File Format Specification

Result file

2006-06-26

1 Change history

Revision	Date	Author	Description
1.0	26.6.2007	Vesa Oikonen, Calle Laakkonen	New document format, based on version 2005-06-20

2 Background

Eventually, when the model programs are aplied for regional PET data, the calculated results need to be saved in files for later retrieval or printing. Results are always saved in ASCII text files which can be read into common word processing or spreadsheet programs (e.g. MS Word or Excel) as such. In some cases, the results still need to be processed by other programs; for this purpose, a common format for result files is introduced.

3 Format

The result file format contains the parameter values calculated for all curves in a PET TAC file. The file is an ASCII text file, which starts with a line describing the program name, version and copyright string, used to calculate the results. Only one set of results can be contained in one result file; if several sets are stored, then only the first set is used.

The next line must contain the date and time of calculation. This line must start with identification string "Date:".

The following title lines contain the name of study (i.e. study number), names of data files, and possible reference regions, etc. These lines must start with the following identification strings:

1. Study:
2. Data file: OR ROI file:
3. Plasma file:
4. Blood file:
5. Reference file:
6. Reference region:
7. Data range: OR Fit time:
8. Tissue density:
9. Lumped constant:
10. Concentration:
11. Beta:
12. Vb:

These items need not be in the specified order, and none of these items is required. In future, other identification strings will be added.

Next, there must be a line indicating whether the data was weighted or not weighted. This line must be precisely either "Data was weighted." or "Data was not weighted.".

Next, there must be a title line, starting with string "Region", continuing after 22 characters from the line beginning with a list of parameter identification strings.

The next lines specify the calculated parameter values for each region, each region on its own line. The region name may consist of three fields, six characters wide, describing the region, hemisphere and place (plane), and separated by a space. Missing name should be replaced by a dot ".", but this is not required. The parameter values must be listed 22 characters (or more) from the beginning of the line, separated by space(s) or tab(s).

Result file may also contain empty lines, and comment lines starting with #.

Standard deviations and lower and upper confidence limits may be specified below the results. If the "region" name is set to "SD", then the result file line contents are identified as SD values for the results of previous region. If the three "region" name fields are set to "CL", "95%" and "Lower" or "Upper", respectively, the line contents are identified as the lower or upper confidence limits.

4 Example (Patlak results)

```
patlak 1.4  (c) 2001-2003 by Turku PET Centre
Date:        2003-01-19 15:49:03
Study:       ut2352
Data file:   ut2352.dft
Plasma file: ut2352vp.kbq
Data range:  15 - 55 min (N=8) lsq=c
Data was not weighted.

Region               Ki          Ic          r
cer   dx    All    2.6184e-02     0.6002      0.9964
      SD     .      .  1.0557e-03  0.0572         .
cer   sin   All    2.6374e-02     0.6125      0.9959
      SD     .      .  1.1346e-03  0.0615         .
fro   dx    All    3.3170e-02     0.4739      0.9981
      SD     .      .  9.7074e-04  0.0526         .
fro   sin   All    3.2573e-02     0.4527      0.9975
      SD     .      .  1.0860e-03  0.0589         .
hipp  dx    All    1.9473e-02     0.4168      0.9967
      SD     .      .  7.4831e-04  0.0406         .
hipp  sin   All    1.8704e-02     0.4148      0.9911
      SD     .      .  1.1859e-03  0.0643         .
put   dx    All    3.0182e-02     0.4804      0.9981
      SD     .      .  8.8321e-04  0.0479         .
put   sin   All    2.9847e-02     0.3959      0.9989
      SD     .      .  6.6377e-04  0.0360         .
```