Open Systems Pharmacology Suite - 11 Installation Validation

User1

May 19, 2022

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Chapter 1

Installation Validation Results

Overall Validation Result

Invalid

1.1 Validation Summary

Run Duration

Start time: 2022-05-19 16:38 End time: 2022-05-19 18:36

Validation performed in 01h:58m:41s:209ms

Input Configuration Folder

 $C: \label{lem:cology} Installation Validator \cite{C:ProgramData}. Open Systems Pharmacology \cite{C:ProgramData} Batch Files and the program Pharmacology \cite{C:ProgramData}. The program Pharmacology \cite{C:ProgramData} and the program Pharmacology \cite{C:ProgramData}. The program Pharmacology \cite{C:ProgramData} and the program Pharmacology \cite{C:ProgramData}. The program Pharmacology \cite{C:ProgramData} and the program Pharmacology \cite{C:ProgramData}. The program Pharmacology \cite{C:ProgramData} and \cite{C:ProgramData} and \cite{C:ProgramData}. The program Pharmacology \cite{C:ProgramData} and \cite{C:ProgramData} and \cite{C:ProgramData}. The program Pharmacology \cite{C:ProgramData} and \cite{C:ProgramData$

Local Outputs Location

Application Versions

PK-Sim Version 11.0.150 MoBi Version 11.0.138

Language Settings

English (United Kingdom) (en-GB)

Computer Name

WIN11_EN

Operating System

Windows 10 Pro

Architecture

x64

Running on Virtual Machine

Yes

Running on Terminal Session

No

1.2 Comparison Results

Overall Comparison Result

Invalid

Installation Folder

C:\ProgramData\Open Systems Pharmacology\InstallationValidator\11.0\Outputs\BatchFiles

Computed Folder

C:\Users\User1\AppData\Roaming\Open Systems Pharmacology\InstallationValidator\11.0\Outputs

1.2.1 Invalid Simulations (1/155)

$Simulation: \ Human_MultiORAL_6_12_12_Dissolved-Human_MultiORAL_6_12_12_Dissolved_solubility$

Result of the validation: Invalid Absolute Tolerance: 1.00E-13 Relative Tolerance: 1.00E-8

Output Path: Organism|Lumen|LowerJejunum|drug|Fraction of oral drug mass absorbed into mucosa segment

Deviation for 'Organism|Lumen|LowerJejunum|drug|Fraction of oral drug mass absorbed into mucosa segment' is 100.00% and is greater than the allowed max. tolerance of 3.00%

Deviation: 1.00

0

 $\cdot 10 \text{rg} \\ \text{å} \\ \text{nism} \\ \text{Lumen} \\ \text{LowerJejunum} \\ \text{drug} \\ \text{Fraction of oral drug mass absorbed into mucosa segment} \\$ 1 Installation Computed

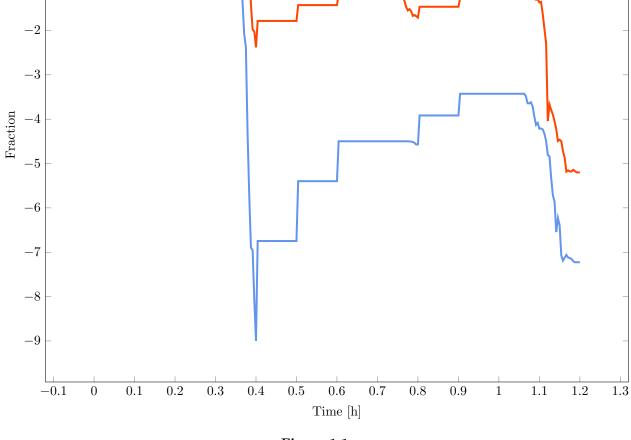


Figure 1.1

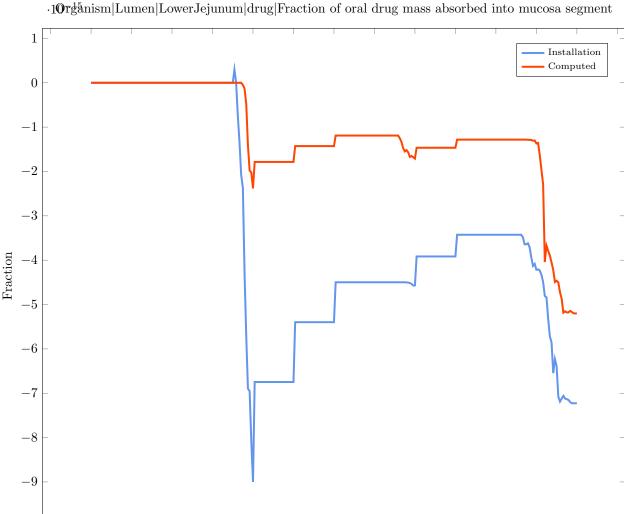


Figure 1.2

0.6

Time [h]

0.7

0.8

0.9

1.1

1.2

1.3

Output Path: Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Deviation: 9.74E-8

0.5

0.1

0

-0.1

0.2

0.3

0.4

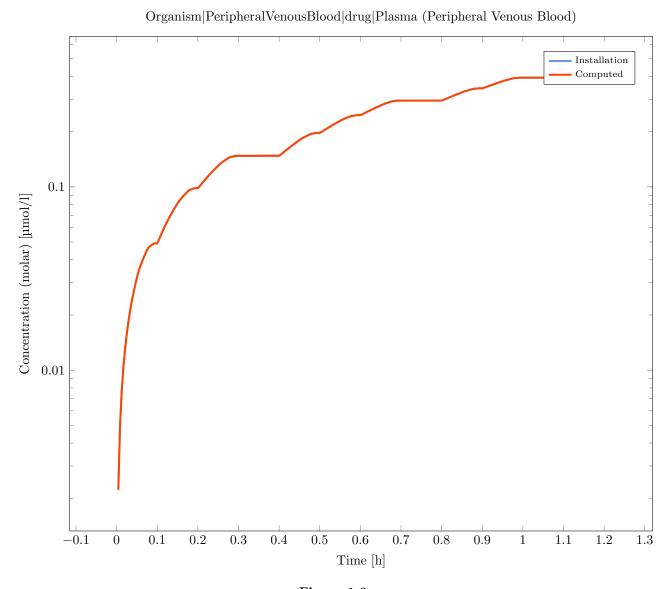


Figure 1.3

1.2.2 Valid Simulations (154/155)

 $Simulation: \ Beagle_SingleORAL_Dissolved-Beagle_SingleORAL_Dissolved$

Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |
drug |Plasma (Peripheral Venous Blood) Deviation: ${\bf 0}$

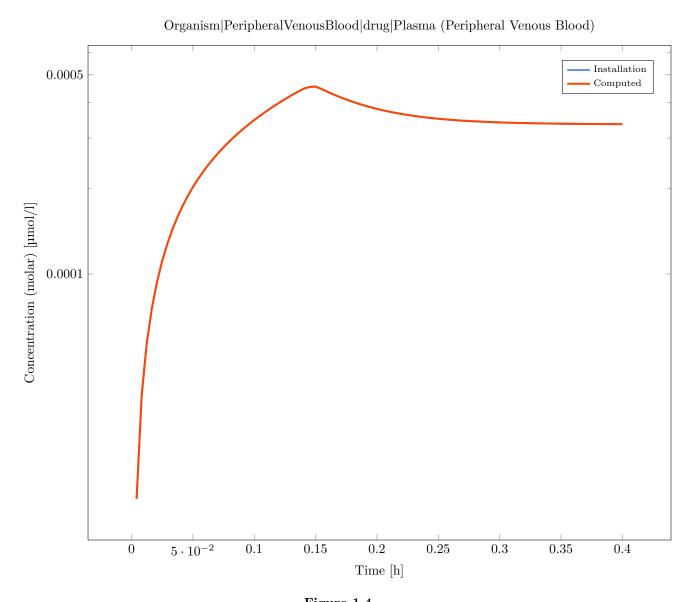
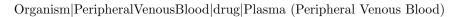


Figure 1.4

 $Simulation: Beagle_SingleORAL_Dissolved_Beagle_SingleORAL_Dissolved_MW_200_fu_0.2_LogP_5$

Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |
drug |Plasma (Peripheral Venous Blood) Deviation: ${\bf 0}$



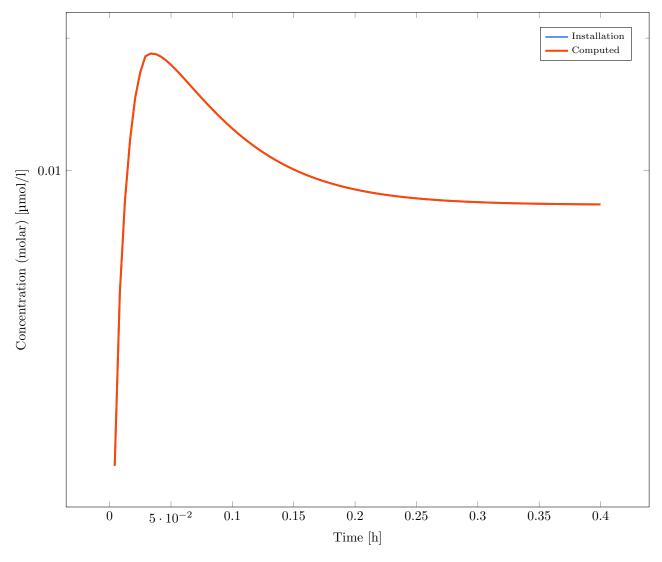


Figure 1.5

 $\label{lem:simulation:beagle_SingleORAL_Dissolved_MW_800_fu_0.6_LogP_--5 \\ Result of the validation: Valid$

Output Path: Organism |PeripheralVenousBlood |
drug |Plasma (Peripheral Venous Blood) Deviation: ${\bf 0}$

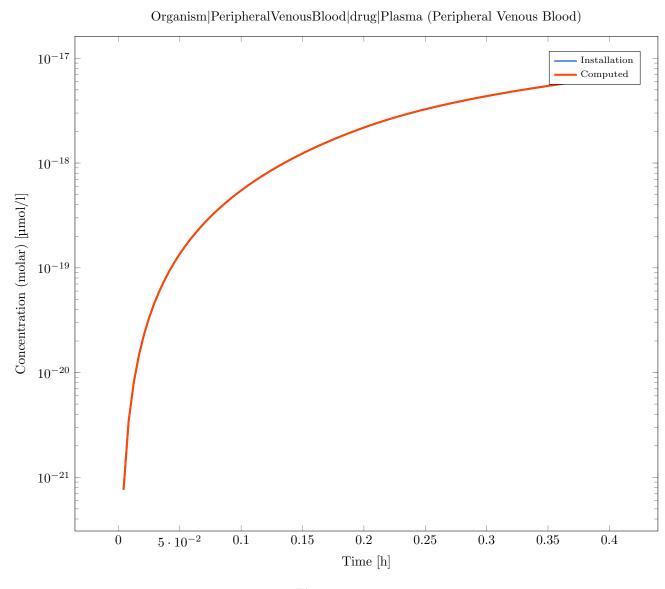
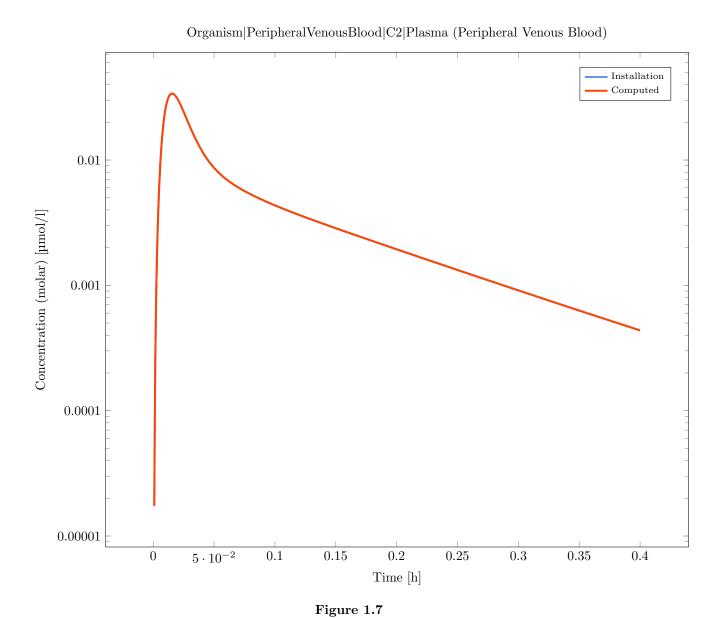


Figure 1.6

 ${\bf Simulation:\ DDI_Multiple Combinations\hbox{--}01_MM_Competitive_Competitive} \\ {\bf Result\ of\ the\ validation:\ Valid}$

Output Path: Organism |Peripheral Venous
Blood |C2 |Plasma (Peripheral Venous Blood)
 Deviation: 3.84E-4



Output Path: Organism |Peripheral Venous
Blood |Fluvoxamine |Plasma (Peripheral Venous Blood)
 Deviation: 2.00E-4

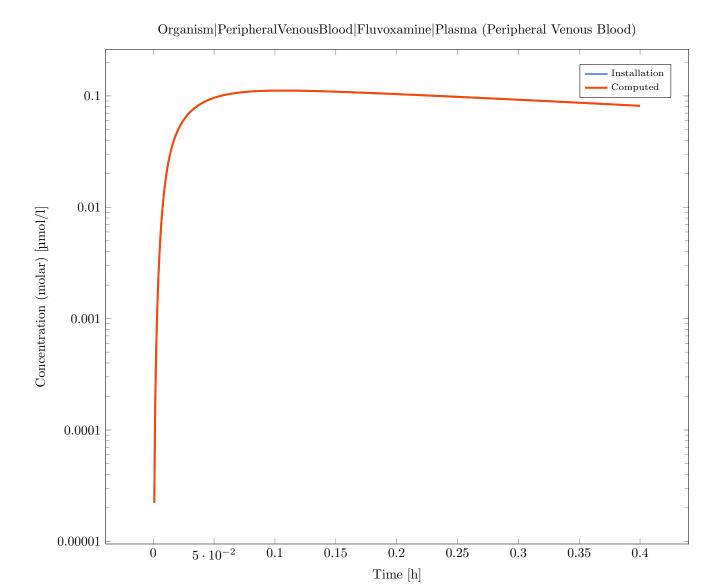


Figure 1.8

Output Path: Organism |Peripheral Venous
Blood |Itraconazole |Plasma (Peripheral Venous Blood)
 Deviation: 2.44E-4



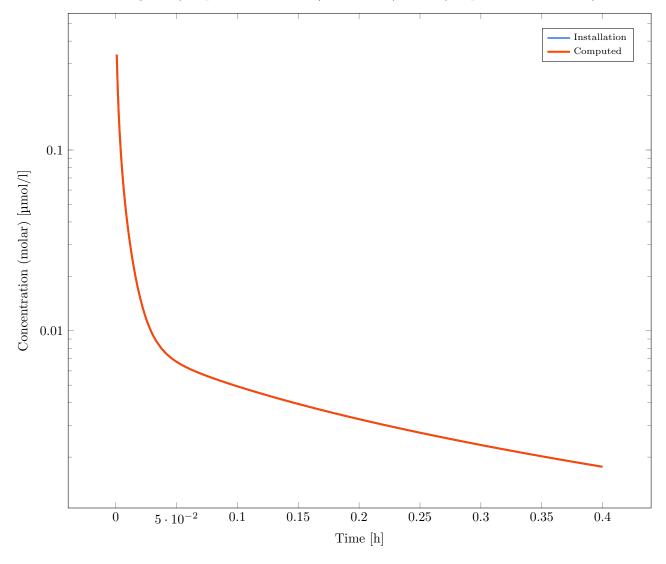


Figure 1.9

 ${\bf Simulation:\ DDI_Multiple Combinations-02_MM_Uncompetitive_Uncompetitive_Result\ of\ the\ validation:\ Valid}$

Output Path: Organism |Peripheral Venous
Blood |C2 |Plasma (Peripheral Venous Blood)
 Deviation: 3.77E-4

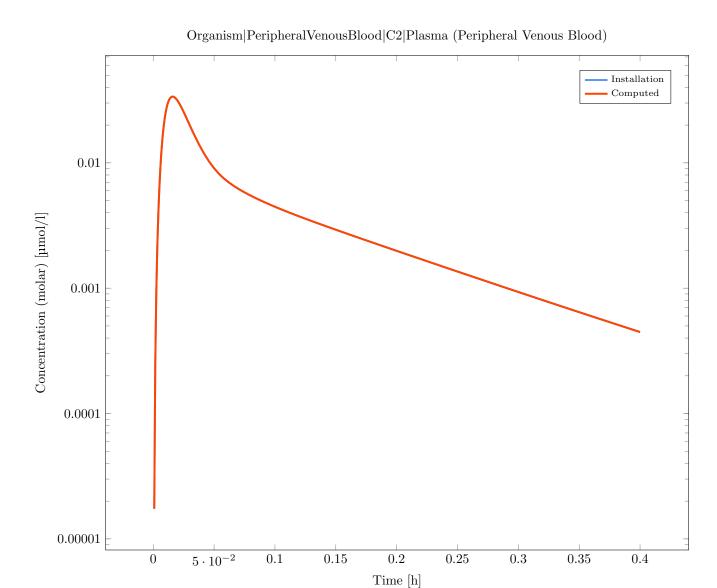


Figure 1.10

 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive_CYP3A4_1|Plasma\ (PeripheralVenous\ Blood)\\ Venous\ Blood)$

Deviation: 3.69E-4

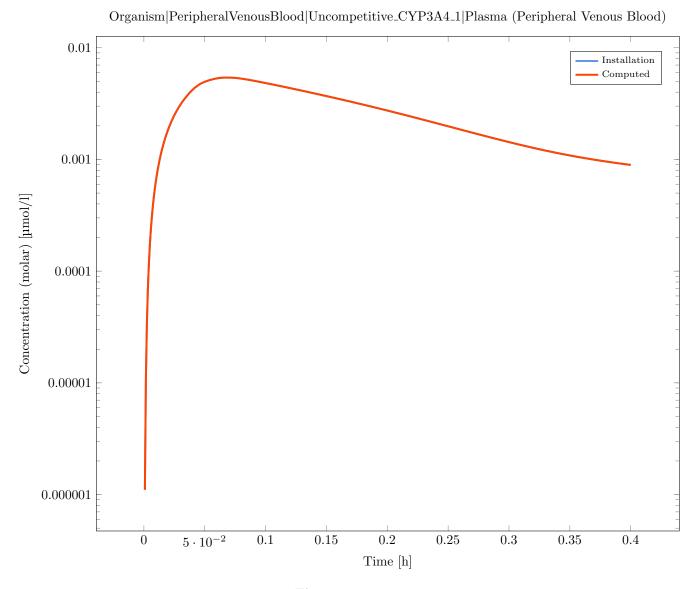
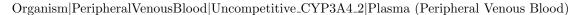


Figure 1.11

 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive_CYP3A4_2|Plasma\ (PeripheralVenous\ Blood)$

Deviation: 3.69E-4



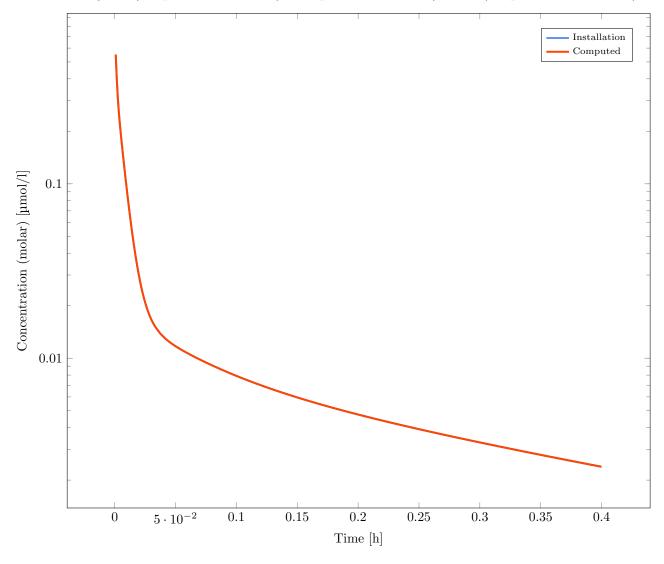


Figure 1.12

 ${\bf Simulation:\ DDI_Multiple Combinations-03_MM_Noncompetitive_N$

Output Path: Organism |Peripheral Venous
Blood |C2 |Plasma (Peripheral Venous Blood)
 Deviation: 3.58E-4

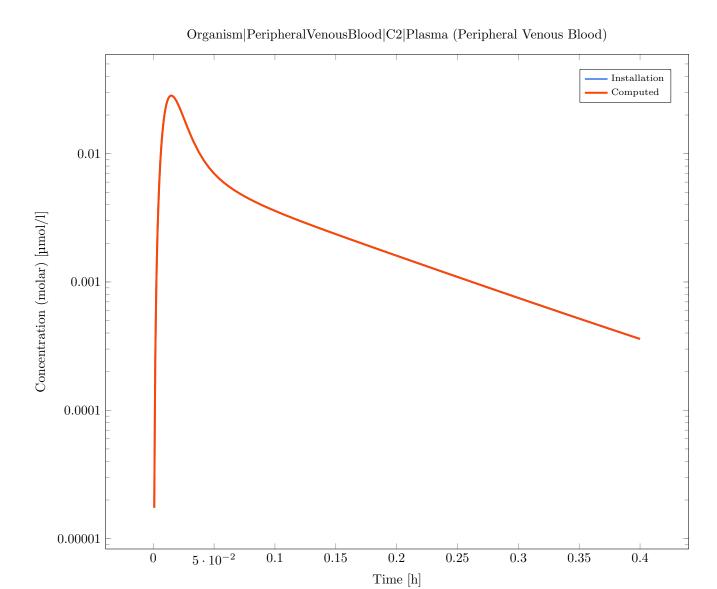


Figure 1.13

 $Output\ Path:\ Organism | Peripheral Venous Blood | Noncompetitive_CYP3A4_1 | Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 3.68E-4

Organism|PeripheralVenousBlood|Noncompetitive_CYP3A4_1|Plasma (Peripheral Venous Blood)

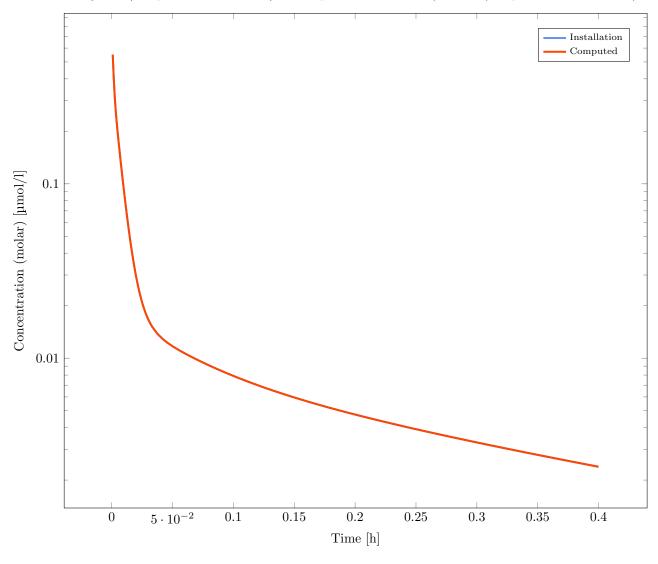


Figure 1.14

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive_CYP3A4_2|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 3.06E-4

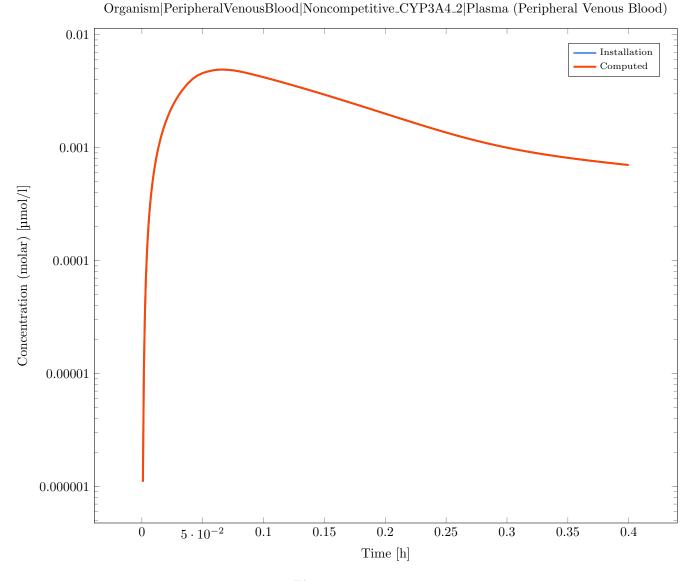


Figure 1.15

 $Simulation: \ DDI_MultipleCombinations-04_MM_Mixed_Mixed$

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C2|Plasma (Peripheral Venous Blood)

