

Harvard Forest Data Archive HF304-01

Data File:

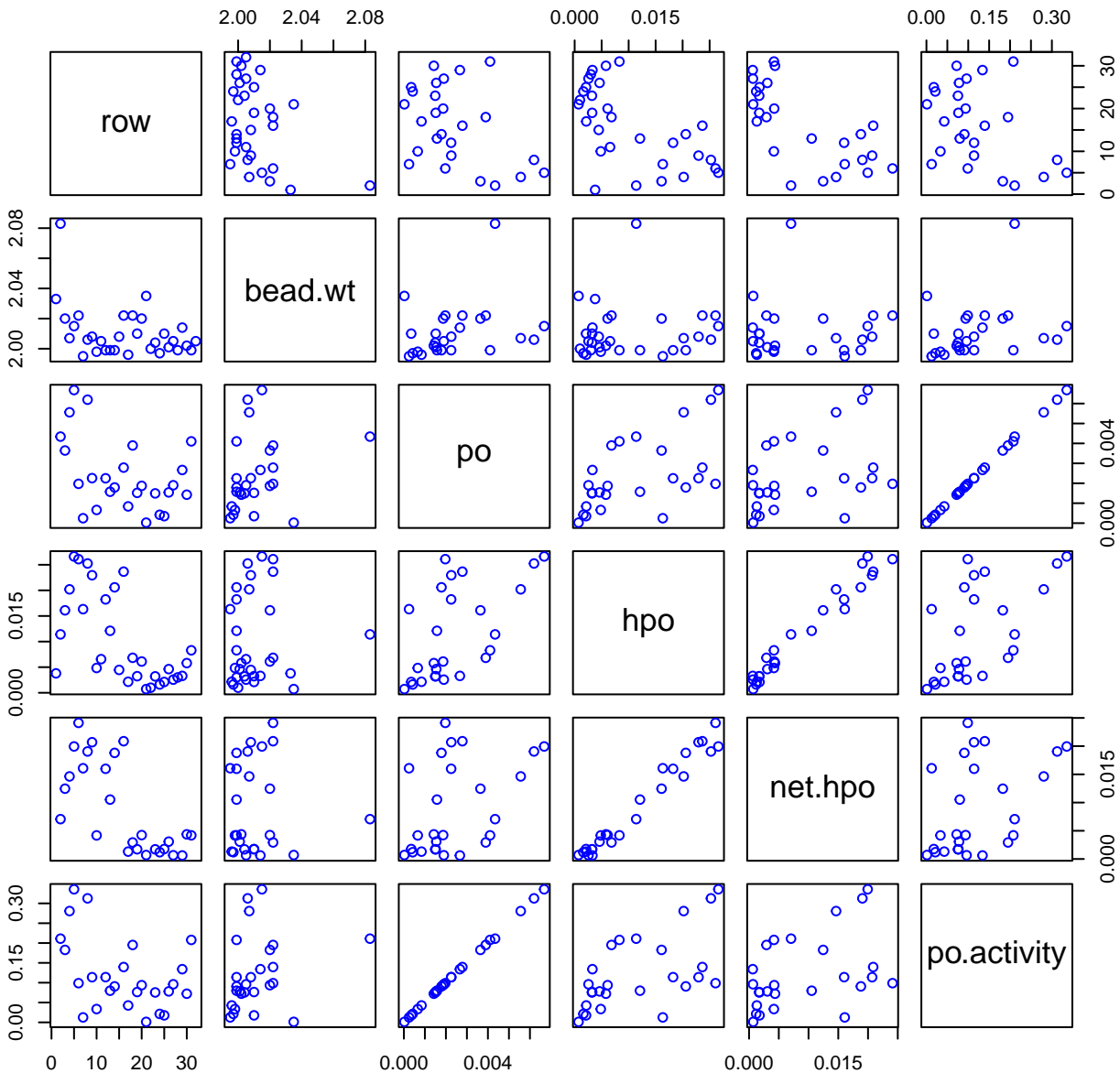
Name = hf304-01-biosep-oxidative-sum.csv  
Description = biosep oxidative summary  
Rows = 32 Columns = 17  
MD5 checksum = 163262b967a96c5852fa244a7af413f4

Variables:

