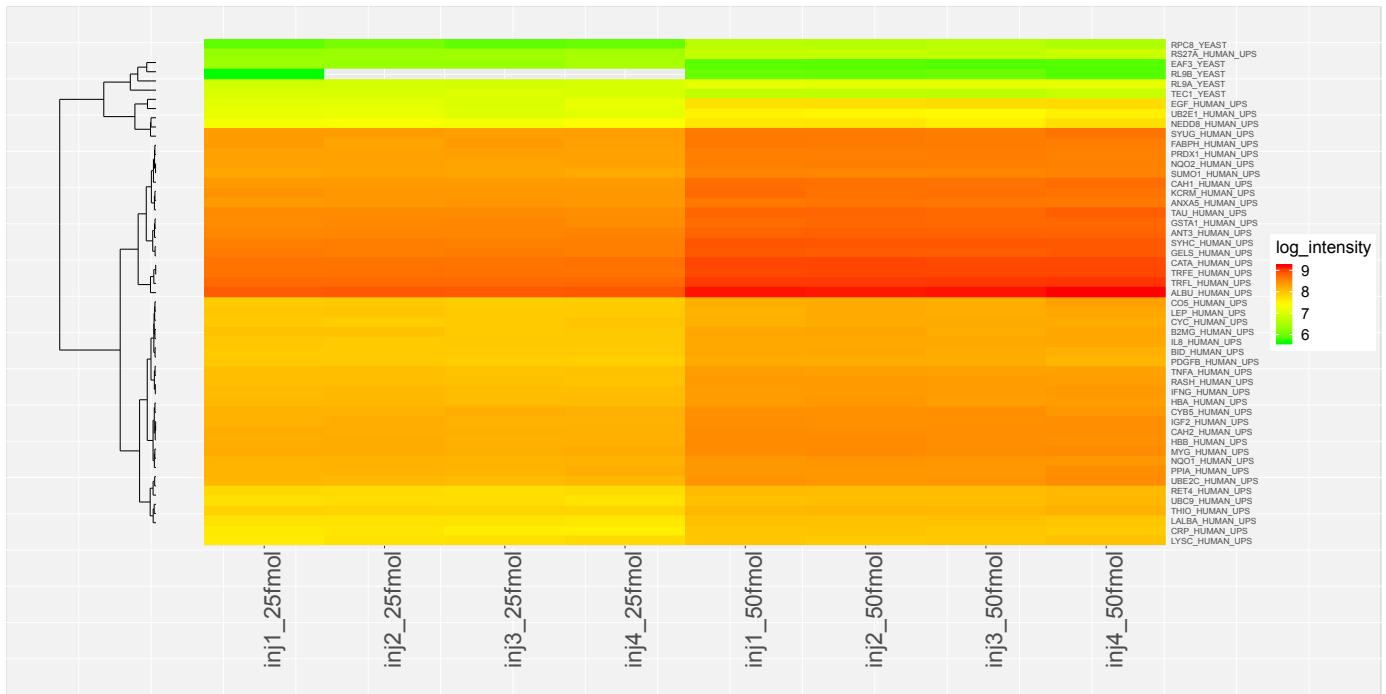
Heatmap



Differential analysis

50fmol-25fmol





50fmol-500amol