Deviation: 3.82E-4

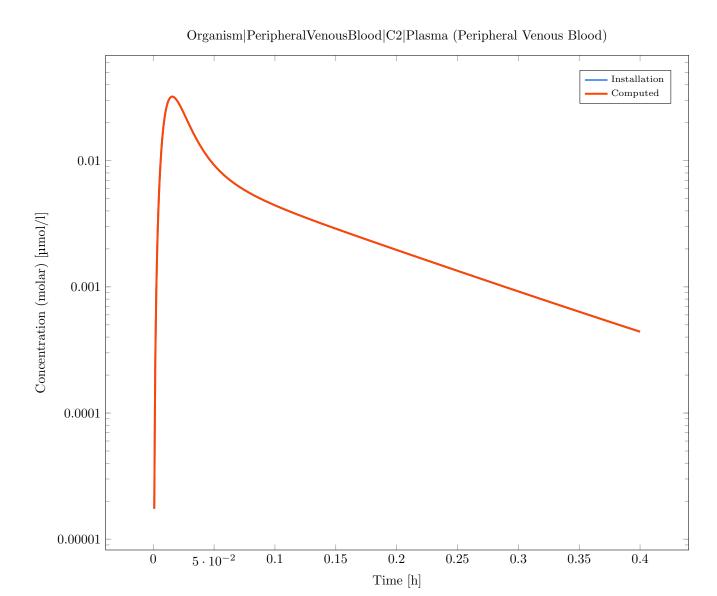


Figure 1.16

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed_CYP3A4_1|Plasma\ (Peripheral\ VenousBlood)$

Deviation: 3.16E-4

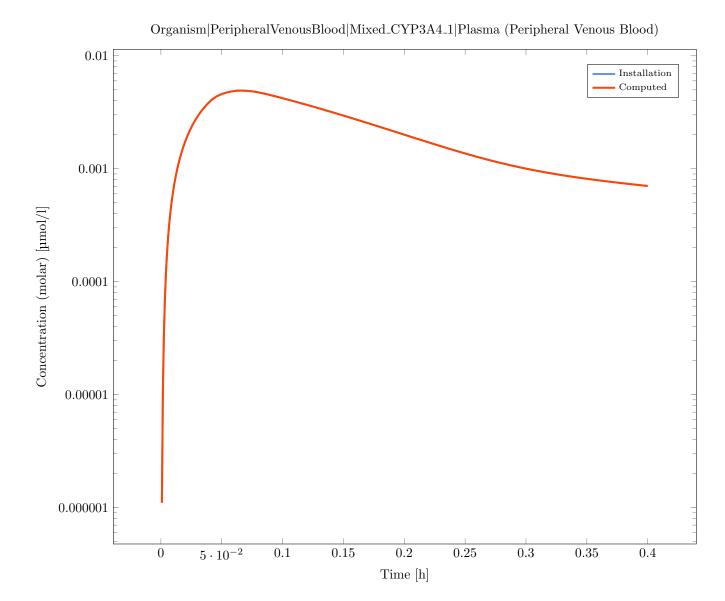


Figure 1.17

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed_CYP3A4_2|Plasma\ (Peripheral\ VenousBlood)$

Deviation: 3.68E-4

Organism|PeripheralVenousBlood|Mixed_CYP3A4_2|Plasma (Peripheral Venous Blood)

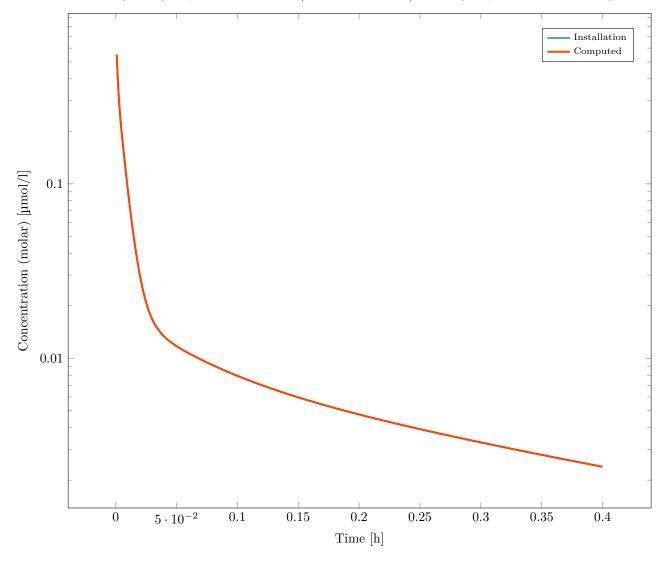


Figure 1.18

Simulation: DDI_MultipleCombinations-05_MM_Mechanismbased_Mechanismbased Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |C2 |Plasma (Peripheral Venous Blood)
 Deviation: $3.69\hbox{E-}4$

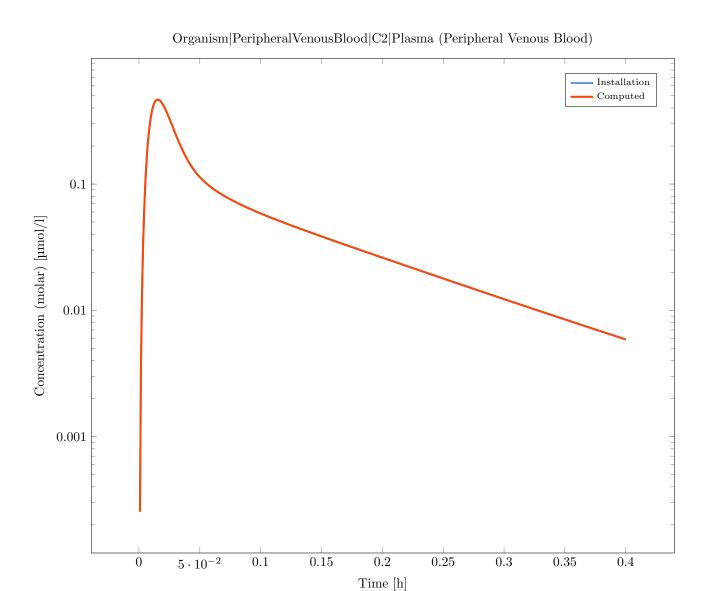
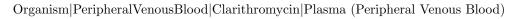


Figure 1.19

Output Path: Organism |PeripheralVenousBlood |Clarithromycin |Plasma (Peripheral Venous Blood)
 Deviation: 2.03E-4



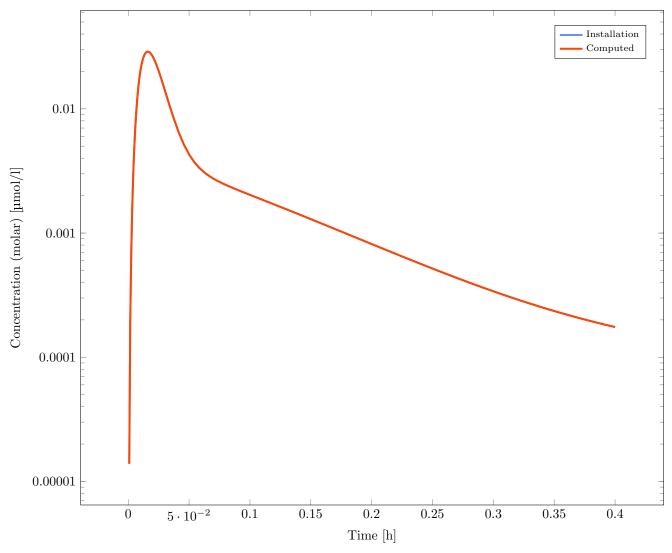


Figure 1.20

Output Path: Organism |PeripheralVenousBlood | Erythromycin |Plasma (Peripheral Venous Blood)
 Deviation: 3.61E-4

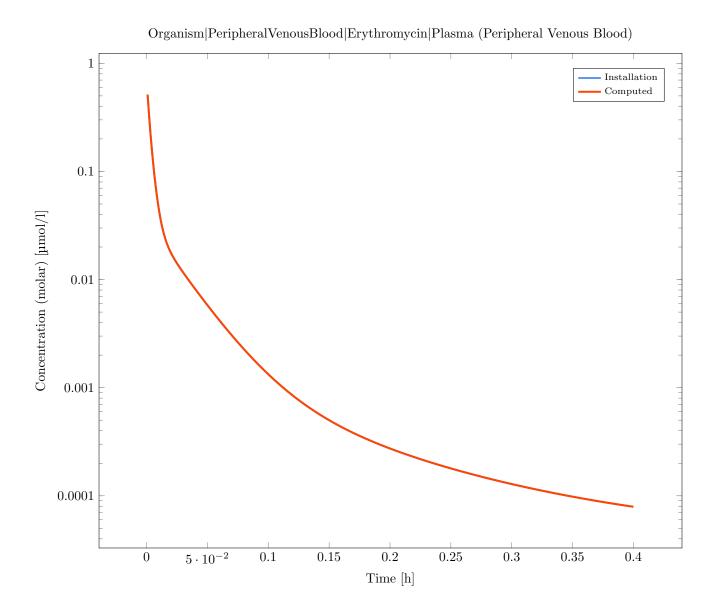


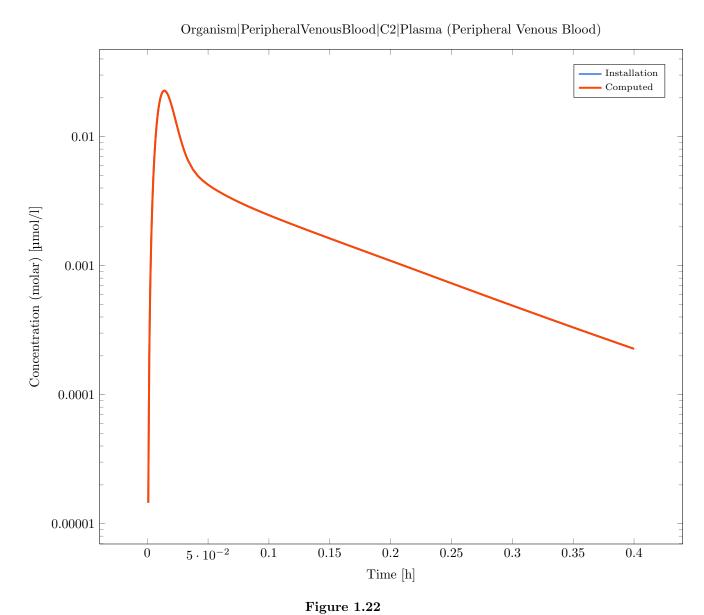
Figure 1.21

 ${\bf Simulation:\ DDI_Multiple Combinations-06_MM_Induction_Induction}$

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C2|Plasma (Peripheral Venous Blood)

Deviation: 3.14E-4



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Output Path: Organism|PeripheralVenousBlood|Efavirenz|Plasma (Peripheral Venous Blood) Deviation: 1.65E-4

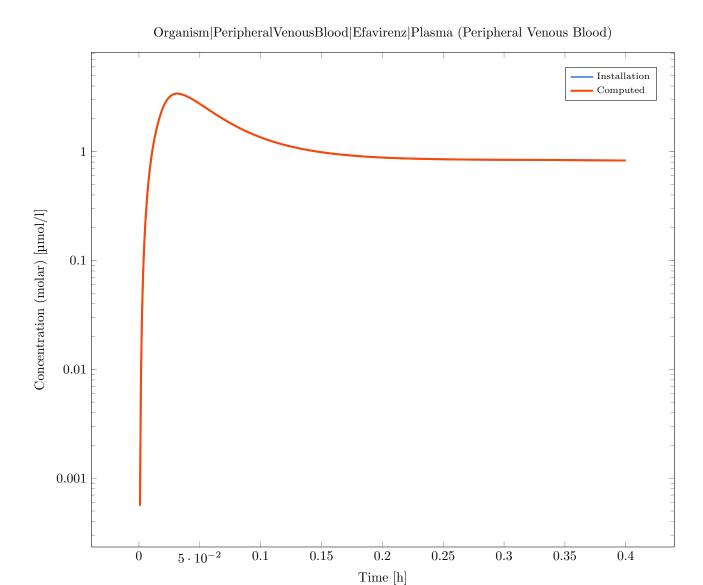


Figure 1.23

Output Path: Organism |Peripheral Venous
Blood |Rifampicin |Plasma (Peripheral Venous Blood)
 Deviation: 3.68E-4

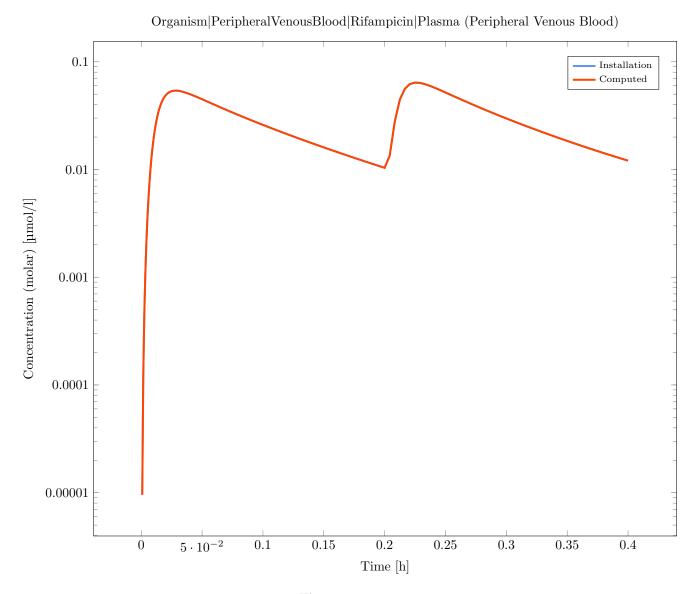
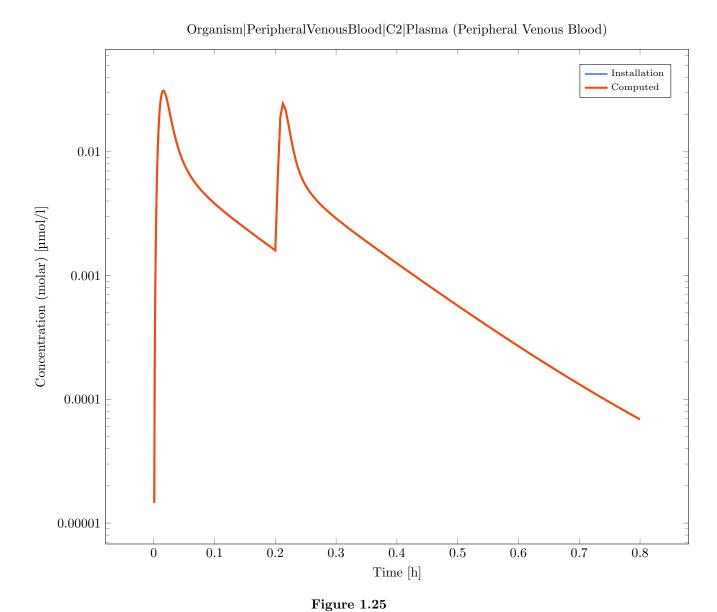


Figure 1.24

Simulation: DDI_MultipleCombinations-07_MM_Competitive_Competitive_Mechanismbased_Mechanismbased Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |C2 |Plasma (Peripheral Venous Blood)
 Deviation: 3.29E-4



Output Path: Organism |Peripheral Venous
Blood |Clarithromycin |Plasma (Peripheral Venous Blood)
 Deviation: $2.15 \pm .4$

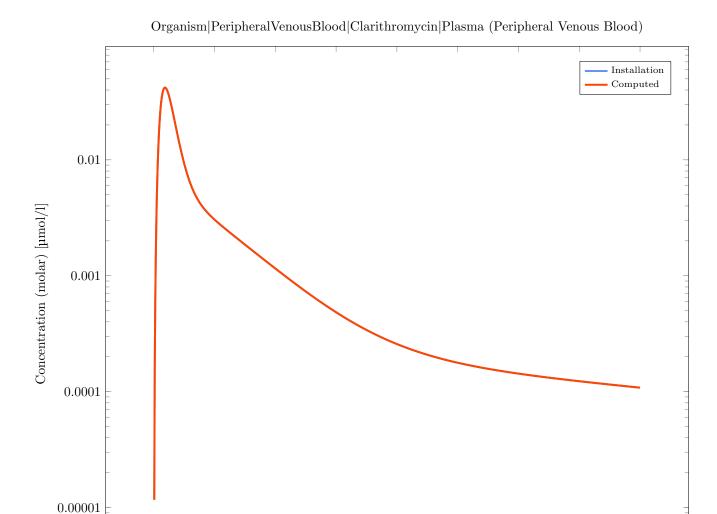


Figure 1.26

0.3

0.4

Time [h]

0.5

0.6

0.7

0.8

Output Path: Organism |Peripheral Venous
Blood |Erythromycin |Plasma (Peripheral Venous Blood)
 Deviation: 6.44E-4

0

0.1

0.2



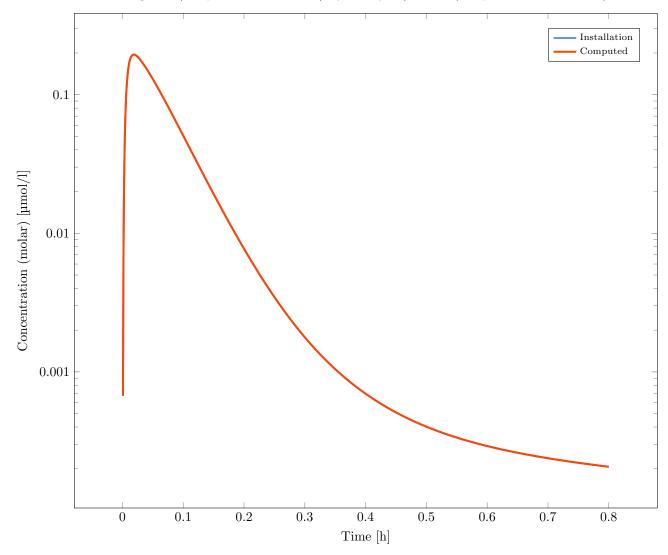
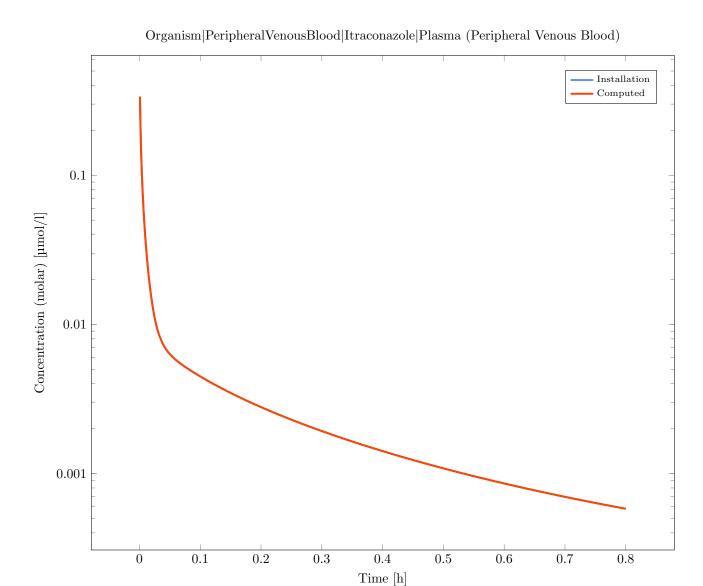


Figure 1.27

Output Path: Organism |Peripheral Venous
Blood |Itraconazole |Plasma (Peripheral Venous Blood)
 Deviation: 3.27E-4



Output Path: Organism |Peripheral Venous
Blood |Rifampicin |Plasma (Peripheral Venous Blood)
 Deviation: $4.68\hbox{E-}4$

Figure 1.28

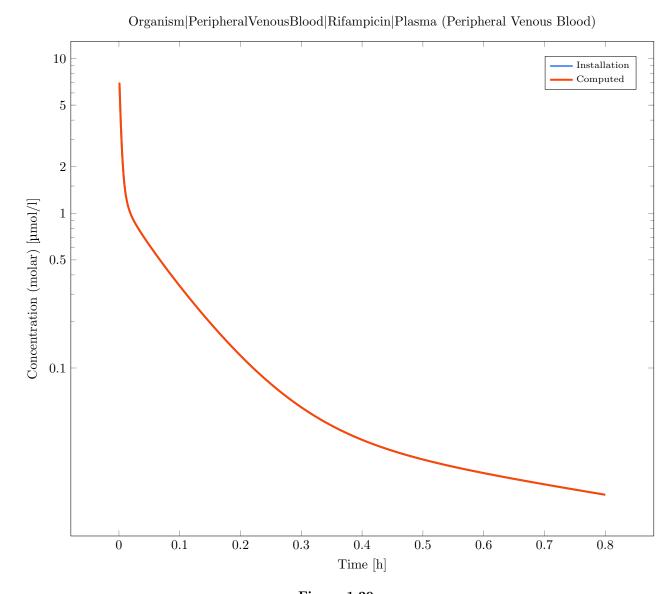


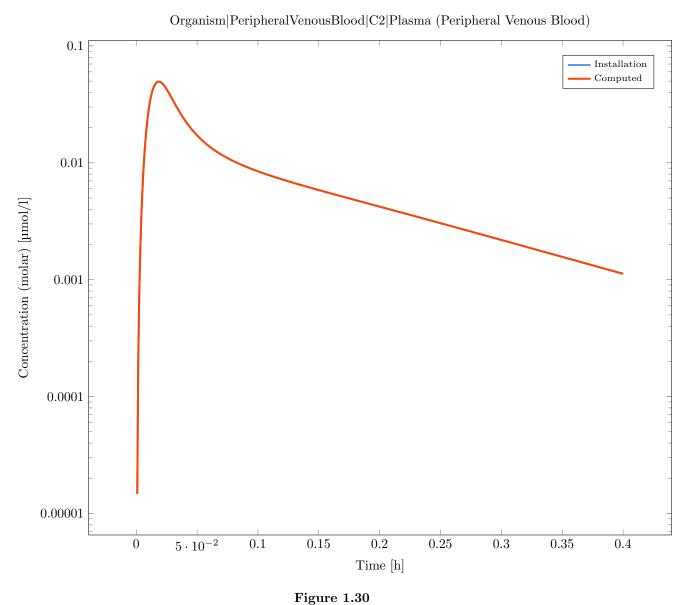
Figure 1.29

 $Simulation: \ DDI_Multiple Combinations - 08_MM_Uncompetitive_Uncompetitive_Mechanism based_Mechanism based$

Result of the validation: Valid

 $Output\ Path:\ Organism|Peripheral Venous Blood|C2|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 6.00E-4



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 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased_4|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 6.00E-4

Organism|PeripheralVenousBlood|MechanismBased_4|Plasma (Peripheral Venous Blood)

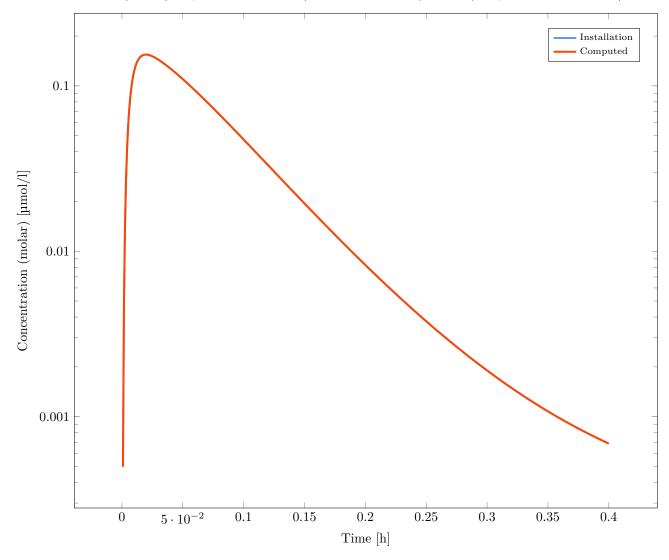
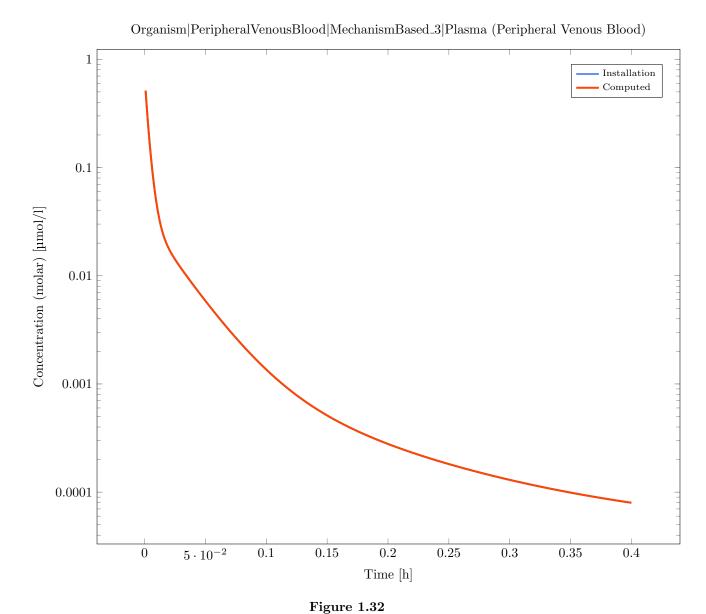


Figure 1.31

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased_3|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 3.66E-4



 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive_CYP3A4_4|Plasma\ (PeripheralVenous\ Blood)$

Deviation: 5.77E-5

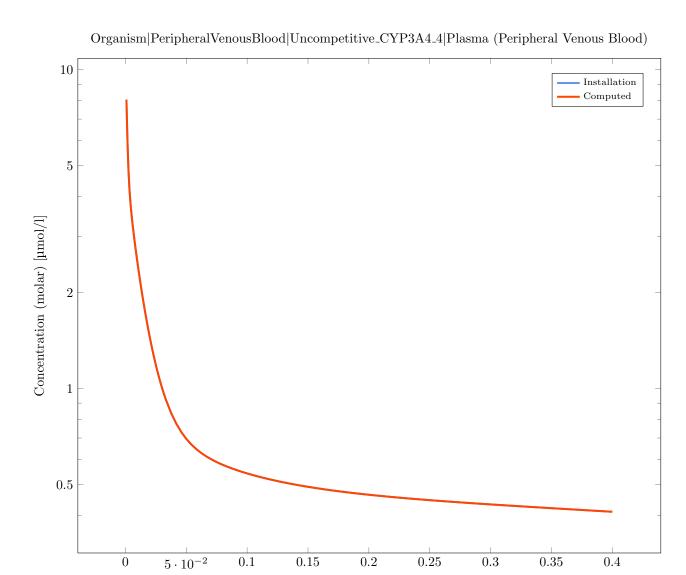
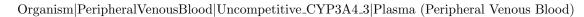