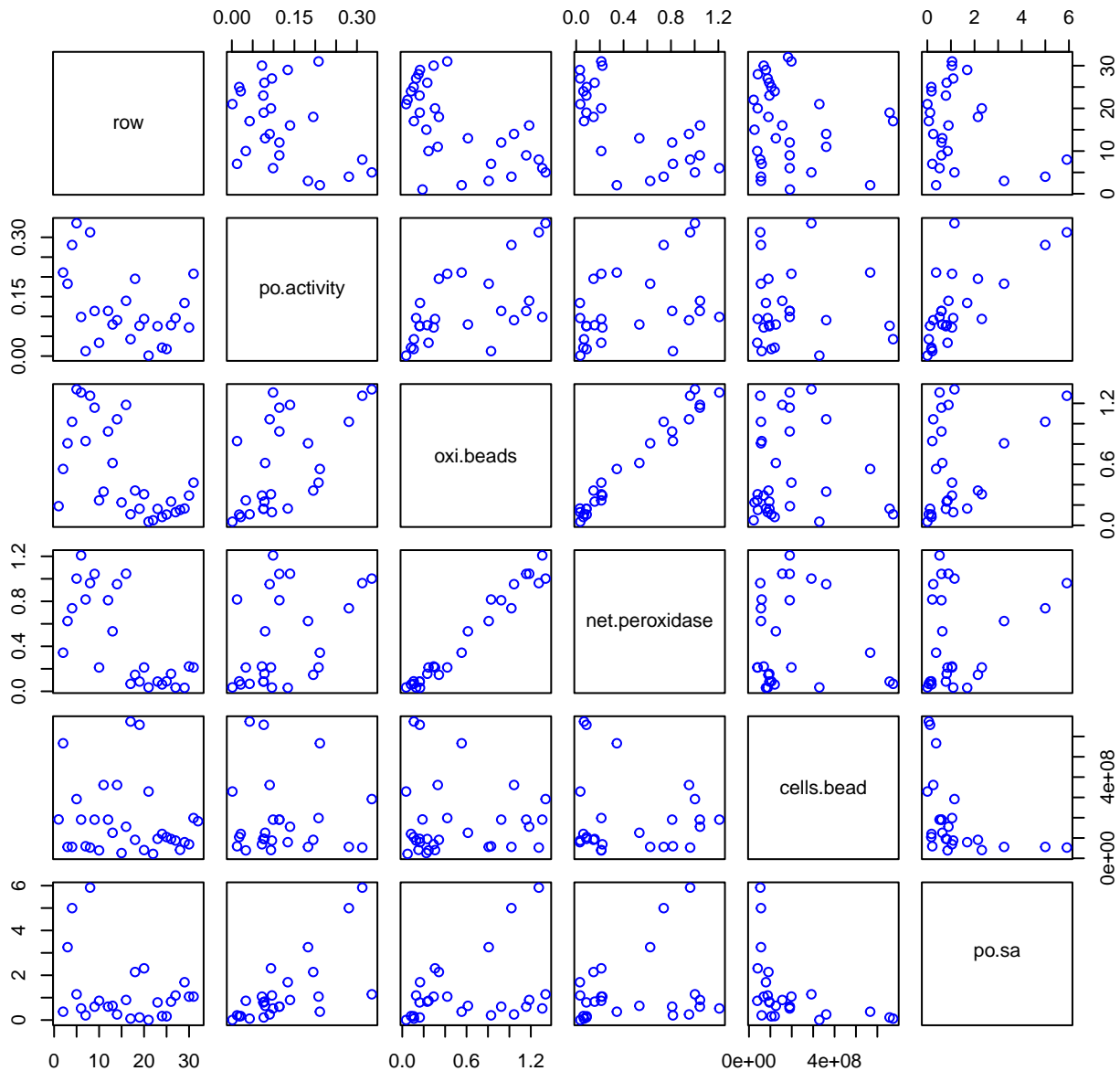
bead.wt = mass of beads used in assay slurry in 40 ml buffer (gram)  
po = phenol oxidase activity as change in A460nm of 50ul enzyme  
assay  
supernatant over the first three hours of the assay (ie it is a  
slope), assuming the initial  
absorbance was zero (number)  
hpo = peroxidase activity calculated using the change in A460nm of  
50ul enzyme  
assay supernatant over the first three hours of the assay  
(ie it is a slope), assuming the  
initial absorbance was zero. The  
greatest changes occurred in the first 20 minutes, however  
these these  
initial values cannot be used due to the large variability in  
blanks.  
(number)  
net.hpo = net peroxidase activity, calculated as plates with H2O2  
minus plates  
without (number)  
po.activity = calculated using the formula Activity = (slope)\*volume  
of buffer used  
(40ml)/(extinction coefficient (7.9umol)\* volume  
plated (0.05ml)\*g beads), where slope is the  
phenol oxidase slope  
(micromolePerGramPerHour)  
oxi.beads = activity = (slope)\*volume of buffer used  
(40ml)/(extinction coefficient  
(7.9umol)\* volume plated (0.05ml)\*g beads), using  
the peroxidase (ie +H2O2 wells)  
slope (gram)  
net.peroxidase = difference between OXI.beads and PO activity, since  
phenol oxidases are  
active under the addition of H2O2, along with other  
activities (micromolePerGram)  
cells.bead = direct counts of cells detected per gram bead (number)  
po.sa = phenol oxidase specific activity (substrate converted per  
hour per 1e9  
cells) (dimensionless)  
oxi.cells = total oxidative specific activity (substrate converted  
per hour per 1e9  
cells) (dimensionless)  
net.perox = net phenol oxidase specific activity (substrate  
converted per hour per 1e9  
cells) (dimensionless)

| Variable     | Min      | Median    | Mean      | Max       | NAs |
|--------------|----------|-----------|-----------|-----------|-----|
| bead.wt      | 1.995    | 2.005     | 2.011     | 2.083     | 0   |
| po           | 0.000    | 0.002     | 0.002     | 0.007     | 6   |
| hpo          | 0.001    | 0.006     | 0.010     | 0.027     | 1   |
| net.hpo      | 0.001    | 0.004     | 0.009     | 0.024     | 6   |
| po.activity  | 0.001    | 0.095     | 0.120     | 0.336     | 6   |
| oxi.beads    | 0.036    | 0.306     | 0.509     | 1.338     | 1   |
| net.peroxida | 0.031    | 0.217     | 0.451     | 1.208     | 6   |
| cells.bead   | 21839804 | 112378589 | 181298161 | 673754096 | 0   |
| po.sa        | 0.004    | 0.804     | 1.220     | 5.912     | 6   |
| oxi.cells    | 0.110    | 3.661     | 5.153     | 24.100    | 1   |
| net.perox    | 0.098    | 2.918     | 4.287     | 18.188    | 6   |

# HF304-01 Plot 1



# HF304-01 Plot 2



# HF304-01 Plot 3

