

```

*****
*           Double_exp_mac.mlxtran           *
*           May 18, 2021 at 10:53:18         *
*           Monolix version : 2020R1         *
*****

```

## ESTIMATION OF THE POPULATION PARAMETERS

---

Fixed Effects ----- se\_sa rse(%)

A1_pop	:	0.0498	nan	nan
tau1_pop	:	1.98e+3	nan	nan
A2_pop	:	0.114	nan	nan
tau2_pop	:	3.39	nan	nan
I0_pop	:	0.449	0.00966	2.15

Standard Deviation of the Random Effects -

omega_A1	:	0.381	0.0618	16.2
omega_tau1	:	3.66	0.317	8.67
omega_A2	:	0.231	0.0285	12.3
omega_tau2	:	1.27	0.249	19.7
omega_I0	:	0.194	0.0156	8.03

Correlations -----

corr_A2_A1	:	0.973	0.0112	1.15
corr_tau1_A1	:	-0.912	0.0449	4.92
corr_tau2_A1	:	-0.946	0.0248	2.62
corr_tau1_A2	:	-0.98	0.0142	1.45
corr_tau2_A2	:	-0.853	0.0577	6.76
corr_tau2_tau1	:	0.758	0.0952	12.6

Error Model Parameters -----

a	:	0.0208	0.00355	17.1
b	:	0.0667	0.00568	8.52

Elapsed time (seconds) : 53  
CPU time (seconds) : 94

---

## ESTIMATION OF THE INDIVIDUAL PARAMETERS

---

Estimation of the individual parameters by Conditional Distribution -----

	min	Q1	median	Q3	max
A1	: 0.0167	0.0423	0.0509	0.0598	0.108
tau1	: 2.86	5.28e+3	2.73e+4	1.82e+5	1.42e+7
A2	: 0.0607	0.104	0.115	0.128	0.182
tau2	: 0.152	2.61	4.66	8.59	122
I0	: 0.257	0.412	0.473	0.506	0.613



WARNING : Impossible to compute the eigen values of the correlation matrix.

Elapsed time (seconds) : 4.6

CPU time (seconds) : 11

---

ESTIMATION OF THE LOG-LIKELIHOOD

---

	(is)	
-2 x log-likelihood	(OFV) :	-18132.51
Akaike Information Criteria	(AIC) :	-18096.51
Corrected Bayesian Information Criteria	(BICc) :	-18021.24
Bayesian Information Criteria	(BIC) :	-18051.92

Elapsed time (seconds) : 32.49

CPU time (seconds) : 66.00

[Importance Sampling] Standard error : 1270.754

Sampling distribution : T-distribution with 5 degrees of freedom

---

DATASET INFORMATION

Number of individuals: 88

Number of observations (observation): 7040

Number of doses: 0

```

*****
*           Double_exp_mac.mlxtran           *
*           May 18, 2021 at 11:00:54         *
*           Monolix version : 2020R1         *
*****

```

## ESTIMATION OF THE POPULATION PARAMETERS

---

```

Fixed Effects ----- se_sa rse(%)
A1_pop   :           0.11   nan   nan
tau1_pop :           4.04   nan   nan
A2_pop   :          0.0469   nan   nan
tau2_pop :           2.92   nan   nan
I0_pop   :           0.495 0.0127 2.57

```

### Standard Deviation of the Random Effects -

```

omega_A1 :           0.281   nan   nan
omega_tau1 :          0.356 0.0218 6.12
omega_A2 :           0.136 0.00974 7.18
omega_tau2 :          0.574   nan   nan
omega_I0 :           0.0996 0.0216 21.6

```

### Correlations -----

```

corr_A2_A1 :           0.413 0.0403 9.75
corr_tau1_A1 :          -0.29 0.0766 26.5
corr_tau2_A1 :          -0.843 0.0431 5.12
corr_tau1_A2 :           0.749 0.0398 5.31
corr_tau2_A2 :          -0.0439   nan   nan
corr_tau2_tau1 :          0.594   nan   nan

```

### Error Model Parameters -----

```

a       :           0.000762 0.0112 1.47e+3
b       :           0.0947 0.0174 18.4