Figure 1.33

Time [h]

 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive_CYP3A4_3|Plasma\ (PeripheralVenous\ Blood)$

Deviation: 1.05E-4



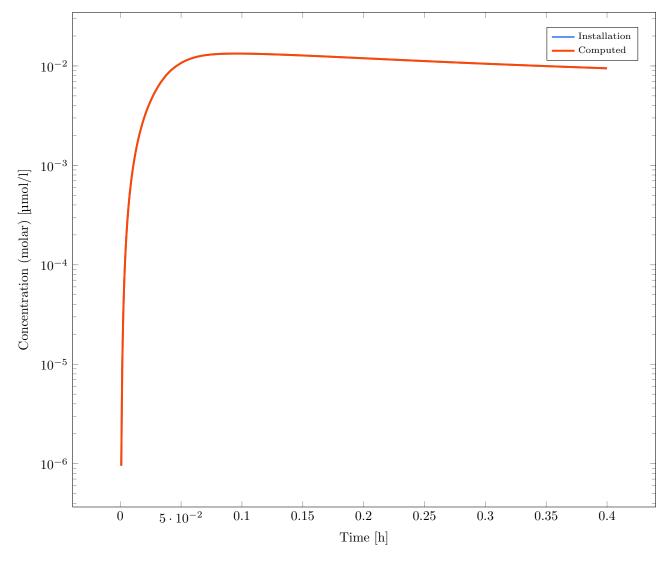


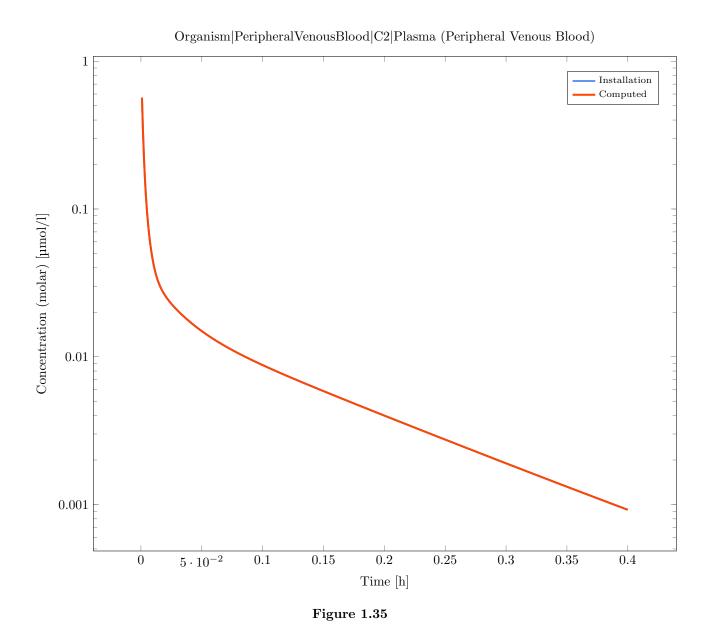
Figure 1.34

 $Simulation: \ DDI_Multiple Combinations - 09_MM_Noncompetitive_Noncompetitive_Mechanism based_Mechanism based$

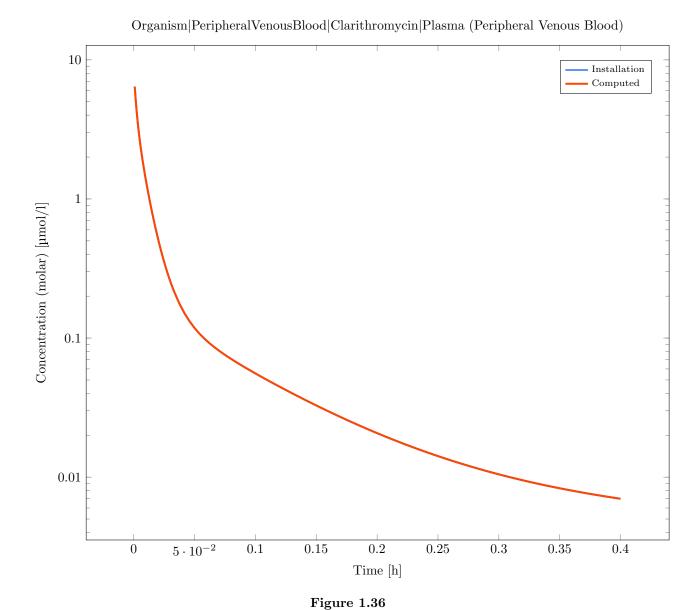
Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C2|Plasma (Peripheral Venous Blood)

Deviation: 3.07E-4



Output Path: Organism |Peripheral Venous
Blood |Clarithromycin |Plasma (Peripheral Venous Blood)
 Deviation: 2.42E-4



Output Path: Organism |Peripheral Venous
Blood |Erythromycin |Plasma (Peripheral Venous Blood)
 Deviation: 5.50E-4

Organism|PeripheralVenousBlood|Erythromycin|Plasma (Peripheral Venous Blood)

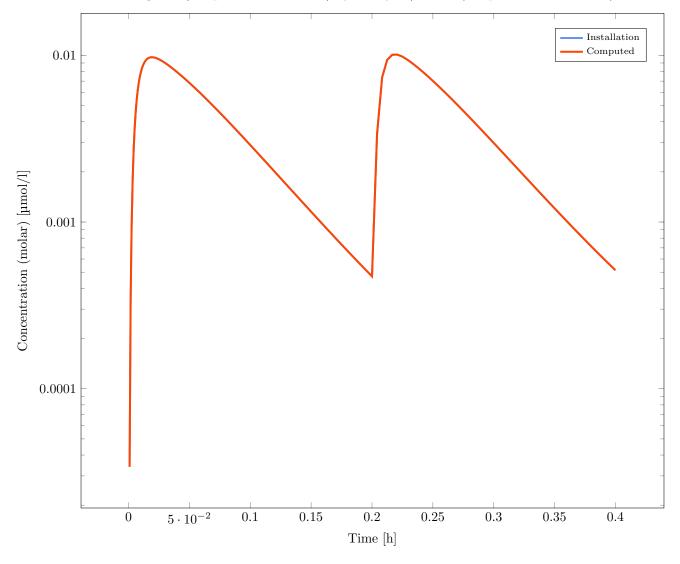
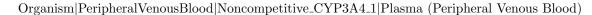


Figure 1.37

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive_CYP3A4_1|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 3.16E-4



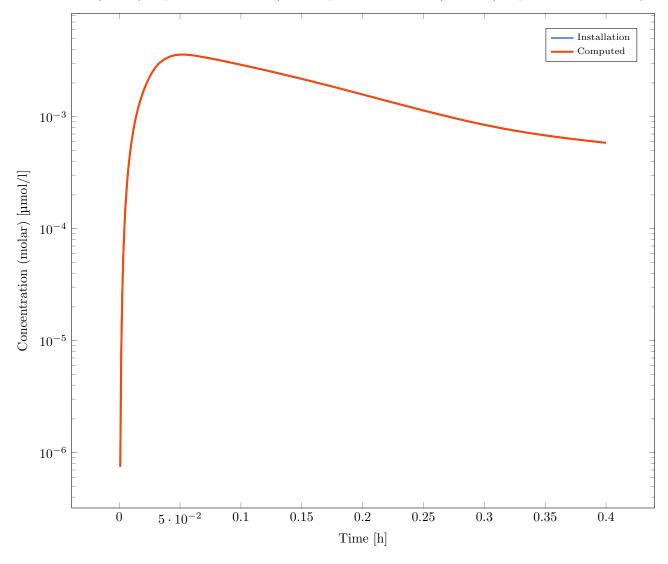


Figure 1.38

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive_CYP3A4_2|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 3.33E-4



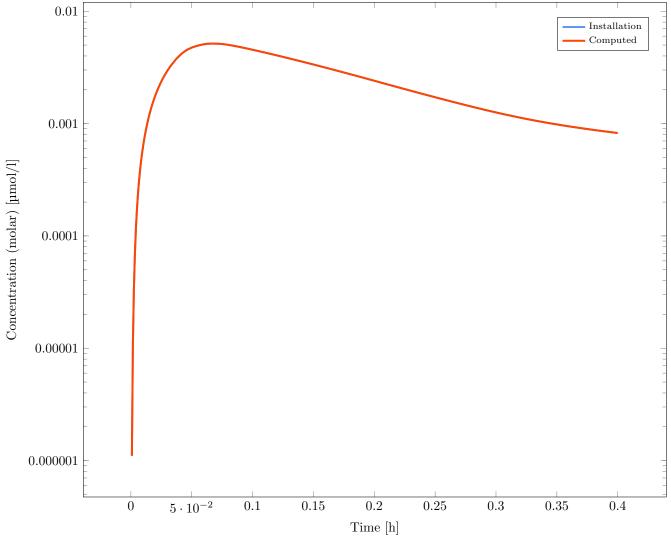


Figure 1.39

 ${\bf Simulation:\ DDI_Multiple Combinations-10_MM_Mixed_Mixed_Mechanismbased_Mech$

Output Path: Organism |Peripheral Venous
Blood |C2 |Plasma (Peripheral Venous Blood)
 Deviation: $4.93\hbox{E-}4$

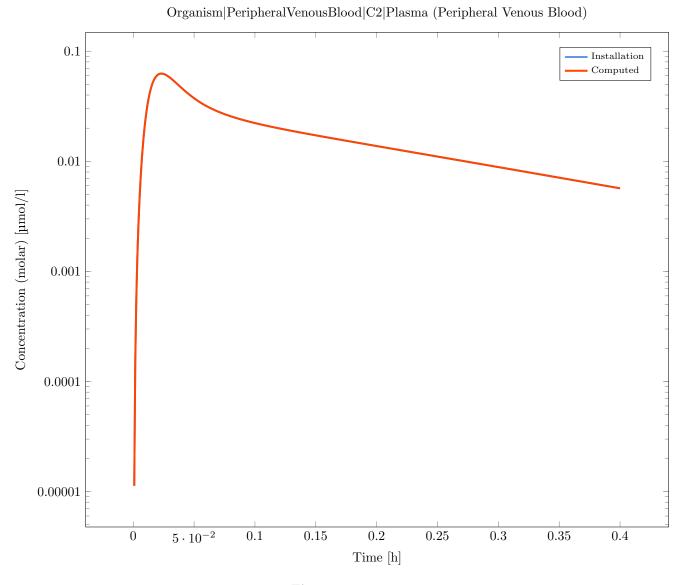


Figure 1.40

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased_4|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 5.67E-4

Organism|PeripheralVenousBlood|MechanismBased_4|Plasma (Peripheral Venous Blood)

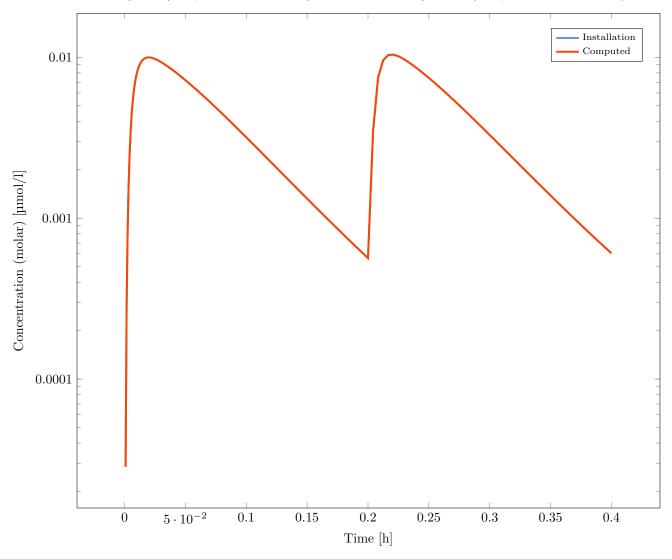


Figure 1.41

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased_3|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 5.92E-4

Organism|PeripheralVenousBlood|MechanismBased_3|Plasma (Peripheral Venous Blood)

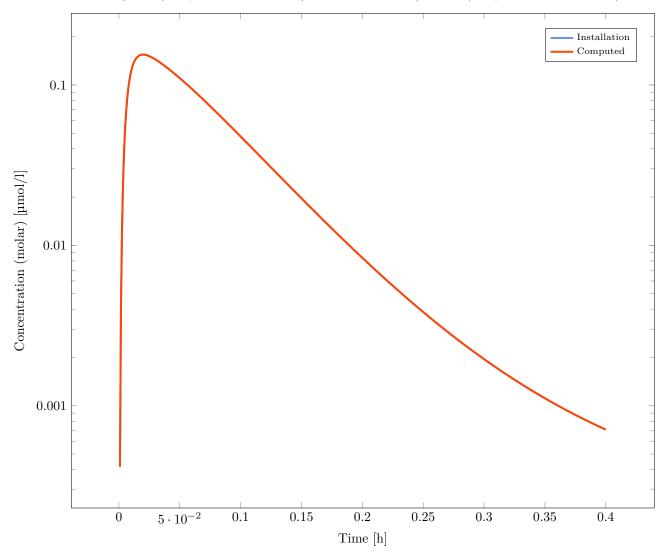
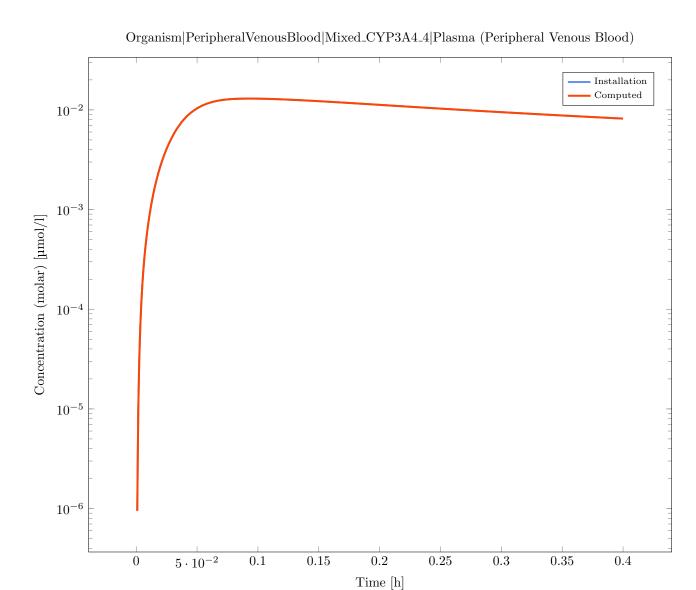


Figure 1.42

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed_CYP3A4_4|Plasma\ (Peripheral\ VenousBlood)$

Deviation: 1.01E-4



 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed_CYP3A4_3|Plasma\ (Peripheral\ VenousBlood)$

Figure 1.43

Deviation: 1.61E-4

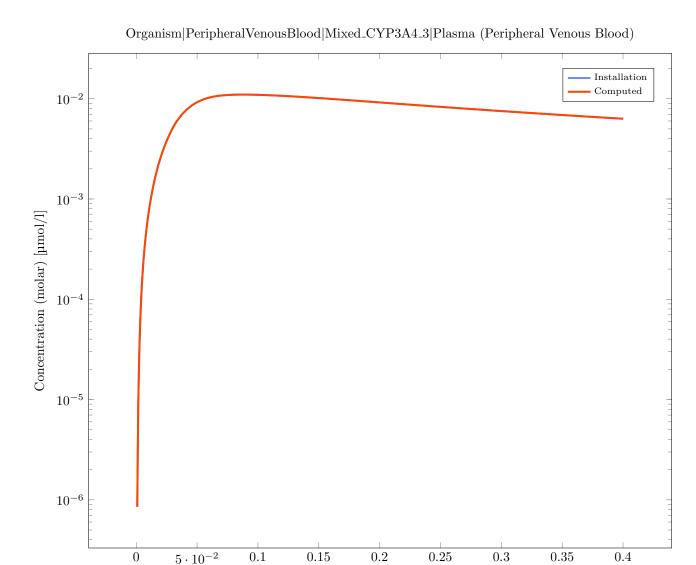


Figure 1.44

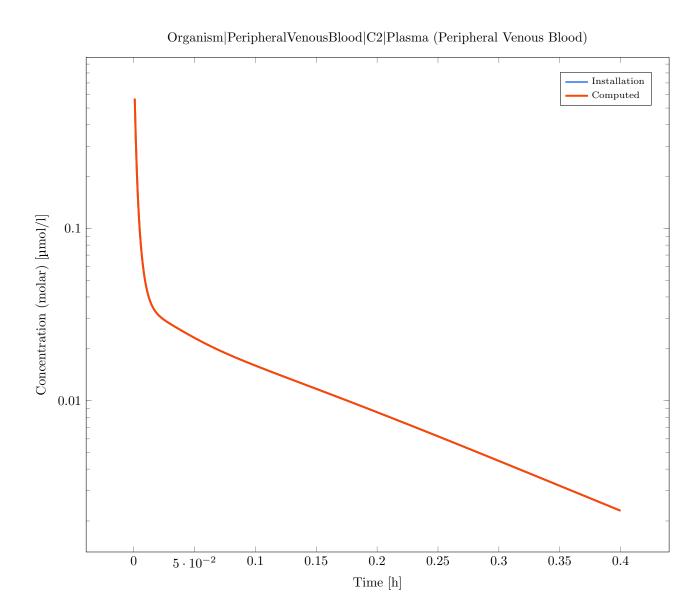
Time [h]

 $Simulation: \begin{tabular}{ll} DDI_Multiple Combinations - 11_MM_Mechanism based_Mechanism based_Induction_Induction \end{tabular}$

Result of the validation: Valid

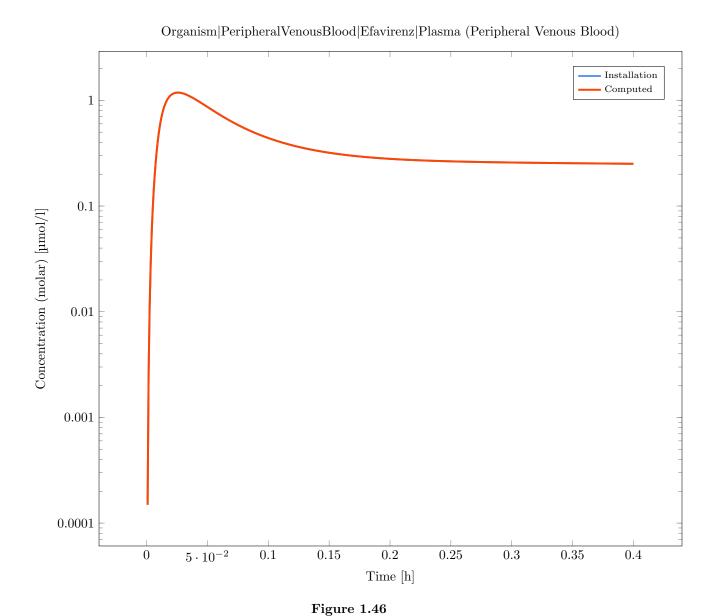
 $Output\ Path:\ Organism|Peripheral Venous Blood|C2|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 5.05E-4



Output Path: Organism|PeripheralVenousBlood|Efavirenz|Plasma (Peripheral Venous Blood) Deviation: 1.73E-4

Figure 1.45



 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased_3|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 5.98E-4

Organism|PeripheralVenousBlood|MechanismBased_3|Plasma (Peripheral Venous Blood)

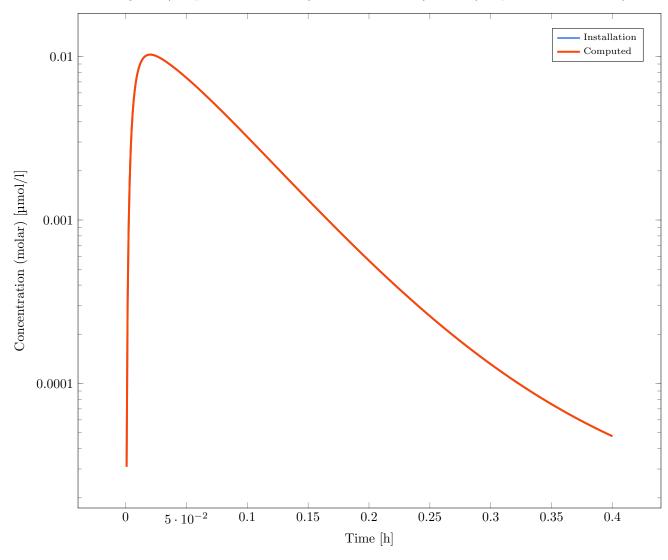


Figure 1.47

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased_4|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 6.00E-4

Organism|PeripheralVenousBlood|MechanismBased_4|Plasma (Peripheral Venous Blood)

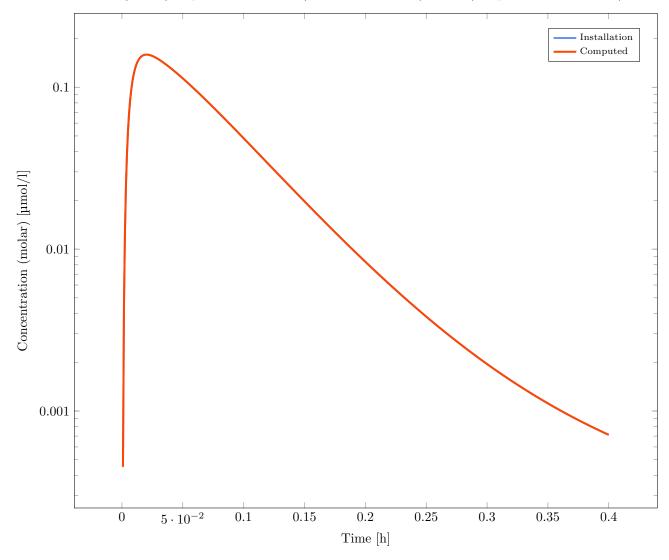


Figure 1.48

Output Path: Organism |Peripheral Venous
Blood |Rifampicin |Plasma (Peripheral Venous Blood)
 Deviation: $4.51 \hbox{E-}4$

Organism|PeripheralVenousBlood|Rifampicin|Plasma (Peripheral Venous Blood)

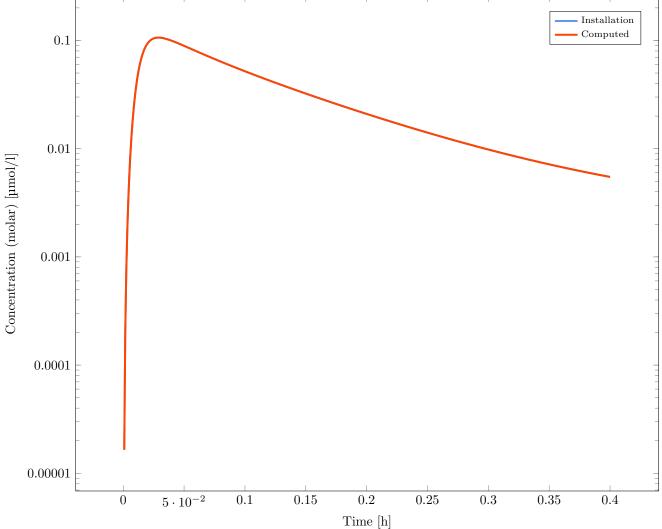


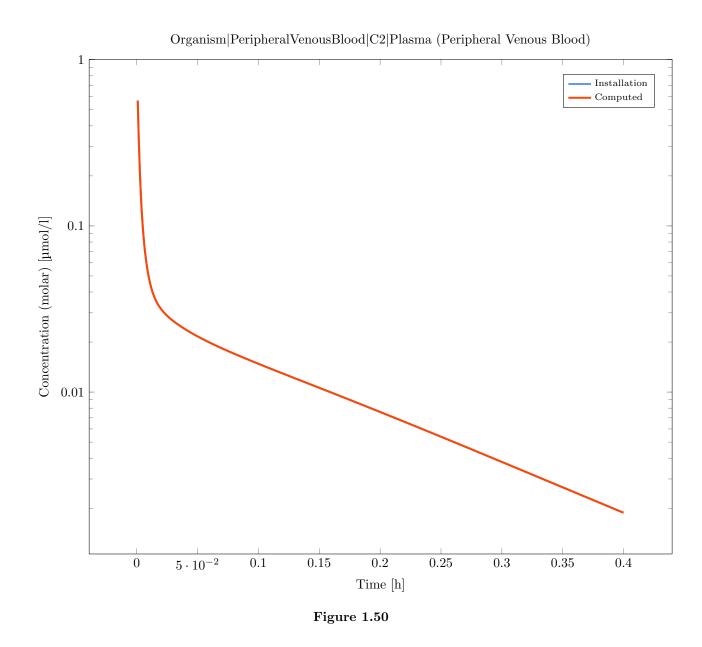
Figure 1.49

 $Simulation: \ DDI_MultipleCombinations-12_MM_All_DDI_Types$

Result of the validation: Valid

 $Output\ Path:\ Organism | Peripheral Venous Blood | C2 | Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 5.68E-4



