```
Matrix made by matblas from blosum62.iij
     * column uses minimum score
     BLOSUM Clustered Scoring Matrix in 1/2 Bit Units
     Blocks Database = /data/blocks_5.0/blocks.dat
     Cluster Percentage: >= 62
     Entropy =
                             0.6979, Expected = -0.5209
     ARNDCOEGHILKMF
                                                                                      Ρ
                                                                                             STWYVB
    4 -1 -2 -2 0 -1 -1 0 -2 -1 -1 -1 -1 -2 -1 1
                                                                                                    0 -3 -2 0 -2 -1
                                                                                                                                        0 - 4
                                       0 -2 0 -3 -2 2 -1 -3 -2 -1 -1 -3 -2 -3 -1
                0 -2 -3 1
R-1
            5
                                                                                                                                  0 - 1 - 4
N-2
           0
                 6
                      1 -3
                                  0
                                        0
                                              0
                                                    1 -3 -3 0 -2 -3 -2
                                                                                             1
                                                                                                    0 - 4 - 2 - 3
                                                                                                                            3
                                                                                                                                 0 -1
D - 2 - 2
                1
                      6 -3
                                  0
                                        2 -1 -1 -3 -4 -1 -3 -3 -1
                                                                                             0 -1 -4 -3 -3
                                                                                                                          4
                                                                                                                                 1 - 1 - 4
\begin{smallmatrix} C & 0 & -3 & -3 & -3 & 9 & -3 & -4 & -3 & -3 & -1 & -1 & -3 & -1 & -2 & -3 & -1 & -1 & -2 & -2 & -1 & -3 & -3 & -2 & -4 \end{smallmatrix}
0 -1 1
               0 0 -3 5 2 -2 0 -3 -2 1 0 -3 -1 0 -1 -2 -1 -2 0
                                                                                                                                3 - 1 - 4
E - 1 0
                 0
                      2 - 4 \quad 2 \quad 5 - 2
                                                    0 -3 -3 1 -2 -3 -1
                                                                                              0 -1 -3 -2 -2 1
                                                                                                                                 4 - 1 - 4
G 0 - 2
                 0 \ -1 \ -3 \ -2 \ -2 \ 6 \ -2 \ -4 \ -4 \ -2 \ -3 \ -3 \ -2 \ 0 \ -2 \ -2 \ -3 \ -3 \ -1 \ -2 \ -1 \ -4
H - 2 0
                 1 -1 -3 0 0 -2
                                                   8 -3 -3 -1 -2 -1 -2 -1 -2 -2
                                                                                                              2 -3 0
                                                                                                                                 0 - 1 - 4
I -1 -3 -3 -3 -1 -3 -4 -3
                                                         4 2 -3
                                                                            1
                                                                                 0 -3 -2 -1 -3 -1 3 -3 -3 -1 -4
L -1 -2 -3 -4 -1 -2 -3 -4 -3 2 4 -2
                                                                           2
                                                                                 0 -3 -2 -1 -2 -1 1 -4 -3 -1 -4
 \texttt{K} \ -1 \quad 2 \quad 0 \ -1 \ -3 \quad 1 \quad 1 \ -2 \ -1 \ -3 \ -2 \quad 5 \ -1 \ -3 \ -1 \quad 0 \ -1 \ -3 \ -2 \ -2 \quad 0 \quad 1 \ -1 \ -4 
F -2 -3 -3 -3 -2 -3 -3 -1 0 0 -3 0
                                                                                6 -4 -2 -2 1 3 -1 -3 -3 -1 -4
P -1 -2 -2 -1 -3 -1 -1 -2 -2 -3 -3 -1 -2 -4 7 -1 -1 -4 -3 -2 -2 -1 -2 -4
                      0 -1 0 0 0 -1 -2 -2 0 -1 -2 -1 4 1 -3 -2 -2 0 0
   1 -1
                 1
                                                                                                                                       0 - 4
                0 -1 -1 -1 -1 -2 -2 -1 -1 -1 -1 -2 -1 1
                                                                                                    5 -2 -2 0 -1 -1
    0 - 1
                                                                                                              2 -3 -4 -3 -2 -4
W -3 -3 -4 -4 -2 -2 -3 -2 -2 -3 -2 -3 -1
                                                                                1 -4 -3 -2 11
Y -2 -2 -2 -3 -2 -1 -2 -3 2 -1 -1 -2 -1
                                                                                3 -3 -2 -2 2
                                                                                                              7 -1 -3 -2 -1 -4
V 0 -3 -3 -3 -1 -2 -2 -3 -3 3 1 -2 1 -1 -2 -2 0 -3 -1 4 -3 -2 -1 -4
B - 2 - 1 3 4 - 3 0 1 - 1 0 - 3 - 4 0 - 3 - 3 - 2 0 - 1 - 4 - 3 - 3 4 1 - 1 - 4
Z -1 0 0
                                                                                             0 -1 -3 -2 -2 1
                      1 -3 3 4 -2
                                                   0 -3 -3 1 -1 -3 -1
                                                                                                                                4 - 1 - 4
	imes 	ime
```