```

Elapsed time (seconds) : 36

CPU time (seconds) : 64

---

## ESTIMATION OF THE INDIVIDUAL PARAMETERS

---

### Estimation of the individual parameters by Conditional Distribution -----

```

      min   Q1  median   Q3   max
A1 : 0.0649 0.0966 0.107 0.128 0.178
tau1 : 3.06 3.88 4.37 4.89 5.64
A2 : 0.0412 0.0458 0.0478 0.0499 0.0537
tau2 : 1.34 2.48 3.59 4.14 9.57
I0 : 0.383 0.48 0.498 0.515 0.576

```



WARNING : Impossible to compute the eigen values of the correlation matrix.

Elapsed time (seconds) : 4.7

CPU time (seconds) : 11

---

ESTIMATION OF THE LOG-LIKELIHOOD

---

	(is)	
-2 x log-likelihood	(OFV) :	-4761.68
Akaike Information Criteria	(AIC) :	-4725.68
Corrected Bayesian Information Criteria	(BICc) :	-4676.26
Bayesian Information Criteria	(BIC) :	-4707.76

Elapsed time (seconds) : 8.25

CPU time (seconds) : 16.00

[Importance Sampling] Standard error : 13.246

Sampling distribution : T-distribution with 5 degrees of freedom

---

DATASET INFORMATION

Number of individuals: 20

Number of observations (observation): 1800

Number of doses: 0

```

*****
*           Double_exp_mac.mlxtran           *
*           May 18, 2021 at 10:57:43        *
*           Monolix version : 2020R1        *
*****

```

## ESTIMATION OF THE POPULATION PARAMETERS

---

```

Fixed Effects ----- se_sa rse(%)
A1_pop   :           0.118 0.00667 5.63
tau1_pop :           1.22 0.303 24.7
A2_pop   :           0.0387 0.00532 13.8
tau2_pop :           2.82 1.17 41.6
I0_pop   :           0.346 0.0205 5.94

```

```

Standard Deviation of the Random Effects -
omega_A1 :           0.195 0.0308 15.8
omega_tau1 :          0.651 0.101 15.5
omega_A2 :           0.291 0.0492 16.9
omega_tau2 :          0.906 0.144 15.9
omega_I0 :           0.255 0.0406 15.9

```

```

Correlations -----
corr_A2_A1 :          -0.11 nan nan
corr_tau1_A1 :        -0.754 nan nan
corr_tau2_A1 :          0.233 nan nan
corr_tau1_A2 :          0.713 nan nan
corr_tau2_A2 :        -0.957 nan nan
corr_tau2_tau1 :       -0.815 nan nan

```

```

Error Model Parameters -----
a      :           2.22e-16 0.00458 2.06e+15
b      :           0.0889 0.0091 10.2

```

```

Elapsed time (seconds) : 37
CPU time (seconds) : 63

```

---

## ESTIMATION OF THE INDIVIDUAL PARAMETERS

---

```

Estimation of the individual parameters by Conditional Distribution -----
      min   Q1  median   Q3   max
A1   : 0.0825 0.107 0.117 0.134 0.189
tau1 : 0.285 0.972 1.57 1.92 2.39
A2   : 0.0235 0.0357 0.0411 0.0445 0.0462
tau2 : 1.91 2.37 3.16 5.72 14
I0   : 0.212 0.274 0.333 0.454 0.506

```





WARNING : Impossible to compute the eigen values of the correlation matrix.

Elapsed time (seconds) : 5.8

CPU time (seconds) : 13

---

ESTIMATION OF THE LOG-LIKELIHOOD

---

	(is)	
-2 x log-likelihood	(OFV) :	-5905.37
Akaike Information Criteria	(AIC) :	-5869.37
Corrected Bayesian Information Criteria	(BICc) :	-5819.95
Bayesian Information Criteria	(BIC) :	-5851.44

Elapsed time (seconds) : 8.21

CPU time (seconds) : 16.00

[Importance Sampling] Standard error : 47.242

Sampling distribution : T-distribution with 5 degrees of freedom

---

DATASET INFORMATION

Number of individuals: 20

Number of observations (observation): 1800

Number of doses: 0