Output Path: Organism |Peripheral Venous
Blood |Efavirenz |Plasma (Peripheral Venous Blood)
 Deviation: $1.92 \hbox{E-}4$

Organism|PeripheralVenousBlood|Efavirenz|Plasma (Peripheral Venous Blood) Installation Computed

Figure 1.51

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

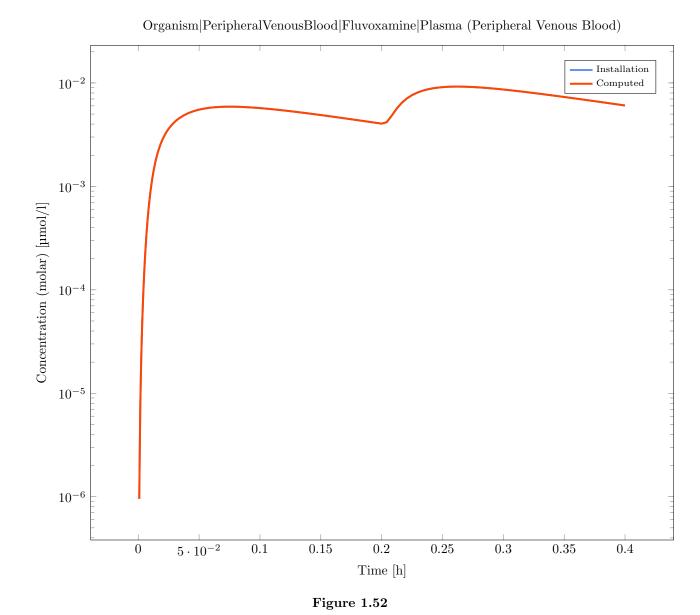
0.1

Output Path: Organism |Peripheral Venous
Blood |Fluvoxamine |Plasma (Peripheral Venous Blood)
 Deviation: 3.12E-4

1

0

 $5 \cdot 10^{-2}$



 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased_3|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 4.79E-4



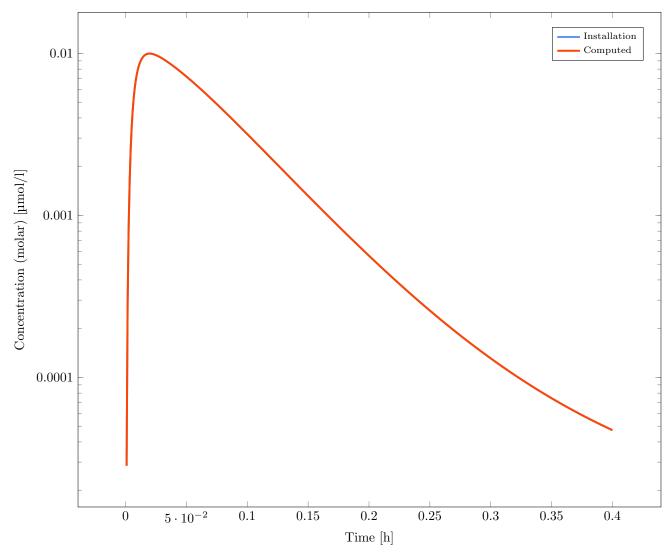


Figure 1.53

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed_CYP3A4_3|Plasma\ (Peripheral\ VenousBlood)$

Deviation: 4.20E-4

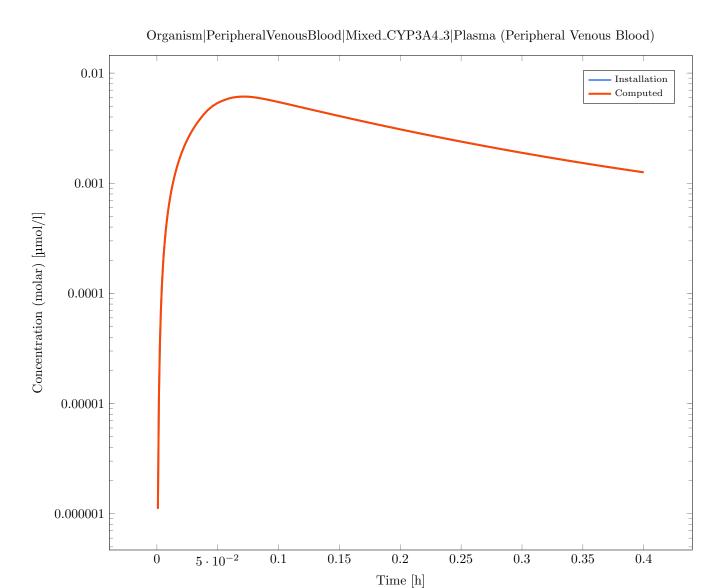
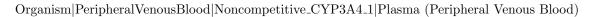


Figure 1.54

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive_CYP3A4_1|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 5.23E-4



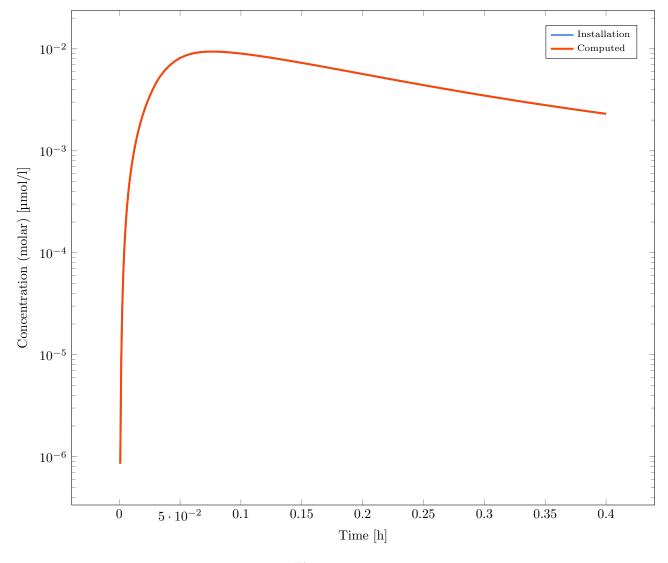


Figure 1.55

 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive_CYP3A4_3|Plasma\ (PeripheralVenous\ Blood)$

Deviation: 5.07E-4

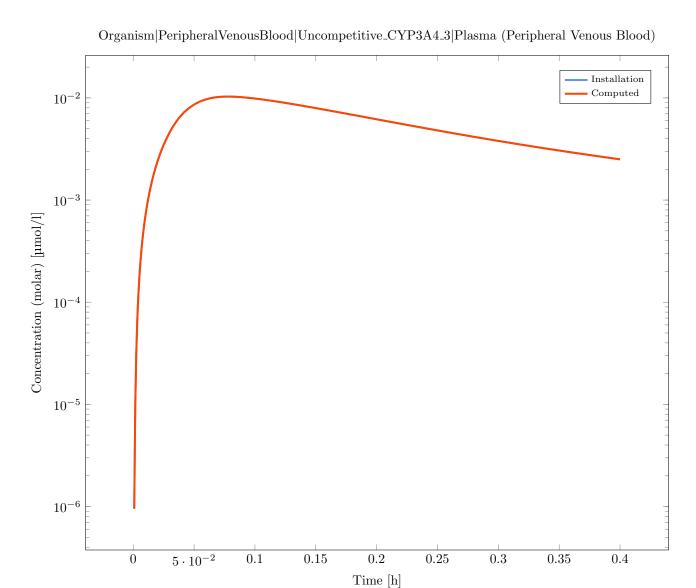
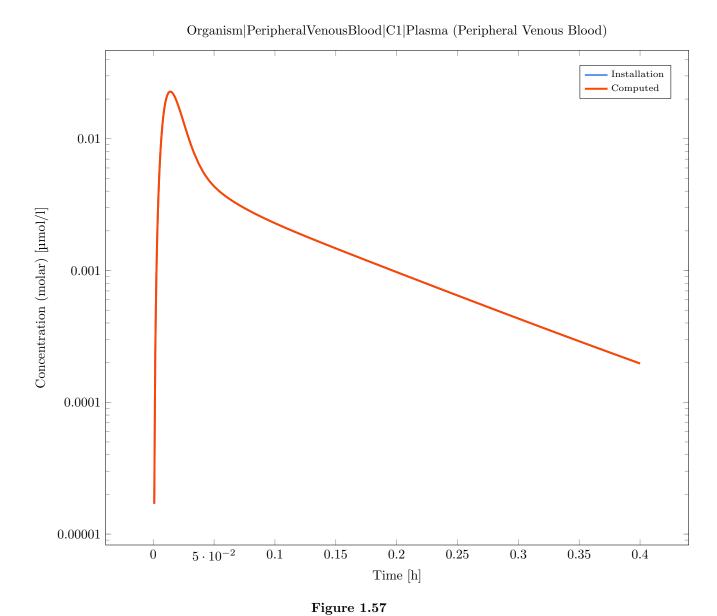


Figure 1.56

 ${\bf Simulation:\ DDI_Multiple Combinations-21_1st_Competitive_Competitive_Result\ of\ the\ validation:\ Valid}$

Output Path: Organism |Peripheral Venous
Blood |C1 |Plasma (Peripheral Venous Blood)
 Deviation: 2.97E-4



Output Path: Organism |Peripheral Venous
Blood |Fluvoxamine |Plasma (Peripheral Venous Blood)
 Deviation: 2.00E-4

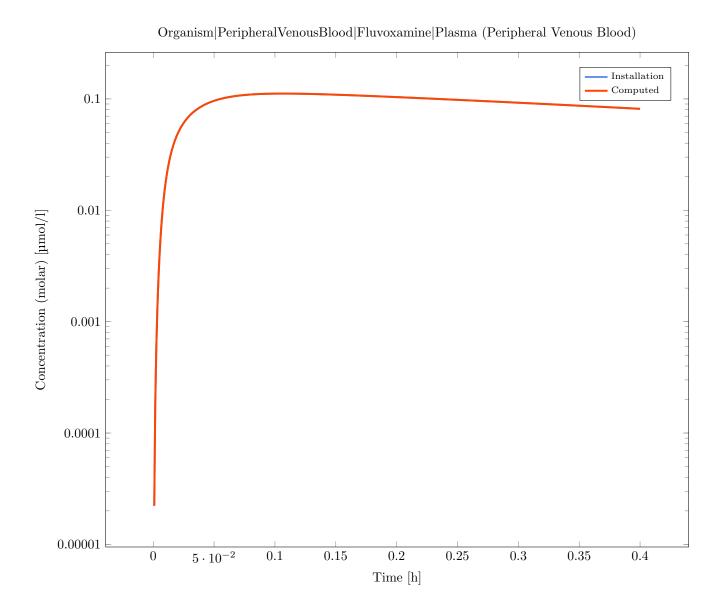


Figure 1.58

Output Path: Organism |Peripheral Venous
Blood |Itraconazole |Plasma (Peripheral Venous Blood)
 Deviation: 2.44E-4

Organism|PeripheralVenousBlood|Itraconazole|Plasma (Peripheral Venous Blood) | Installation | Computed | Comp

Figure 1.59

Time [h]

Simulation: DDI_MultipleCombinations-23_1st_Noncompetitive_Noncompetitive Result of the validation: Valid

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive_CYP3A4_1|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 3.68É-4

Organism|PeripheralVenousBlood|Noncompetitive_CYP3A4_1|Plasma (Peripheral Venous Blood)

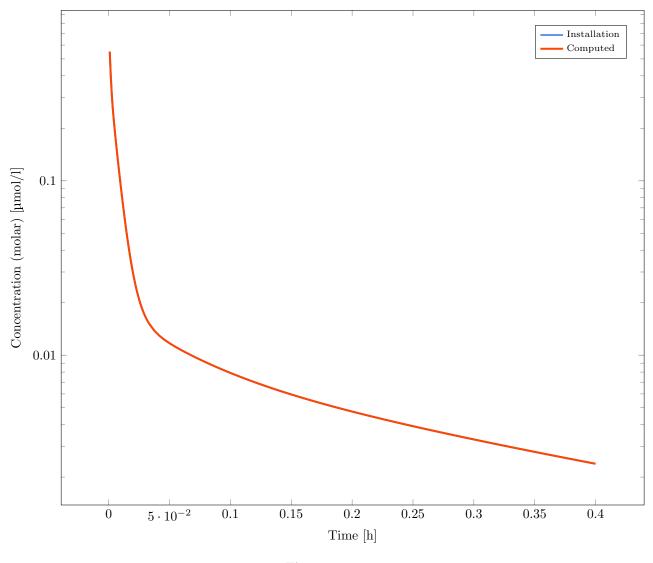


Figure 1.60

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive_CYP3A4_2|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 3.32E-4

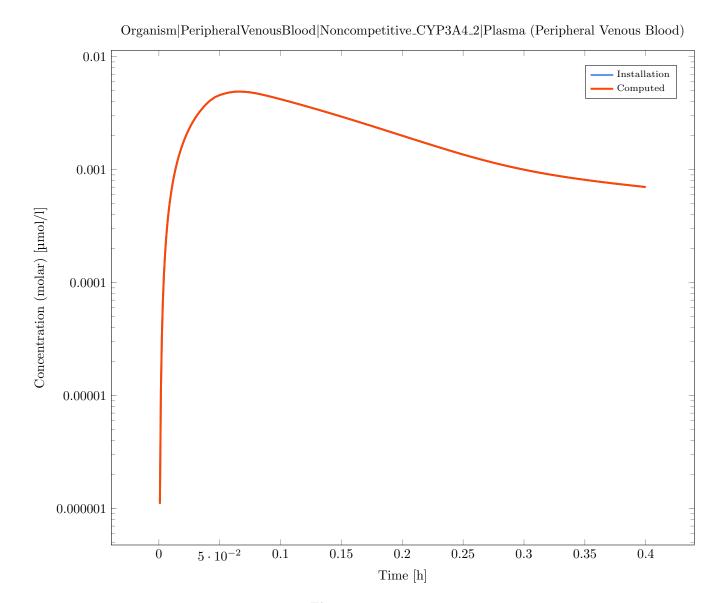


Figure 1.61

 $Output\ Path:\ Organism|Peripheral Venous Blood|C1|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 2.67E-4

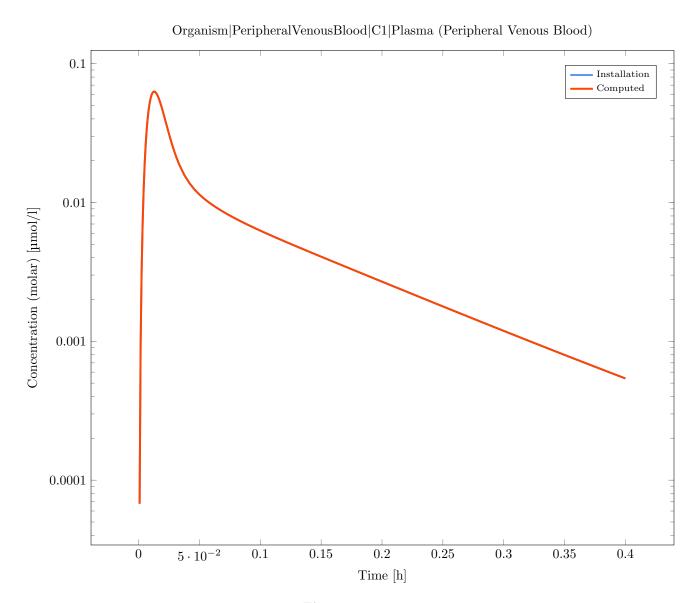


Figure 1.62

 $Simulation: \ DDI_MultipleCombinations-24_1st_Mixed_Mixed$

Result of the validation: Valid

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed_CYP3A4_1|Plasma\ (Peripheral\ VenousBlood)$

Deviation: 3.11E-4

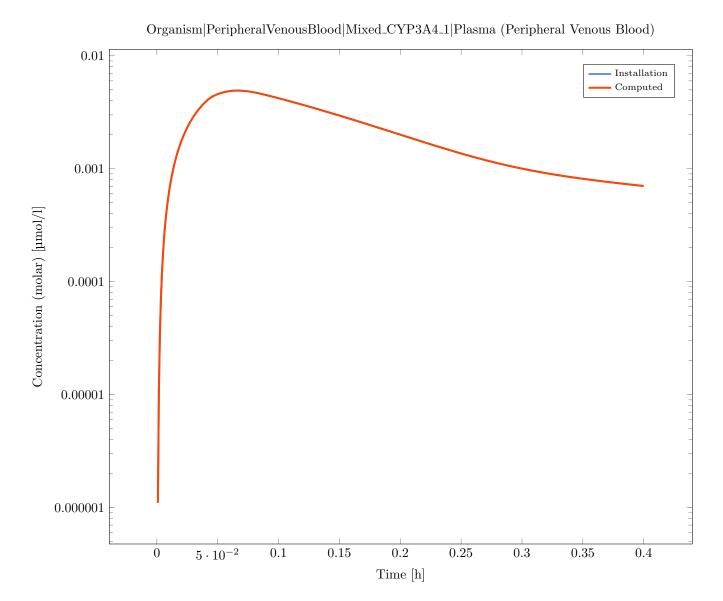


Figure 1.63

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed_CYP3A4_2|Plasma\ (Peripheral\ VenousBlood)$

Deviation: 3.68E-4

Organism|PeripheralVenousBlood|Mixed_CYP3A4_2|Plasma (Peripheral Venous Blood)

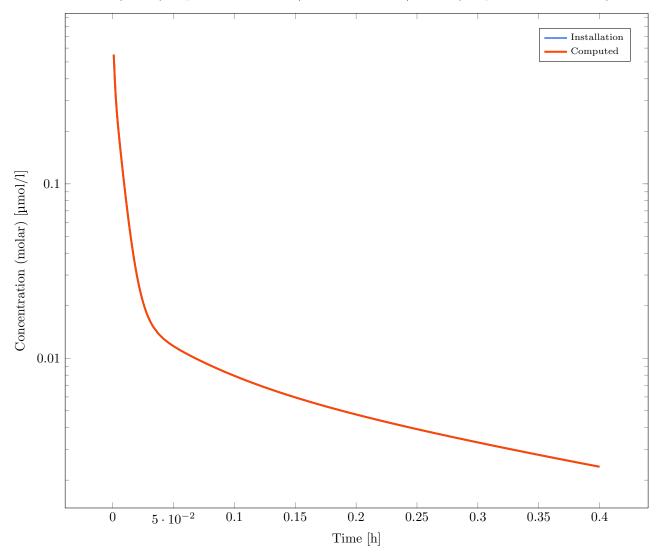


Figure 1.64

 $Output\ Path:\ Organism|Peripheral Venous Blood|C1|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 2.84E-4

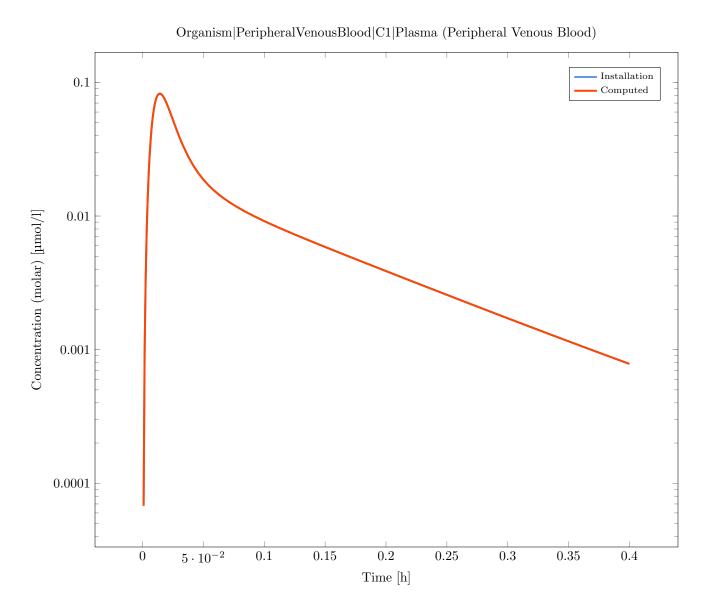
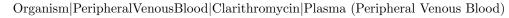


Figure 1.65

 ${\bf Simulation:\ DDI_Multiple Combinations\hbox{--}25_1st_Mechanismbased_Mechanismbased}. Result of the validation:\ Valid$

Output Path: Organism |Peripheral Venous
Blood |Clarithromycin |Plasma (Peripheral Venous Blood)
 Deviation: 2.03E-4



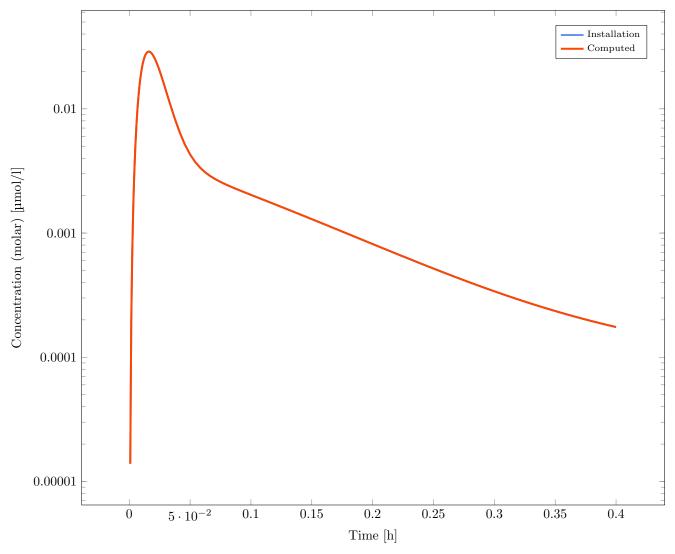


Figure 1.66

Output Path: Organism |PeripheralVenousBlood | Erythromycin |Plasma (Peripheral Venous Blood)
 Deviation: 3.62E-4

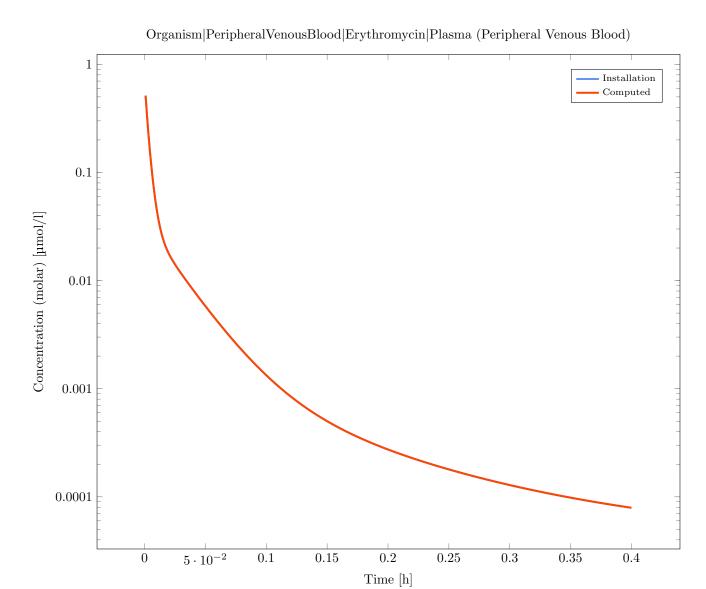


Figure 1.67

Output Path: Organism |PeripheralVenousBlood |C1|Plasma (Peripheral Venous Blood)
 Deviation: 2.67E-4

Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood)

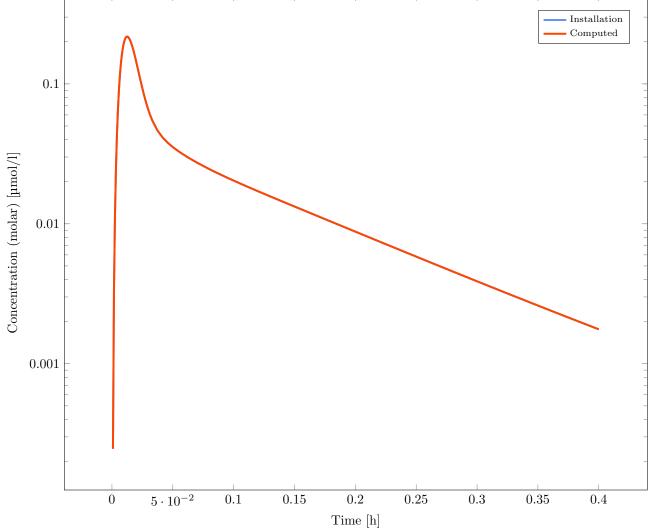


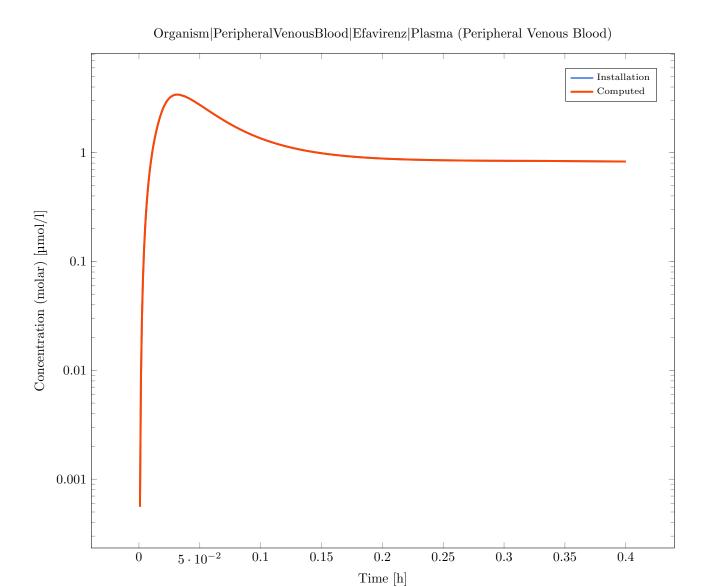
Figure 1.68

Simulation: DDI_MultipleCombinations-26_1st_Induction_Induction

Result of the validation: Valid

 $Output\ Path:\ Organism | Peripheral Venous Blood | Efavirenz | Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 1.75E-4



 ${\bf Output\ Path:\ Organism|Peripheral Venous Blood|Rifampicin|Plasma\ (Peripheral\ Venous\ Blood)}$

Figure 1.69

Deviation: 3.68E-4

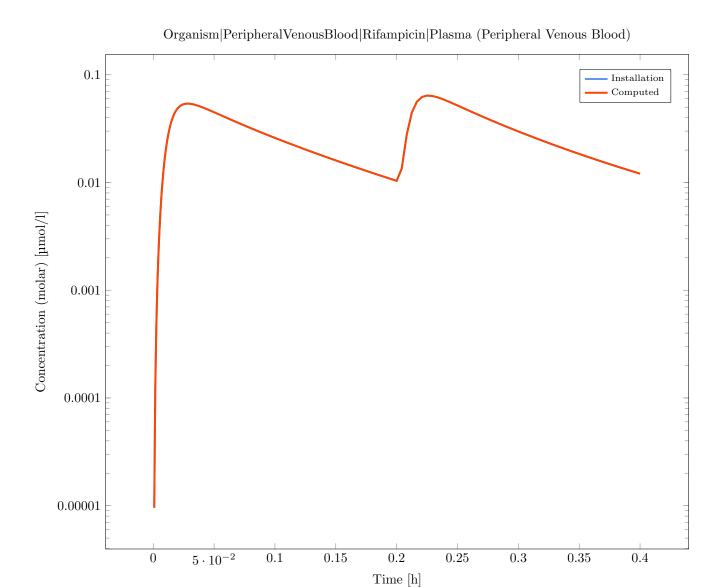


Figure 1.70

Output Path: Organism |Peripheral Venous
Blood |C1 |Plasma (Peripheral Venous Blood)
 Deviation: $2.59\hbox{E-}4$

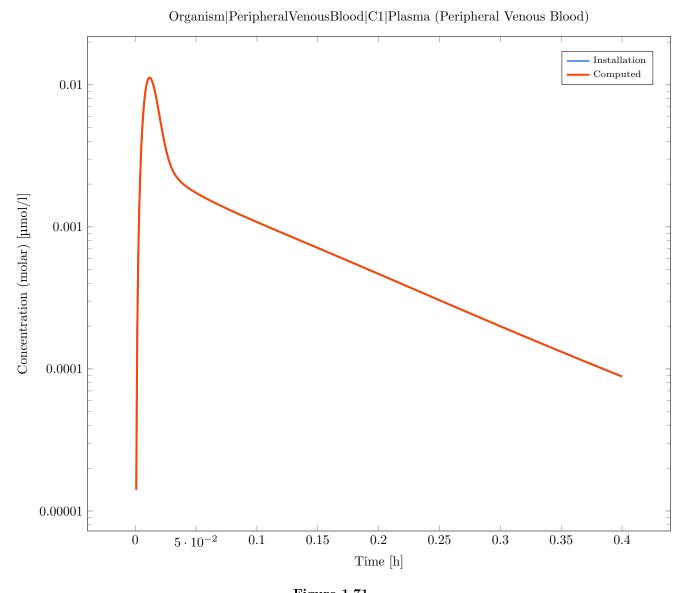
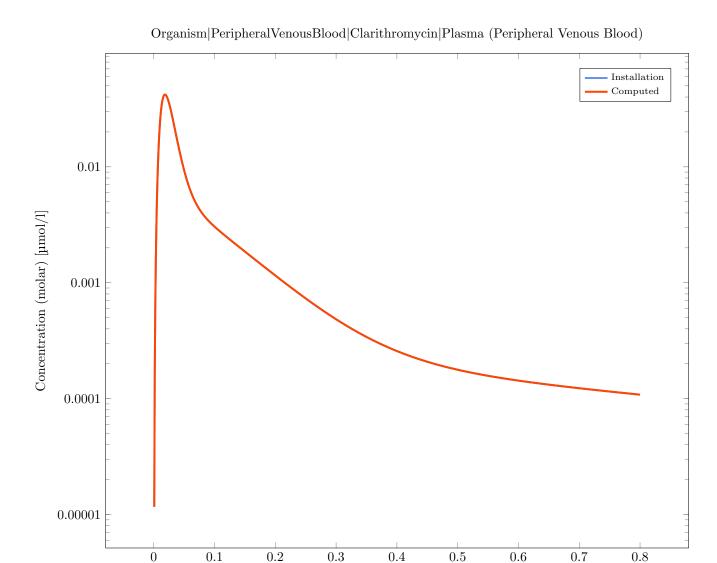


Figure 1.71

Simulation: DDI_MultipleCombinations-27_1st_Competitive_Competitive_Mechanismbased_Mechanismbased Result of the validation: Valid

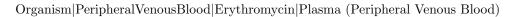
Output Path: Organism |Peripheral Venous
Blood |Clarithromycin |Plasma (Peripheral Venous Blood)
 Deviation: 2.11E-4



 $Output\ Path:\ Organism | Peripheral Venous Blood | Erythromycin | Plasma\ (Peripheral Venous\ Blood)$ Deviation: 5.99E-4

Time [h]

Figure 1.72



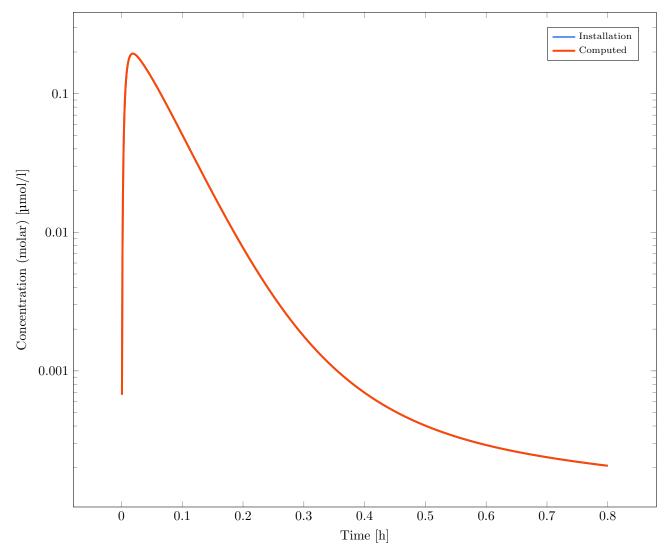


Figure 1.73

Output Path: Organism |Peripheral Venous
Blood |Itraconazole |Plasma (Peripheral Venous Blood)
 Deviation: 3.28E-4

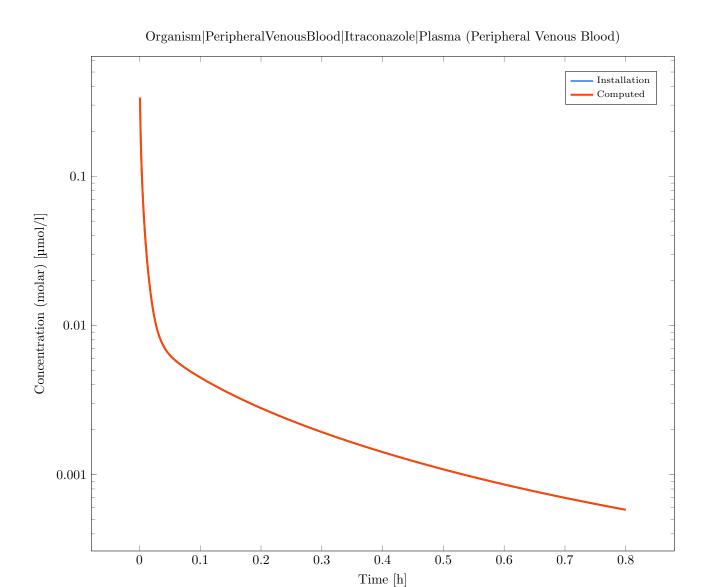
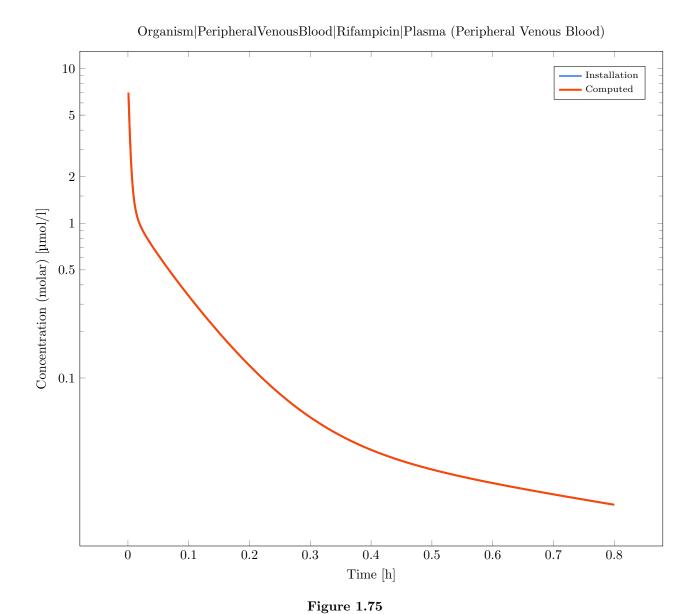


Figure 1.74

Output Path: Organism |Peripheral Venous
Blood |Rifampicin |Plasma (Peripheral Venous Blood)
 Deviation: $4.68 \hbox{E-}4$



Output Path: Organism |Peripheral Venous
Blood |C1 |Plasma (Peripheral Venous Blood)
 Deviation: $2.88\hbox{E-}4$

Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood) O.01 O.001 O.0001 O.0001

Figure 1.76

0.4

Time [h]

0.5

0.6

0.7

0.8

0.3

 $Simulation: \ DDI_Multiple Combinations - 28_1 st_Uncompetitive_Uncompetitive_Mechanism based_Mechanism based$

Result of the validation: Valid

0

0.1

0.2

 $Output\ Path:\ Organism|Peripheral Venous Blood|MechanismBased_4|Plasma\ (Peripheral\ Venous Blood)$

Deviation: 5.99E-4

0.00001

Organism|PeripheralVenousBlood|MechanismBased_4|Plasma (Peripheral Venous Blood)

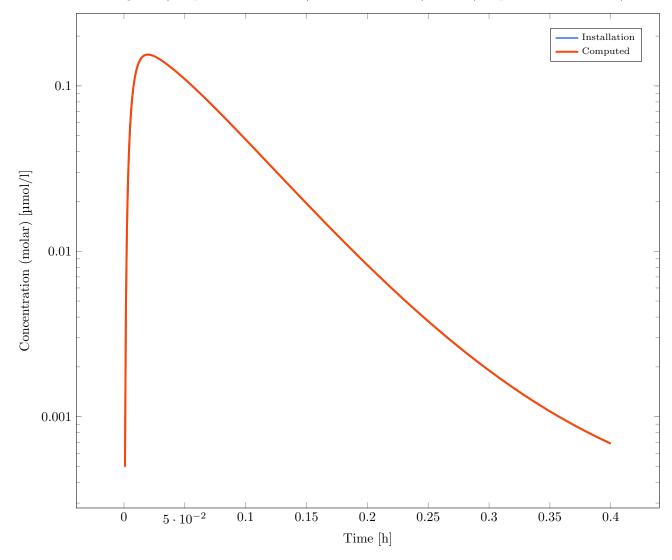


Figure 1.77

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased_3|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 3.67E-4

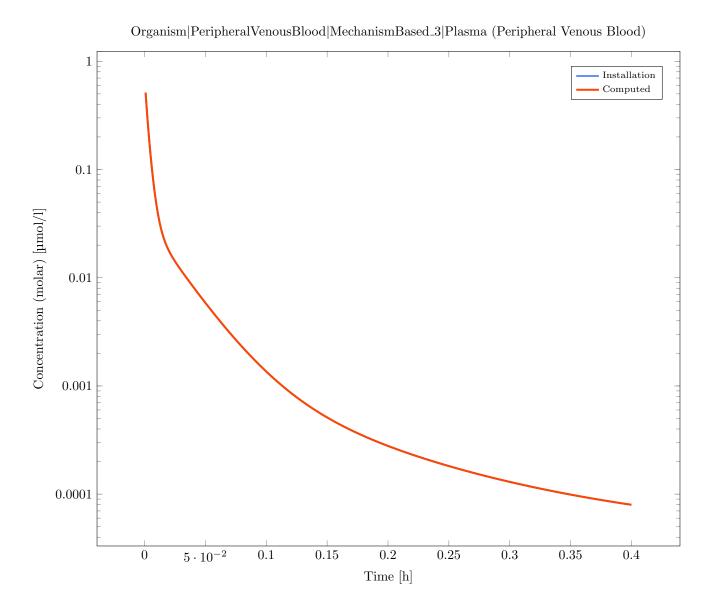
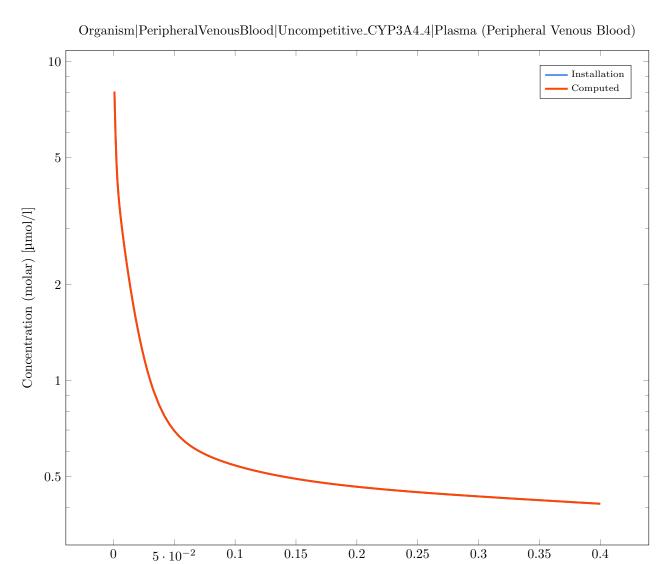


Figure 1.78

 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive_CYP3A4_4|Plasma\ (PeripheralVenous\ Blood)$ $Venous\ Blood)$

Deviation: 5.72E-5

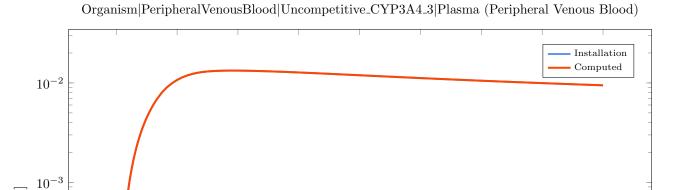


Time [h]

Figure 1.79

 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive_CYP3A4_3|Plasma\ (PeripheralVenous\ Blood)$

Deviation: 1.14E-4



10⁻⁶
10⁻⁶
0 5 · 10⁻² 0.1 0.15 0.2 0.25 0.3 0.35 0.4

Time [h]

Figure 1.80

Output Path: Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood)

Deviation: 5.07E-4

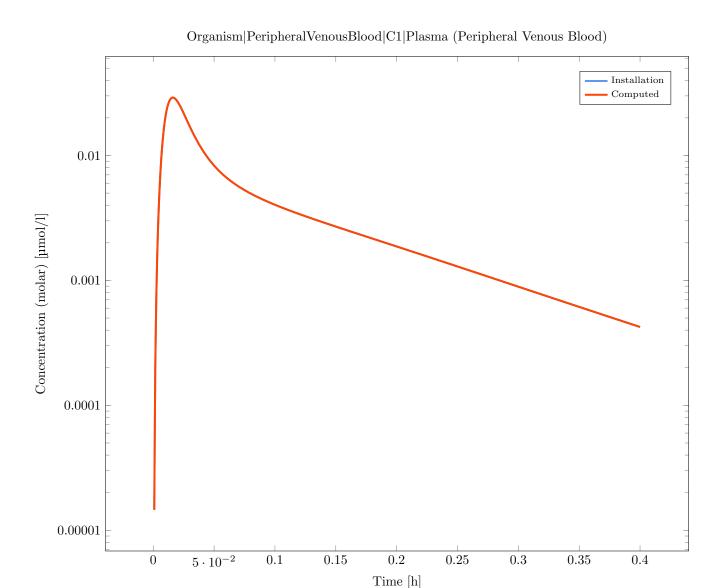


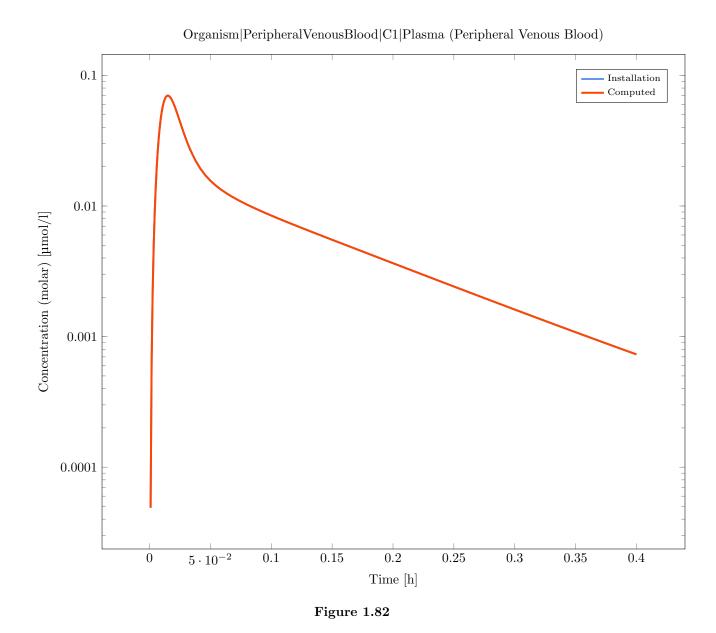
Figure 1.81

 $Simulation: \ DDI_Multiple Combinations \textbf{-} 29_1st_Noncompetitive_Noncompetitive_Mechanism based_Mechanism based$

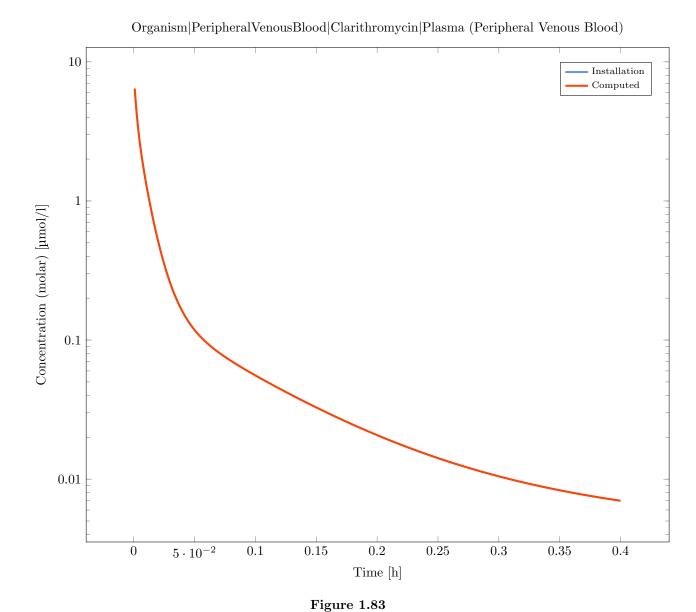
Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood)

Deviation: 2.87E-4



Output Path: Organism |Peripheral Venous
Blood |Clarithromycin |Plasma (Peripheral Venous Blood)
 Deviation: 2.47E-4



Output Path: Organism |PeripheralVenousBlood | Erythromycin |Plasma (Peripheral Venous Blood)
 Deviation: 5.66E-4

Organism|PeripheralVenousBlood|Erythromycin|Plasma (Peripheral Venous Blood)

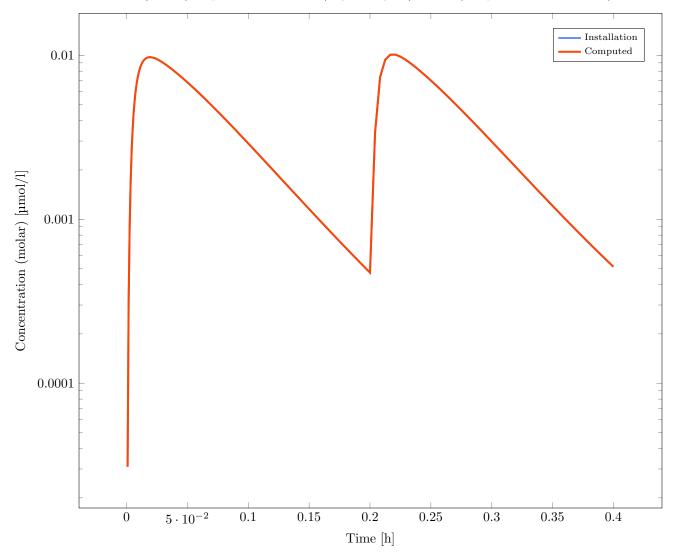
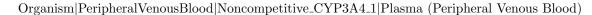


Figure 1.84

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive_CYP3A4_1|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 3.19E-4



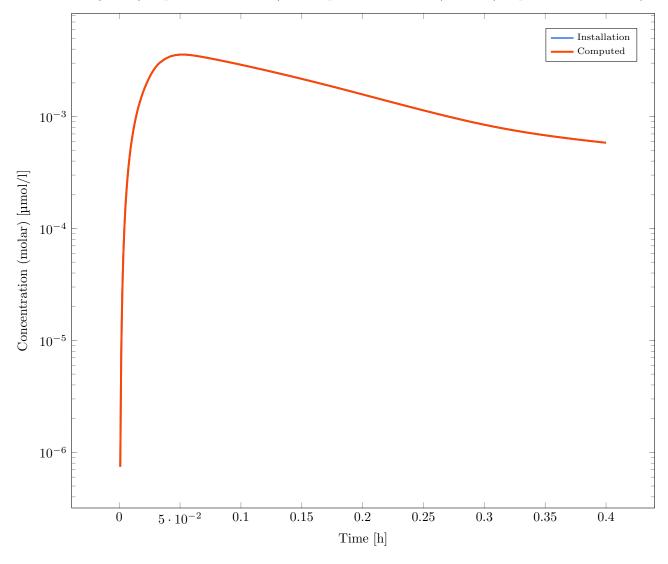


Figure 1.85

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive_CYP3A4_2|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 3.27E-4

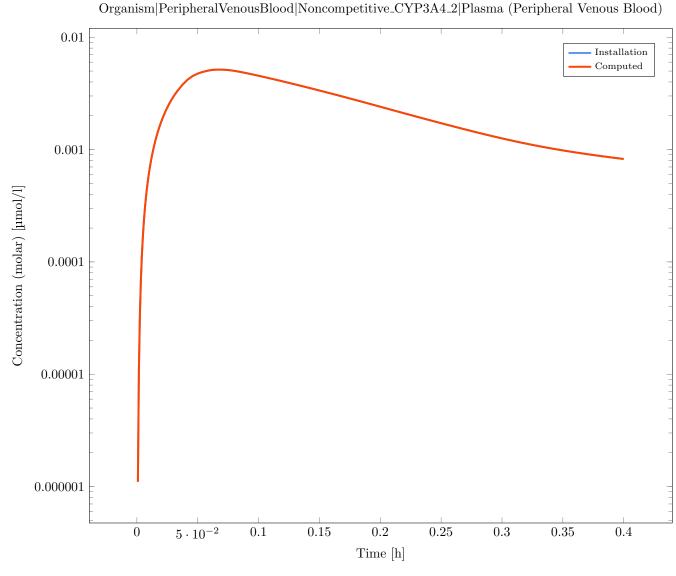


Figure 1.86

 ${\bf Simulation:\ DDI_Multiple Combinations\text{--}30_1st_Mixed_Mechanismbased_Mechanismbased_Mechanismbased_Nesult\ of\ the\ validation:\ Valid$

 $Output\ Path:\ Organism|Peripheral Venous Blood|MechanismBased_4|Plasma\ (Peripheral\ Venous Blood)$

Deviation: 5.63E-4



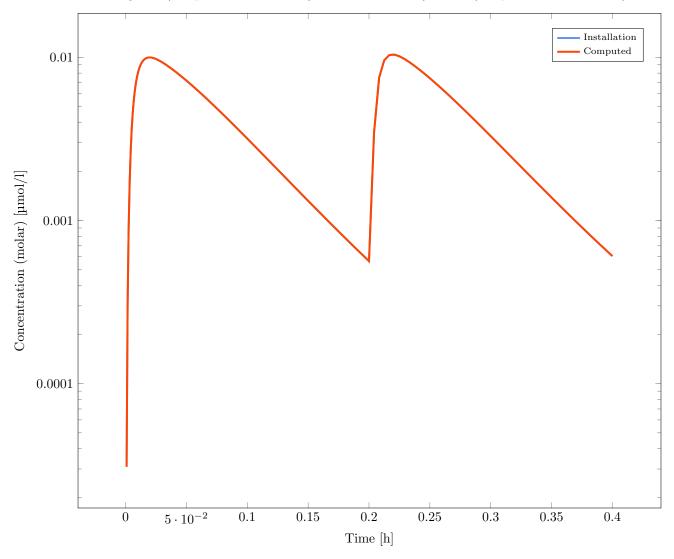


Figure 1.87

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased_3|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 5.34E-4

$Organism | Peripheral Venous Blood | Mechanism Based_3 | Plasma \ (Peripheral Venous Blood)$

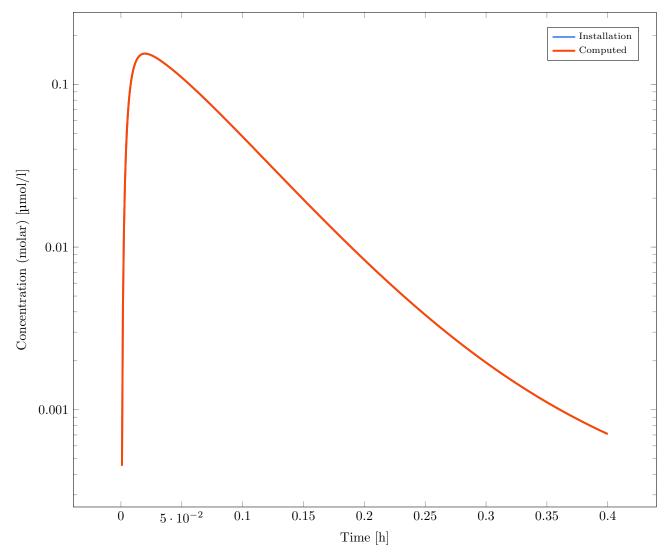
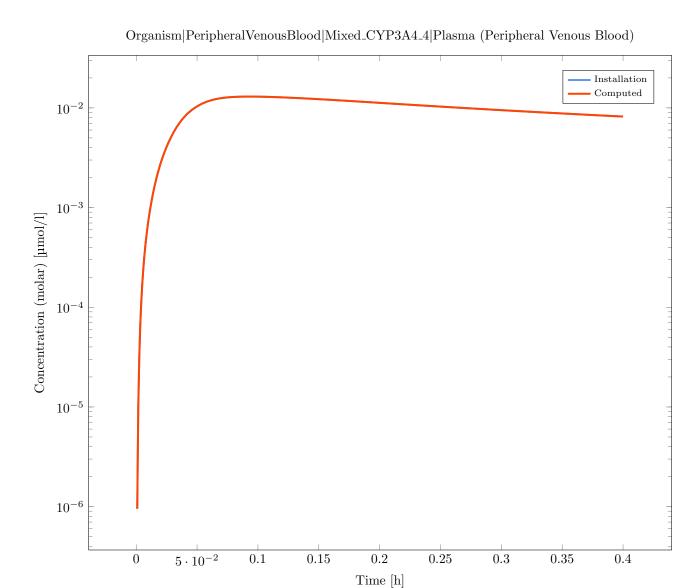


Figure 1.88

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed_CYP3A4_4|Plasma\ (Peripheral\ VenousBlood)$

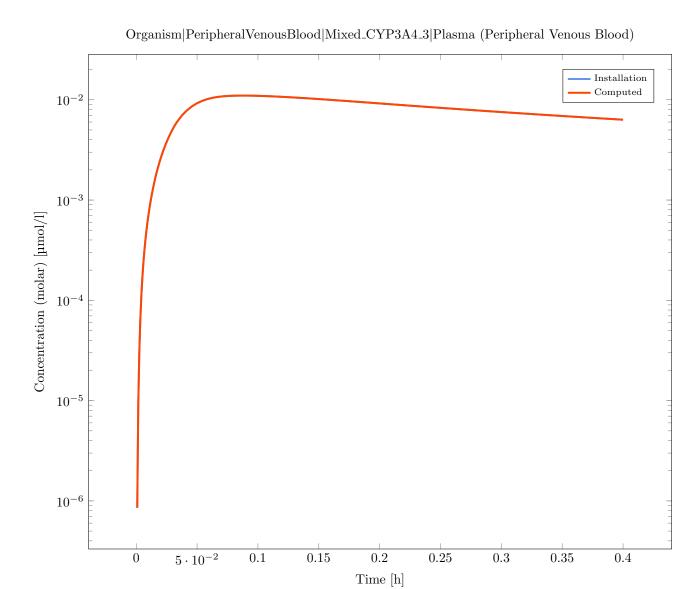
Deviation: 1.10E-4



Output Path: Organism |PeripheralVenousBlood |Mixed_CYP3A4_3 |Plasma (Peripheral Venous Blood)

Figure 1.89

Deviation: 1.61E-4



Output Path: Organism |Peripheral Venous
Blood |C1 |Plasma (Peripheral Venous Blood)
 Deviation: $6.75\hbox{E-}4$

Figure 1.90

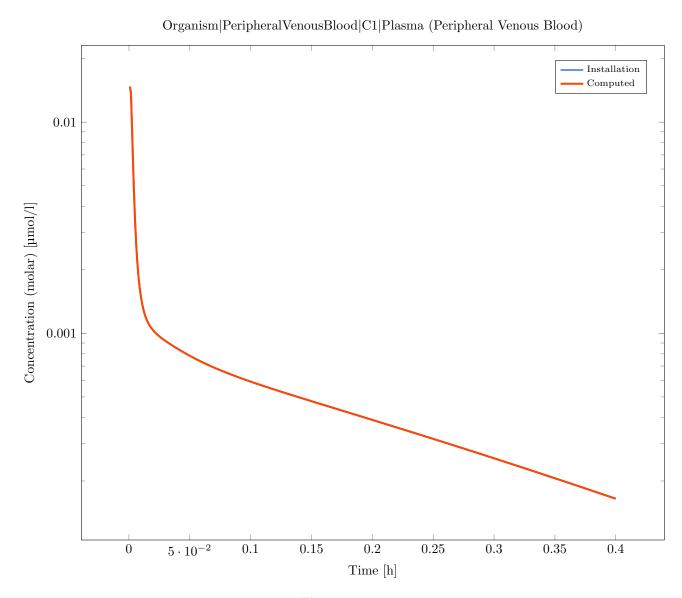
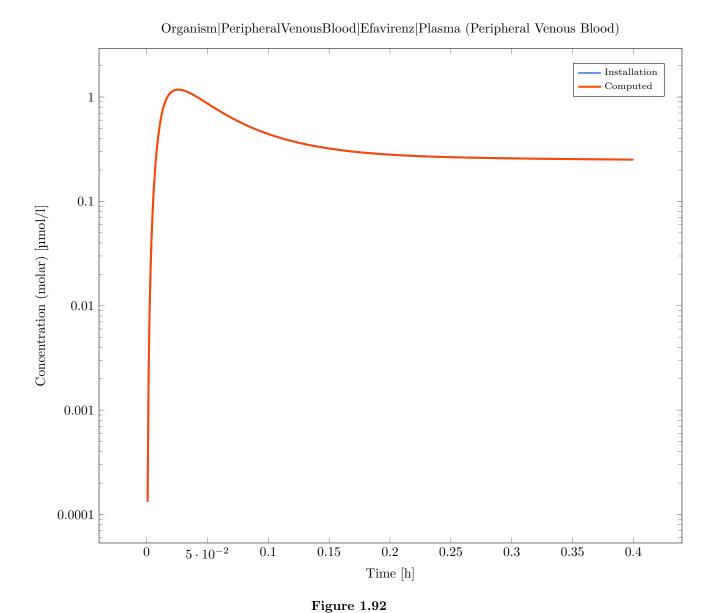


Figure 1.91

 ${\bf Simulation:\ DDI_Multiple Combinations\hbox{--}31_1st_Mechanismbased_Mechanismbased_Induction_Induction} \\ {\bf Result\ of\ the\ validation:\ Valid}$

Output Path: Organism |Peripheral Venous
Blood |Efavirenz |Plasma (Peripheral Venous Blood)
 Deviation: 1.71E-4



 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased_3|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 6.12E-4



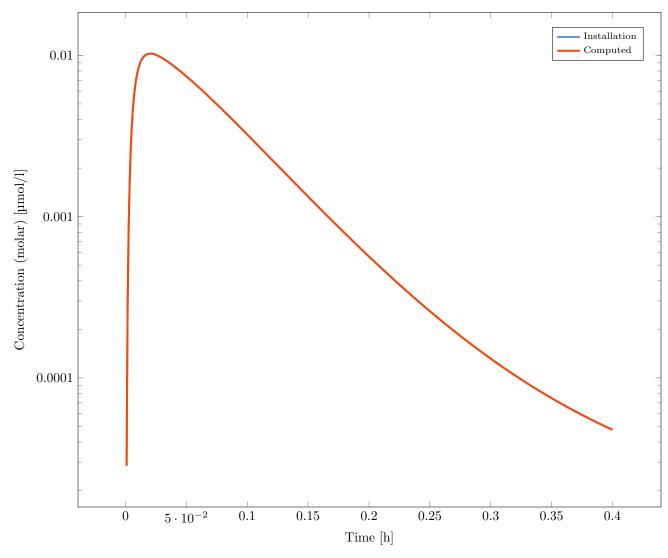


Figure 1.93

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased_4|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 6.14E-4



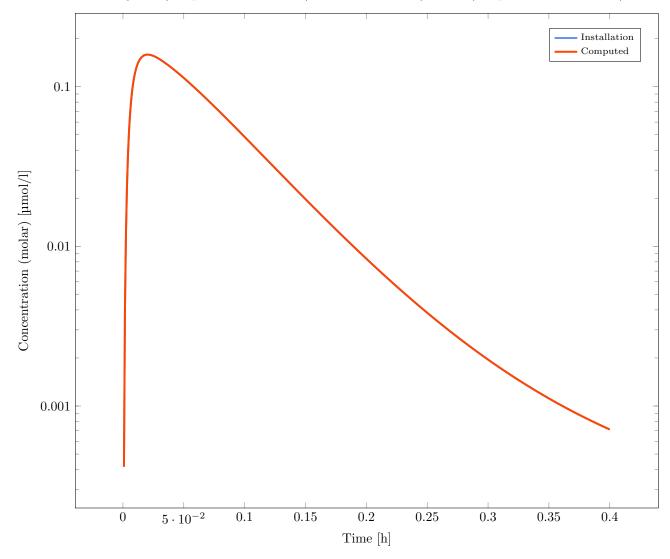


Figure 1.94

Output Path: Organism |Peripheral Venous
Blood |Rifampicin |Plasma (Peripheral Venous Blood)
 Deviation: $4.48\hbox{E-}4$

$Organism|Peripheral Venous Blood|Rifampicin|Plasma\ (Peripheral Venous\ Blood)$

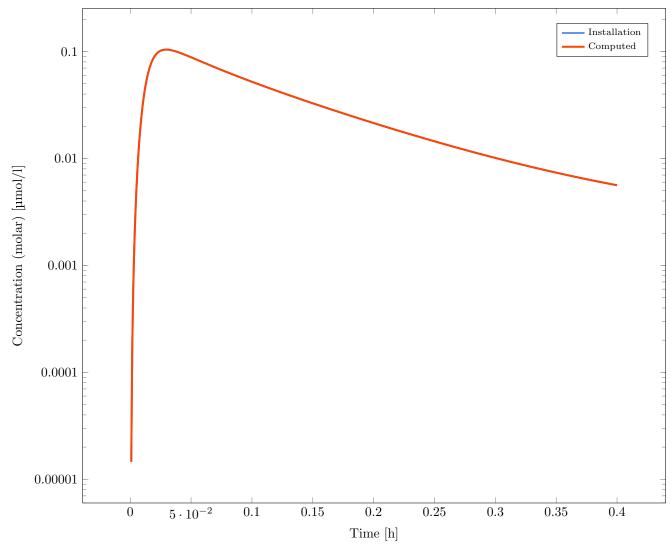


Figure 1.95

Output Path: Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood)

Deviation: 5.55E-4

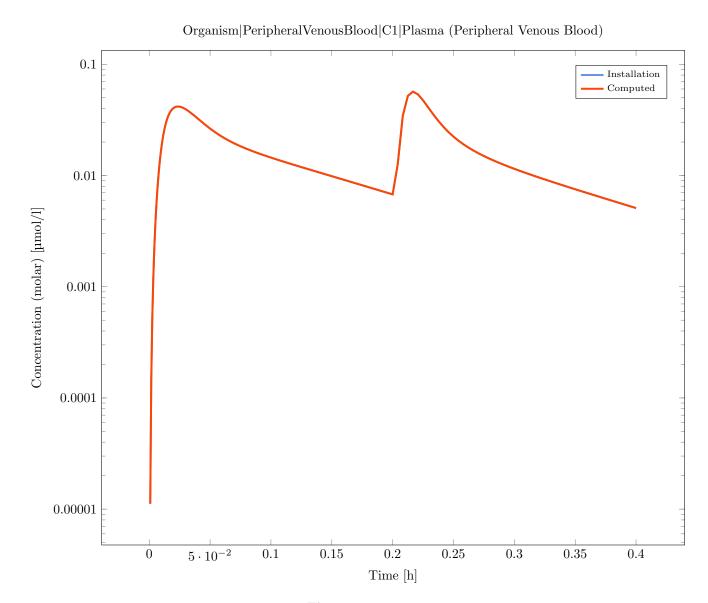


Figure 1.96

 $Simulation: \ DDI_MultipleCombinations-32_1st_All_DDI_Types$

Result of the validation: Valid

 $Output\ Path:\ Organism | Peripheral Venous Blood | Efavirenz | Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 1.92E-4

Organism|PeripheralVenousBlood|Efavirenz|Plasma (Peripheral Venous Blood)

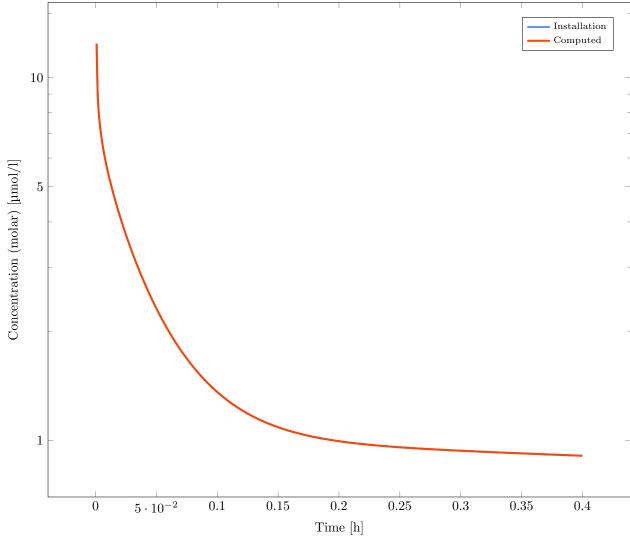
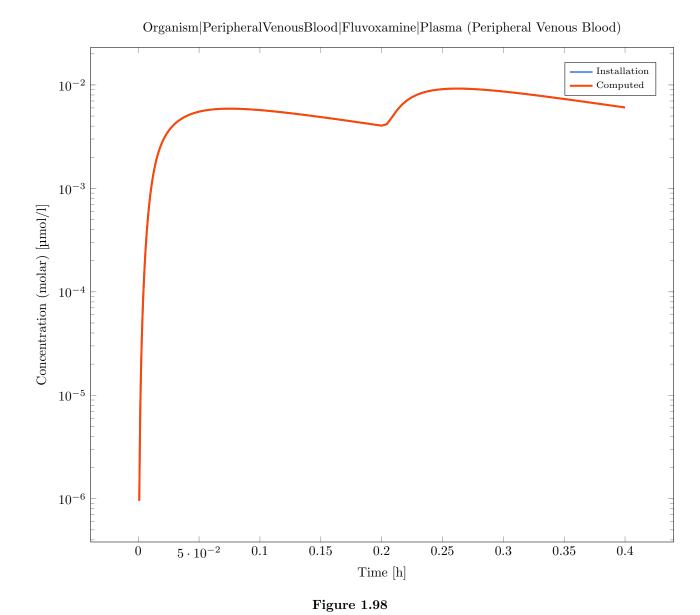


Figure 1.97

Output Path: Organism |Peripheral Venous
Blood |Fluvoxamine |Plasma (Peripheral Venous Blood)
 Deviation: 3.13E-4



 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased_3|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 5.98E-4



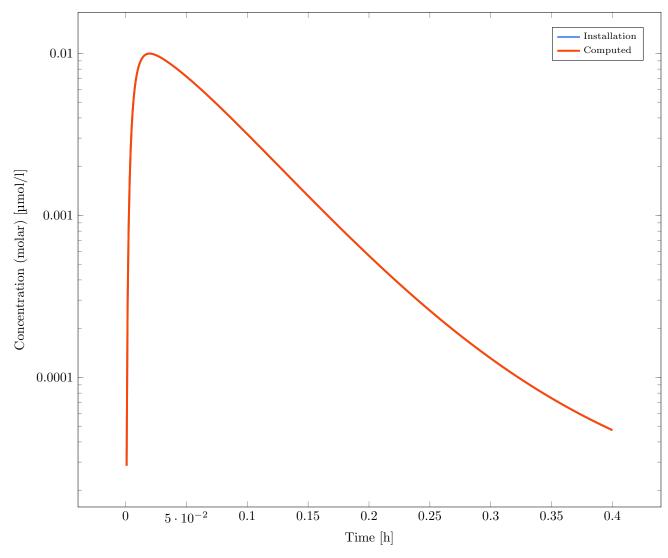


Figure 1.99

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed_CYP3A4_3|Plasma\ (Peripheral\ VenousBlood)$

Deviation: 4.17E-4

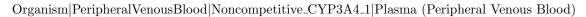
$Organism | Peripheral Venous Blood | Mixed_CYP3A4_3 | Plasma \ (Peripheral Venous Blood)$ 0.01Installation Computed 0.001 Concentration (molar) [µmol/1] 0.00010.000010.0000010 0.1 0.15 0.2 0.25 0.3 0.35 0.4 $5\cdot 10^{-2}$

Figure 1.100

Time [h]

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive_CYP3A4_1|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 4.97E-4



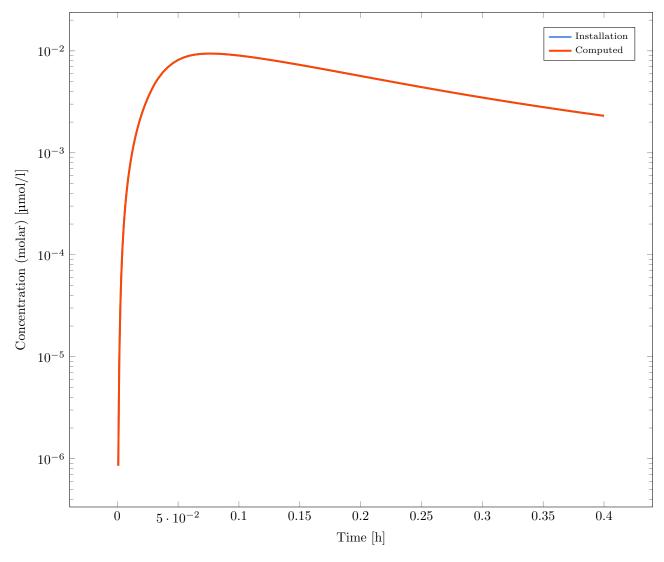
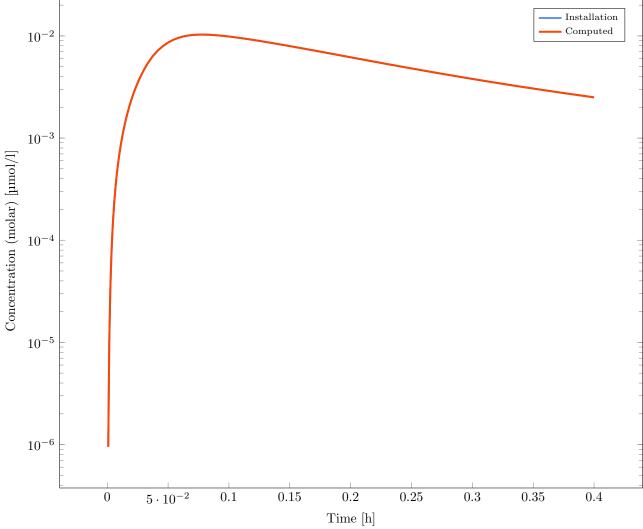


Figure 1.101

 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive_CYP3A4_3|Plasma\ (PeripheralVenous\ Blood)$

Deviation: 5.01E-4





 $Figure \ 1.102$

Output Path: Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood)

Deviation: 6.86E-4

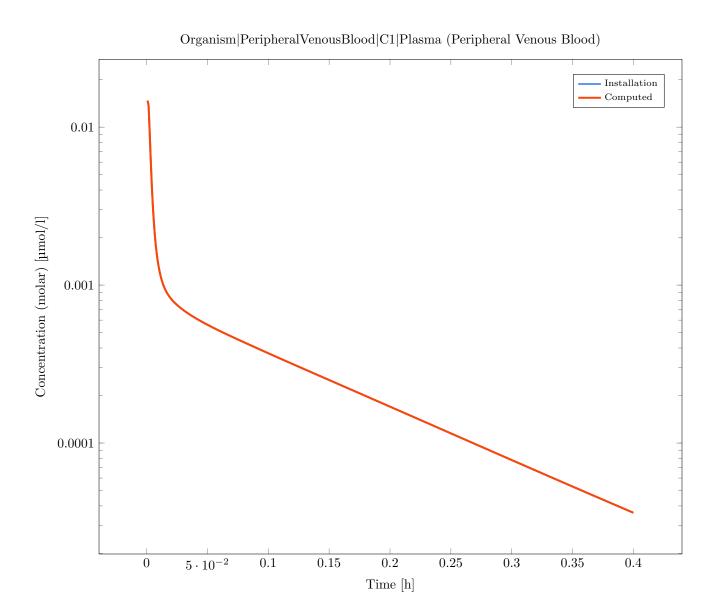


Figure 1.103

Simulation: Dog_MultiORAL_12_12_Dissolved-Dog_MultiORAL_12_12_Dissolved Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood) Deviation:
 0

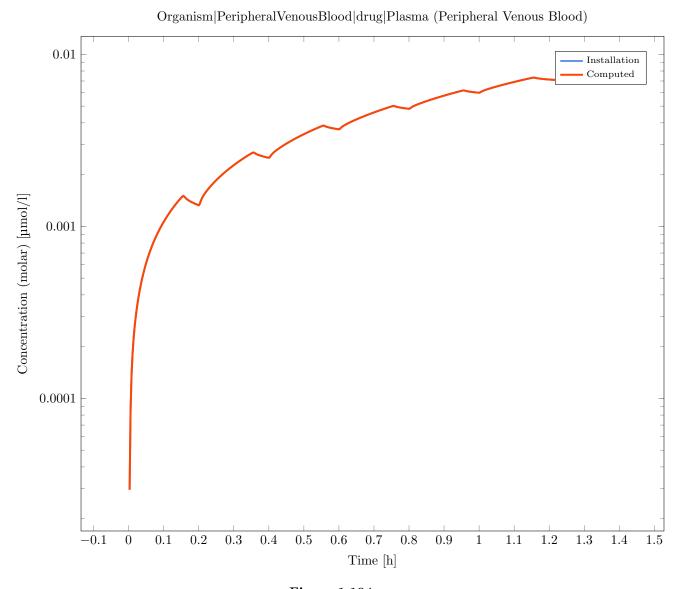


Figure 1.104

 $\begin{tabular}{ll} \bf Simulation: \begin{tabular}{ll} \bf Dog_MultiORAL_24_Dissolved-Dog_MultiORAL_24_$

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood) Deviation:
 0

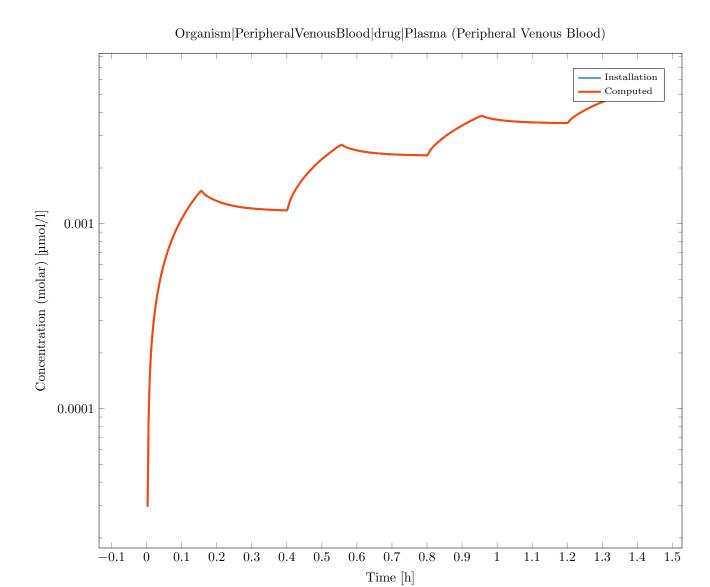


Figure 1.105

 $\begin{tabular}{ll} \bf Simulation: European_SingleORAL_Age_0_CYP3A4-European_SingleORAL_Age_0_CYP3$

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: 3.40E-6

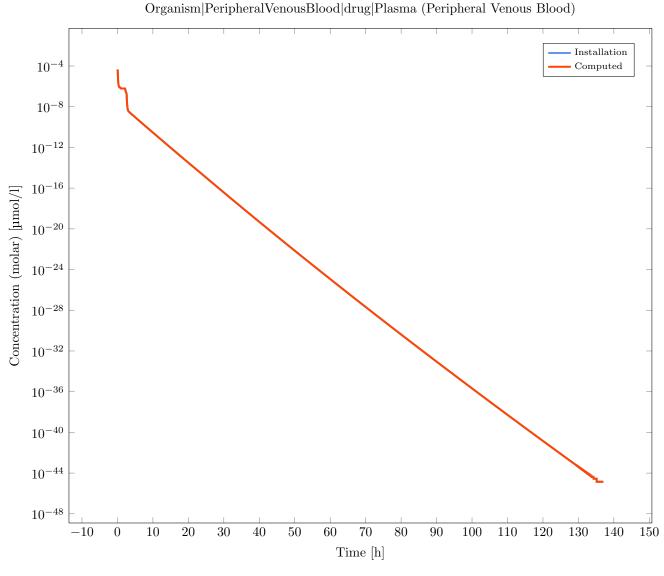


Figure 1.106

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: $8.37 \hbox{E-}7$

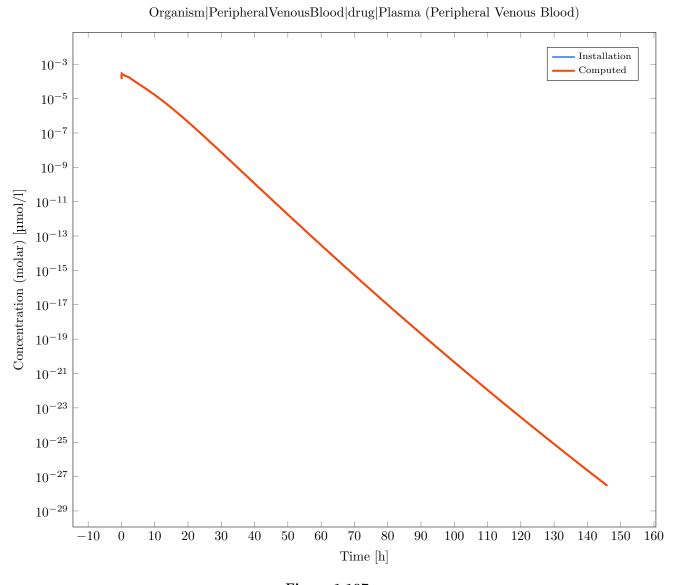


Figure 1.107

 $\begin{tabular}{ll} \bf Simulation: European_SingleORAL_Age_1_CYP3A4-European_SingleORAL_Age_1_CYP3$

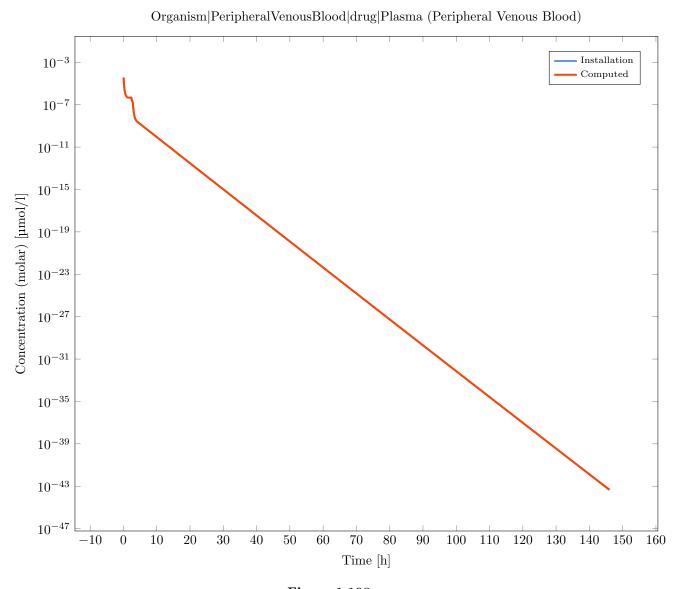
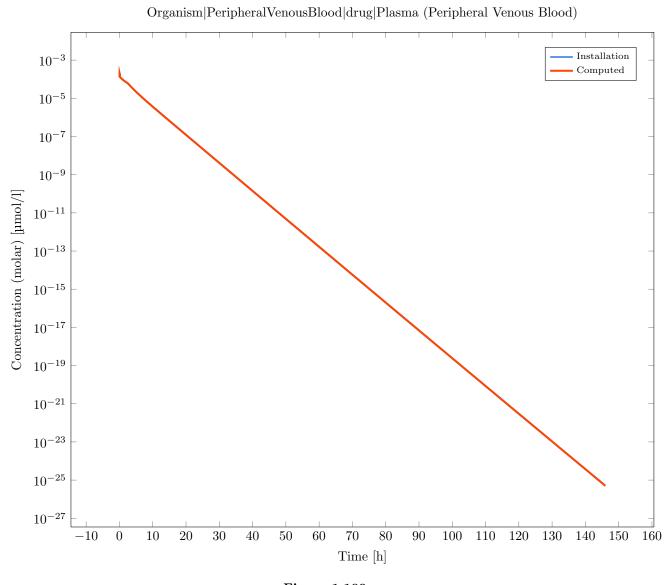


Figure 1.108

 ${\bf Simulation: European_SingleORAL_Age_1_GFR-European_SingleORAL_Age_1_GFR} \\ {\bf Result of the \ validation: \ Valid}$

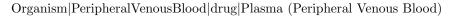
Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: 1.19E-7

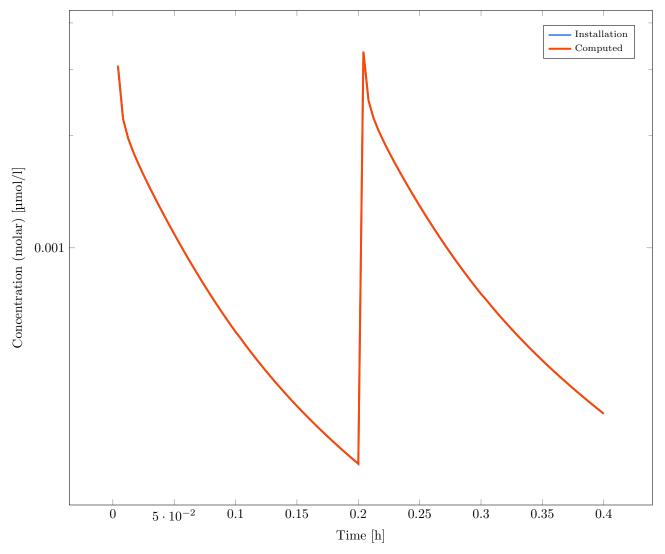


 ${\bf Figure~1.109}$

${\bf Simulation: Human_Competitive Inhibition-Human_Competitive Inhibition}$

Result of the validation: Valid





 ${\bf Figure~1.110}$

Output Path: Organism |PeripheralVenousBlood |
inhibitor |Plasma (Peripheral Venous Blood) | Deviation:
 0

Organism|PeripheralVenousBlood|inhibitor|Plasma (Peripheral Venous Blood) 0.5 | Installation Computed | Comp

Figure 1.111

0.2

Time [h]

0.25

0.3

0.35

0.4

 $Simulation: \ Human_ICRP_AGP-01_ICRP_0y_Male$

 $5 \cdot 10^{-2}$

Result of the validation: Valid

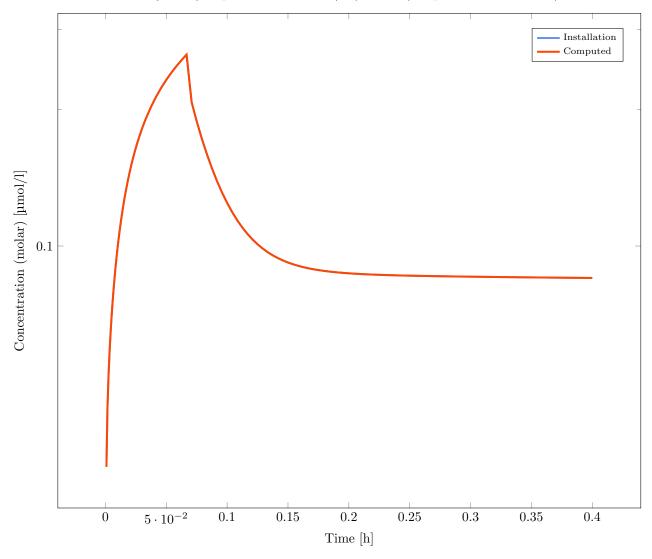
0

Output Path: Organism |Peripheral Venous
Blood |C1 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

0.15

0.1





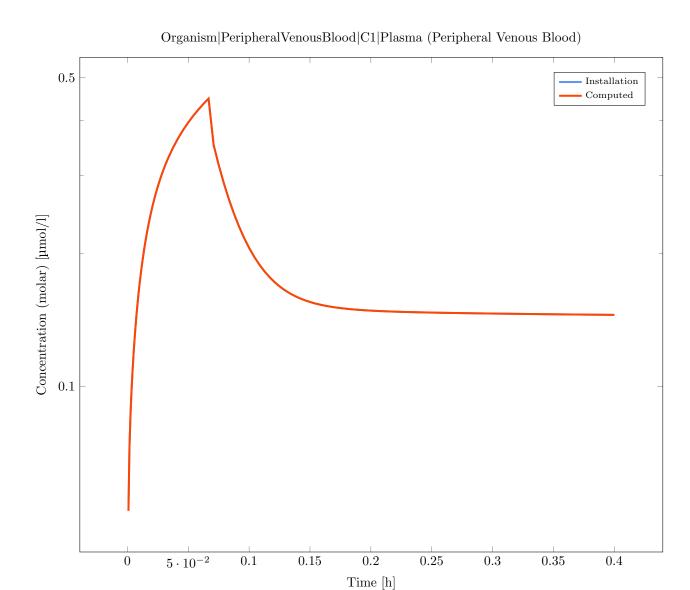
 ${\bf Figure~1.112}$

 $Simulation: \ Human_ICRP_AGP-02_ICRP_0.05y_Female$

Result of the validation: Valid

 $Output\ Path:\ Organism|Peripheral Venous Blood|C1|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 0



 $Figure \ 1.113$

 $Simulation: \ Human_ICRP_AGP-03_ICRP_0.18y_Male$

Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |C1 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

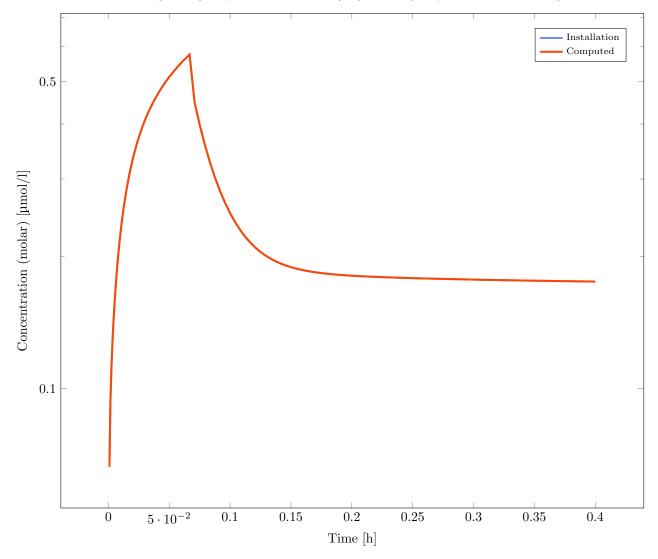


Figure 1.114

Simulation: Human_ICRP_AGP-04_ICRP_1y_Female

Result of the validation: Valid

 $Output\ Path:\ Organism|Peripheral Venous Blood|C1|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 0

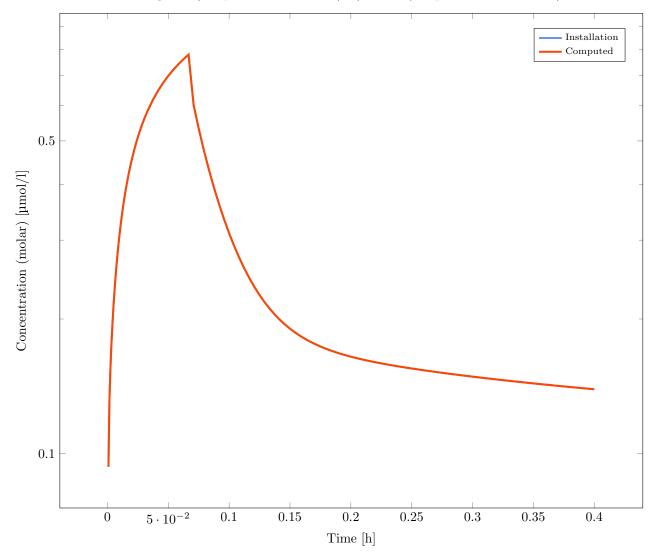


Figure 1.115

 $Simulation: \ Human_ICRP_AGP-05_ICRP_12y_Male$

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood)

Deviation: 1.50E-4

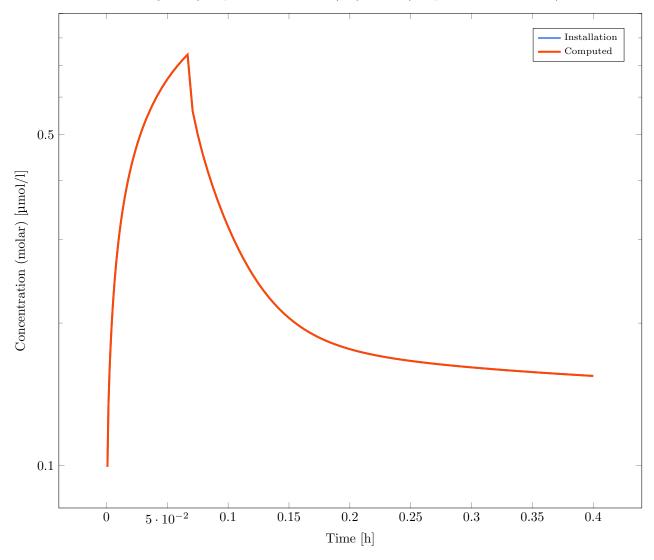


Figure 1.116

 $Simulation: \ Human_ICRP_AGP-06_ICRP_30y_Female$

Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |C1 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$



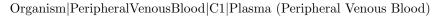
Figure 1.117

 $Simulation: \ Human_ICRP_AGP-07_ICRP_100y_Male$

Result of the validation: Valid

 $Output\ Path:\ Organism|Peripheral Venous Blood|C1|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 0



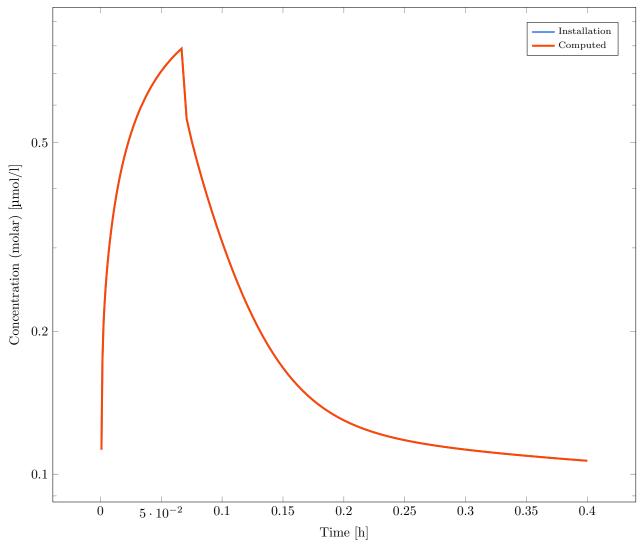


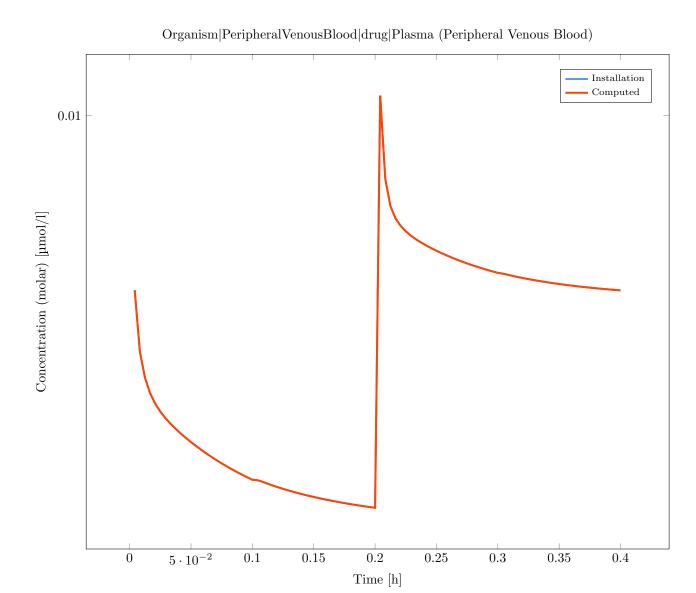
Figure 1.118

 ${\bf Simulation: \ Human_Irreversible Inhibition-Human_Irreversible Inhibition}$

Result of the validation: Valid

 ${\bf Output~Path:~Organism|Peripheral Venous Blood|drug|Plasma~(Peripheral~Venous~Blood)}$

Deviation: 0



Output Path: Organism |PeripheralVenousBlood |
inhibitor |Plasma (Peripheral Venous Blood) | Deviation:
 0

Figure 1.119

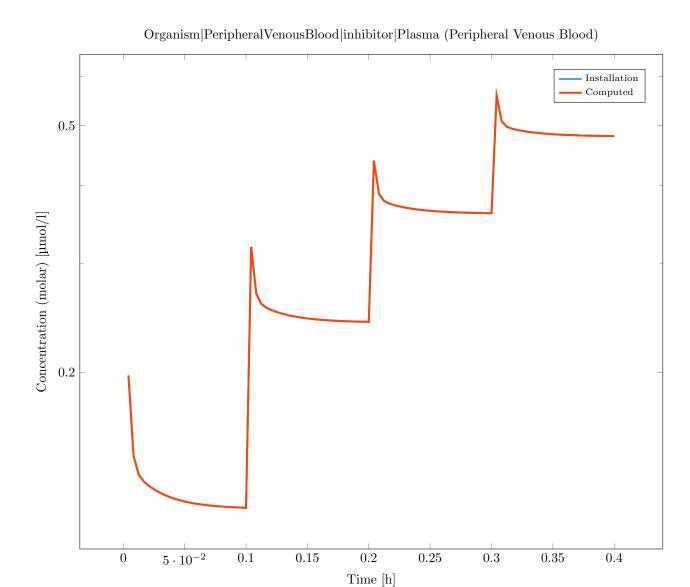
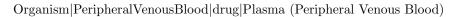
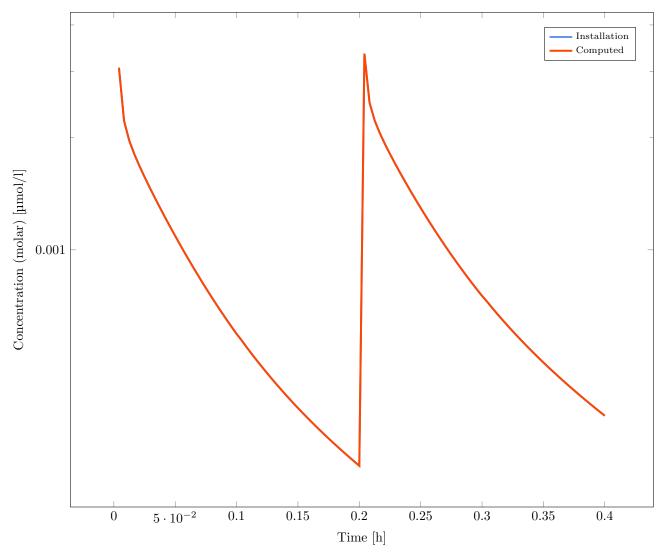


Figure 1.120

 ${\bf Simulation: Human_MixedInhibition-Human_MixedInhibition}$

Result of the validation: Valid





 $Figure \ 1.121$

Output Path: Organism |PeripheralVenousBlood |
inhibitor |Plasma (Peripheral Venous Blood) | Deviation:
 0

Organism|PeripheralVenousBlood|inhibitor|Plasma (Peripheral Venous Blood) Installation Computed 0.5 0.2

Figure 1.122

0.2

Time [h]

0.25

0.3

0.35

0.4

 $Simulation: \ Human_MultiIV_6_6_12-Human_MultiIV_6_6_12$

0.1

Result of the validation: Valid

0

 $5 \cdot 10^{-2}$

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood) Deviation:
 0

0.15

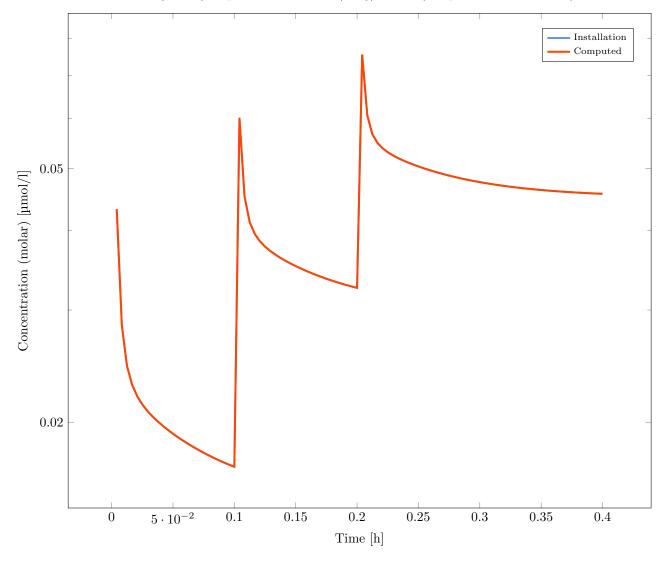


Figure 1.123

 $Simulation: \ Human_MultiORAL_6_12_12_Dissolved-Human_6_12_Dissolved-Human_6_12_$

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: $1.05\mbox{E-}7$

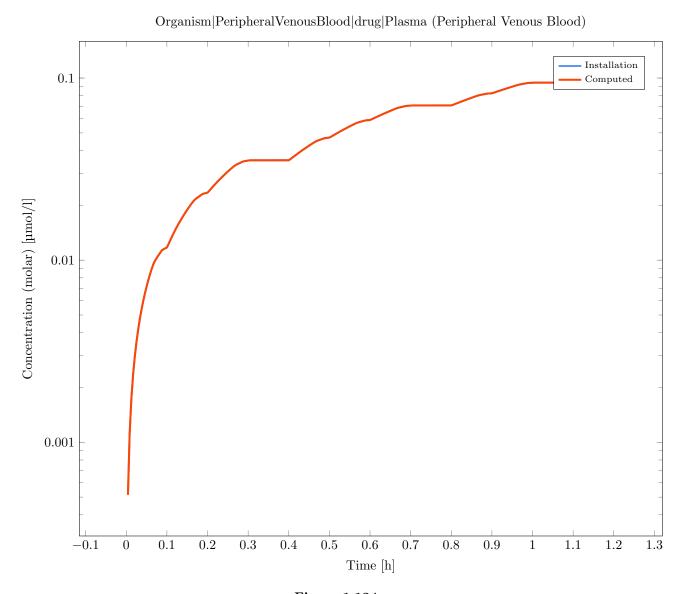


Figure 1.124

 $Simulation: Human_MultiORAL_6_12_12_Dissolved-Human_MultiORAL_6_12_12_Dissolved_absorption_sink_conditions$

Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: 6.10E-8



Figure 1.125

 $Simulation: Human_MultiORAL_6_12_12_Dissolved-Human_MultiORAL_6_12_12_Dissolved_EHC_continuous_fraction_0.5$

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

Deviation: 1.05E-7

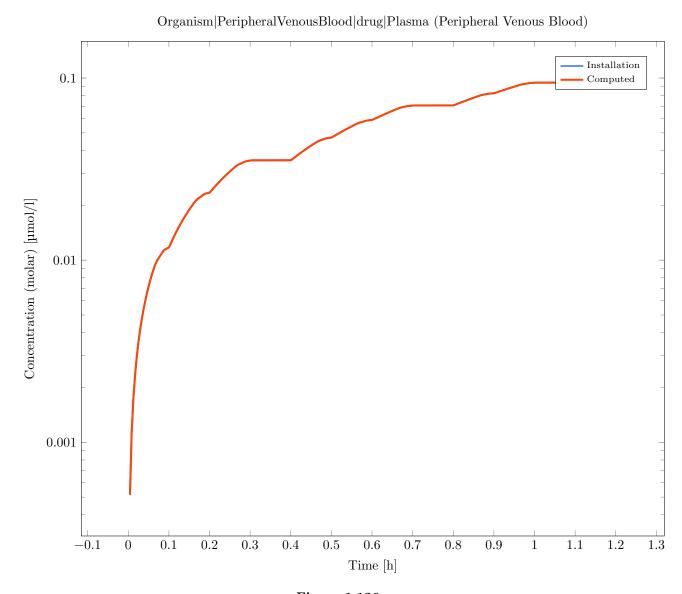


Figure 1.126

 $Simulation: Human_MultiORAL_6_12_12_Dissolved-Human_MultiORAL_6_12_12_Dissolved_EHC_continuous_fraction_1$

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

Deviation: 1.05E-7

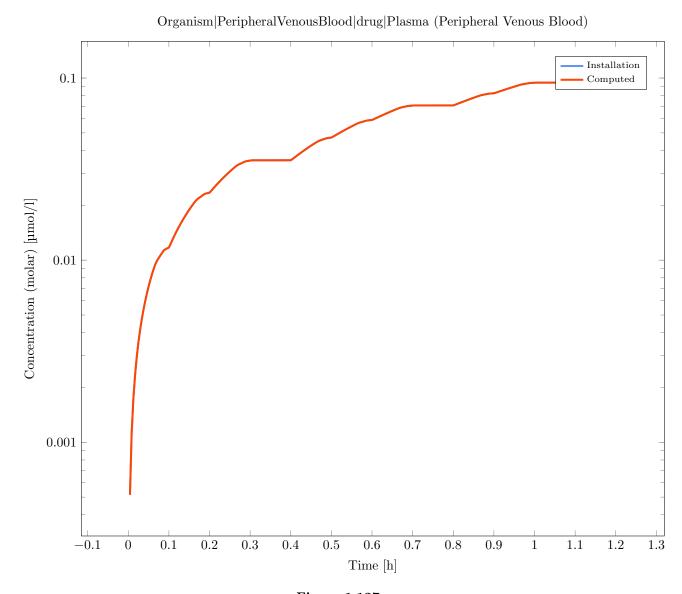


Figure 1.127

 $Simulation: \ Human_MultiORAL_6_12_12_Dissolved-Human_MultiORAL_6_12_12_Dissolved_pKadependent\ penalty\ factor$ Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: $1.05\mbox{E-}7$

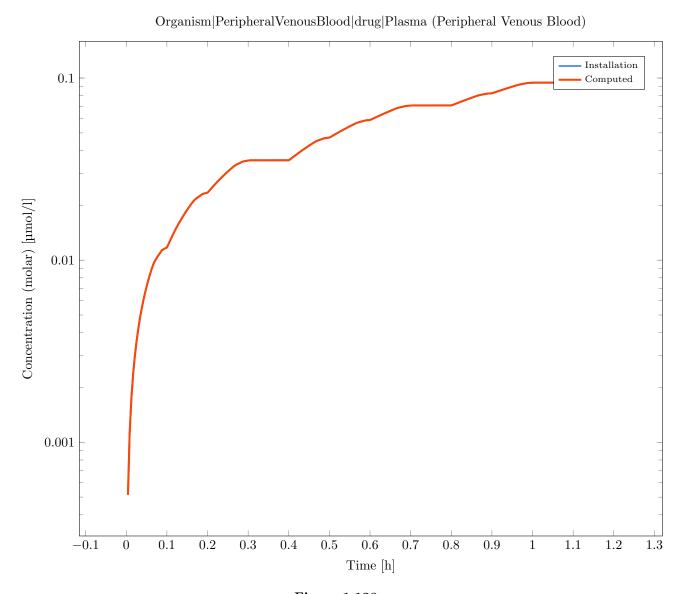


Figure 1.128

 $Simulation: \ Human_MultipleIV_Binding-Human_MultipleIV_Binding$

Result of the validation: Valid

 $Output\ Path:\ Organism|Peripheral Venous Blood|drug|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 0

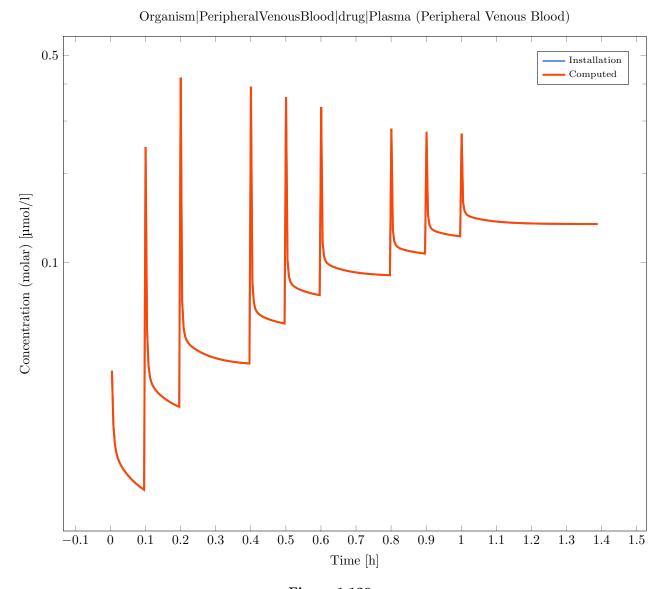
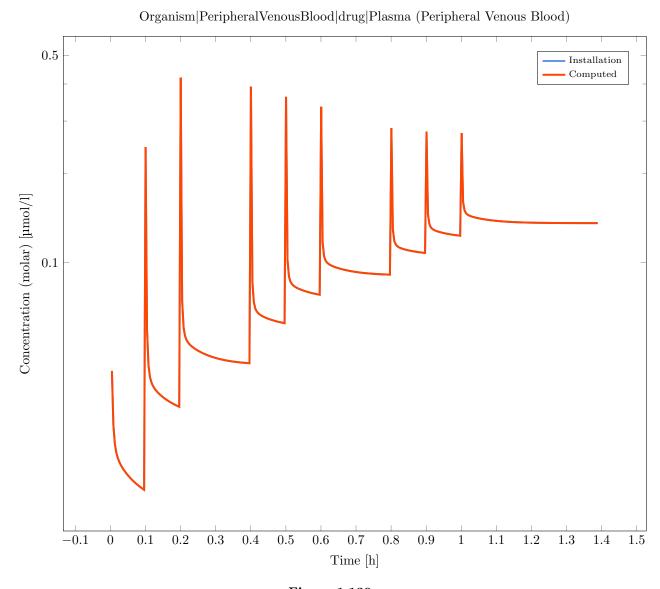


Figure 1.129

 ${\bf Simulation: \ Human_Multiple IV_Efflux Basolateral-Human_Multiple IV_Efflux Basolateral-Result \ of the \ validation: \ Valid$



 ${\bf Figure~1.130}$

 $Simulation: \ Human_MultipleIV_Efflux-Human_MultipleIV_Efflux$

Result of the validation: Valid

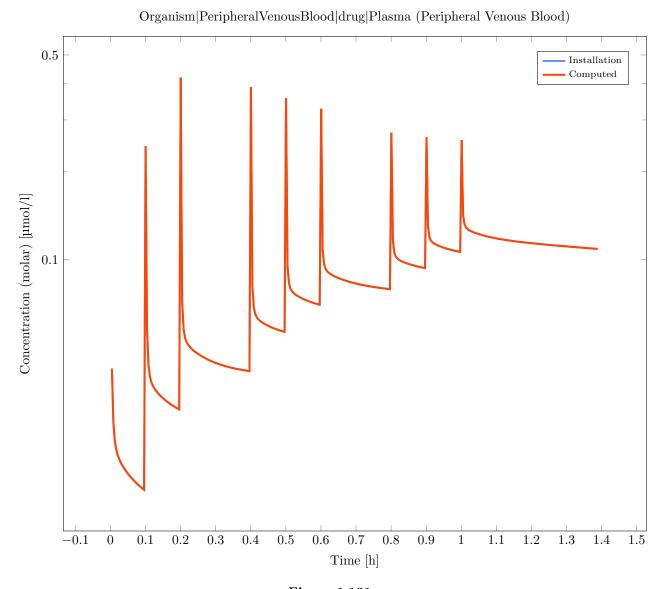


Figure 1.131

 ${\bf Simulation: \ Human_Multiple IV_Influx Basolateral-Human_Multiple IV_Influx Basolateral-Result \ of the \ validation: \ Valid$

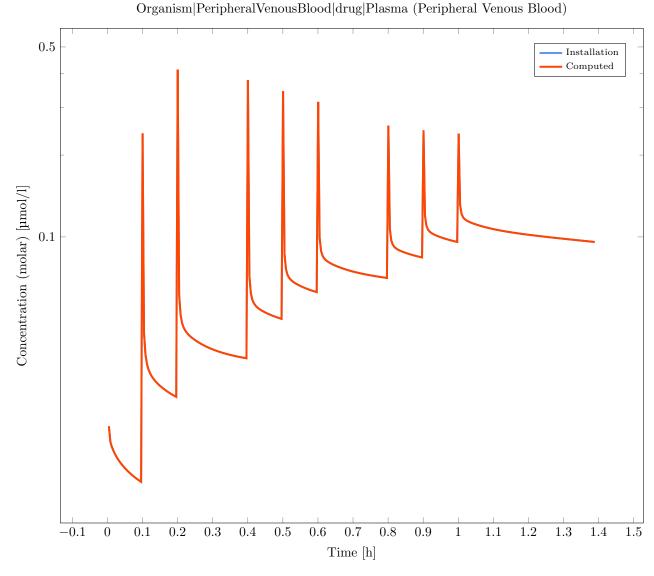


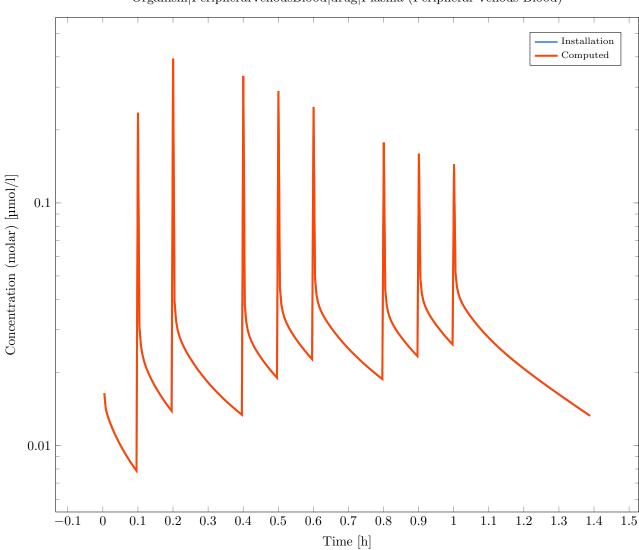
Figure 1.132

 $Simulation: \ Human_MultipleIV_Influx-Human_MultipleIV_ActiveInflux$

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

Deviation: 3.51E-5



Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

Figure 1.133

 ${\bf Simulation: \ Human_Multiple IV_Metabolizm Binding-Human_Multiple IV_Metabolizm Binding \ Result \ of \ the \ validation: \ Valid }$

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed 0.1 Concentration (molar) $[\mu]$ 0.01 0.0010.2 0.3 0.7 0.8 0.9 1.1 1.2 -0.10 0.1 0.4 0.5 0.6 1.3 1.4 1.5

Figure 1.134

Time [h]

 ${\bf Simulation: \ Human_Multiple IV_Metabolizm-Human_Multiple IV_Metabolizm.} \\ {\bf Result \ of \ the \ validation: \ Valid}$

1.3

1.4

1.5

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed 0.1 Concentration (molar) $[\mu]$ 0.01 0.0010.2 0.3 0.8 0.9 1.1 1.2

Figure 1.135

0.6

0.7

Time [h]

 $Simulation: \ Human_MultipleIV_PGPB a solateral-Human_MultipleIV_PGPB a$ Result of the validation: Valid

0.5

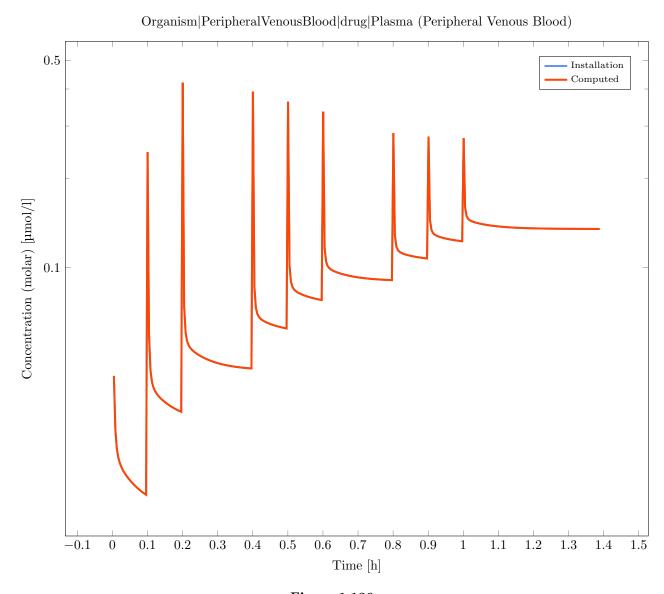
0.4

Output Path: Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Deviation: 0

-0.1

0

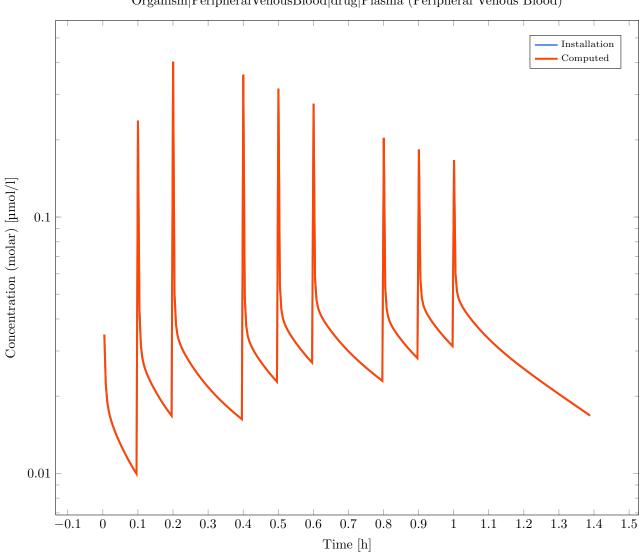
0.1



 ${\bf Figure~1.136}$

 $Simulation: \ Human_MultipleIV_PGP-Human_MultipleIV_PGP$

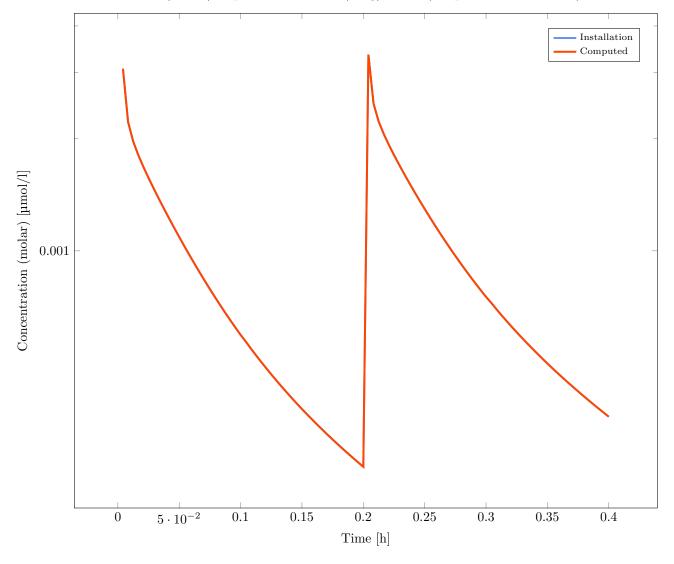
Result of the validation: Valid



Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

Figure 1.137

 ${\bf Simulation: \ Human_NonCompetitive Inhibition-Human_NonCompetitive Inhibition} \\ {\bf Result \ of \ the \ validation: \ Valid}$



 $Figure \ 1.138$

Output Path: Organism |PeripheralVenousBlood |
inhibitor |Plasma (Peripheral Venous Blood) | Deviation:
 0

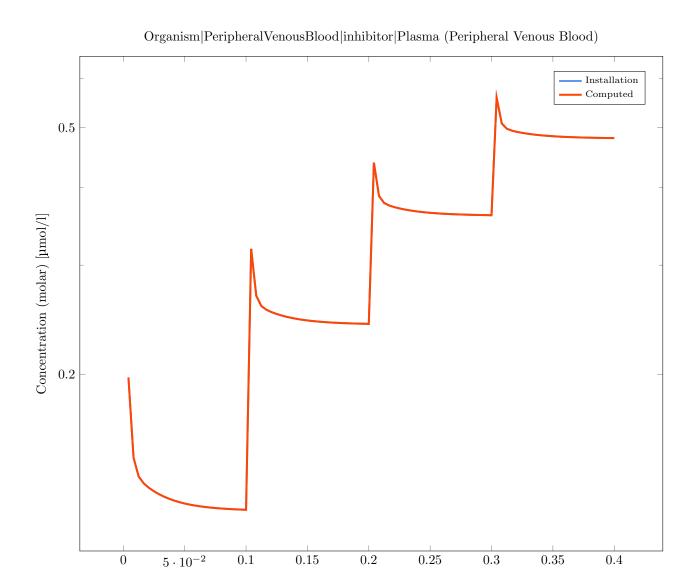


Figure 1.139

Time [h]

 $Simulation: \ Human_Oral_BiDaily_Table Formulation-S1_suspension$

Result of the validation: Valid

 $Output\ Path:\ Organism|Peripheral Venous Blood|C1|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 5.83E-5

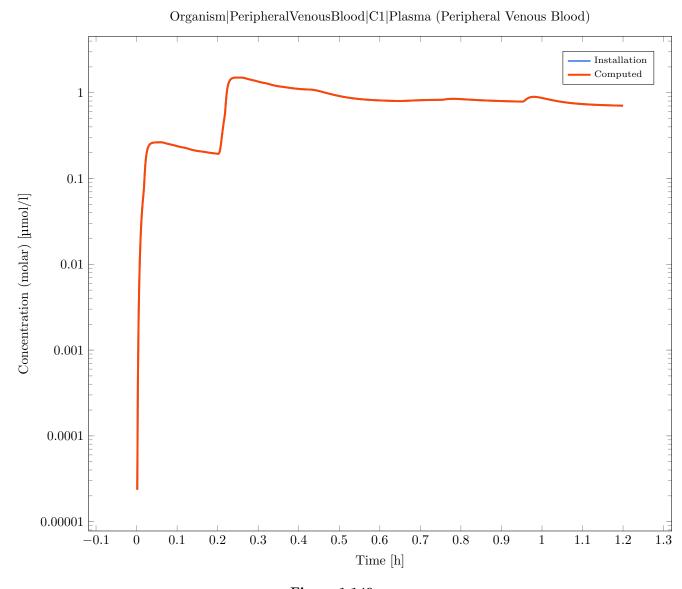


Figure 1.140

 $Simulation: Human_Oral_BiDaily_TableFormulation-S2_NoSuspension$

Result of the validation: Valid

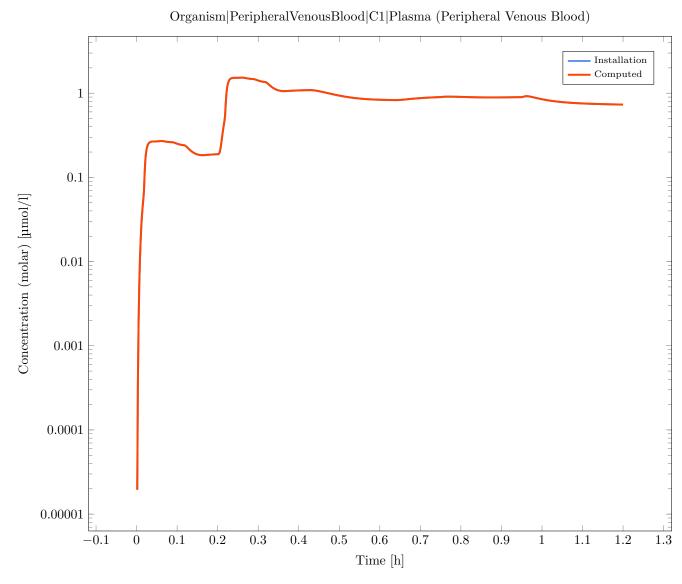


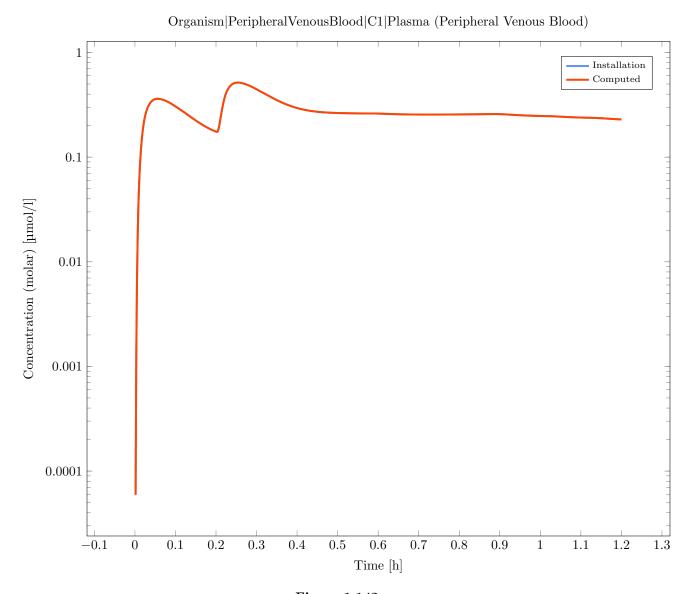
Figure 1.141

Simulation: Human_pH_SolubilityTable-S1_Table

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood)

Deviation: 1.12E-5



 ${\bf Figure~1.142}$

Simulation: Human_pH_SolubilityTable-S2_Measurement

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood)

Deviation: 0

$Organism|Peripheral Venous Blood|C1|Plasma\ (Peripheral Venous Blood)$

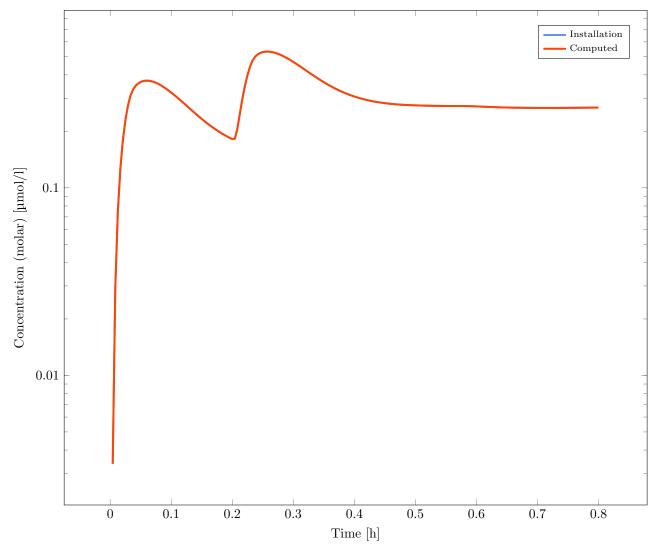


Figure 1.143

 $Simulation: \ Human_pH_SolubilityTable_SolubilityChanged$

Result of the validation: Valid

 $Output\ Path:\ Organism|Peripheral Venous Blood|C1|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 3.58E-6

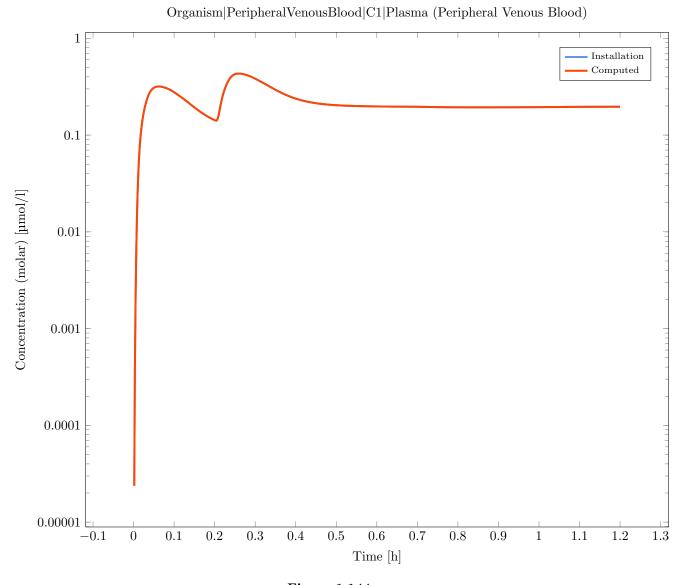


Figure 1.144

 ${\bf Simulation: \ Human_pH_SolubilityTable_S4_Table_SolubilityTableChanged \ Result\ of\ the\ validation:\ Valid}$

Output Path: Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood)

Deviation: 8.65E-8

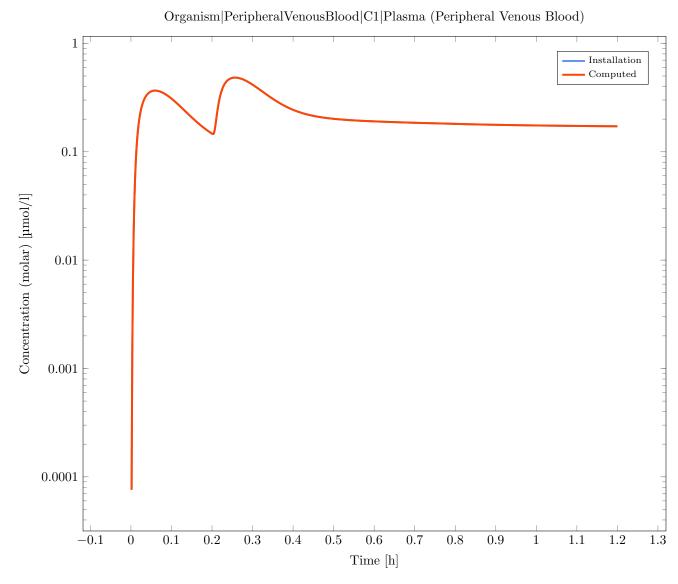


Figure 1.145

 ${\bf Simulation: \ Human_Single IV_Configuration-Human_Single IV_Configuration} \\ {\bf Result \ of \ the \ validation: \ Valid}$

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed Concentration (molar) $[\mu]$ 0.02 $0 \quad 2 \cdot 10^{-2} \cdot 10^{-2} \cdot 10^{-2} \cdot 10^{-2} \cdot 0.1$

Figure 1.146

0.12 0.14 0.16

Time [h]

0.2

 $0.22 \quad 0.24$

0.3

0.18

Simulation: Human_SingleIV-Human_SingleIV

Result of the validation: Valid

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)



Figure 1.147

Simulation: Human_SingleIV-Human_SingleIV_MW_200_fu_0.2_LogP_5 Result of the validation: Valid

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

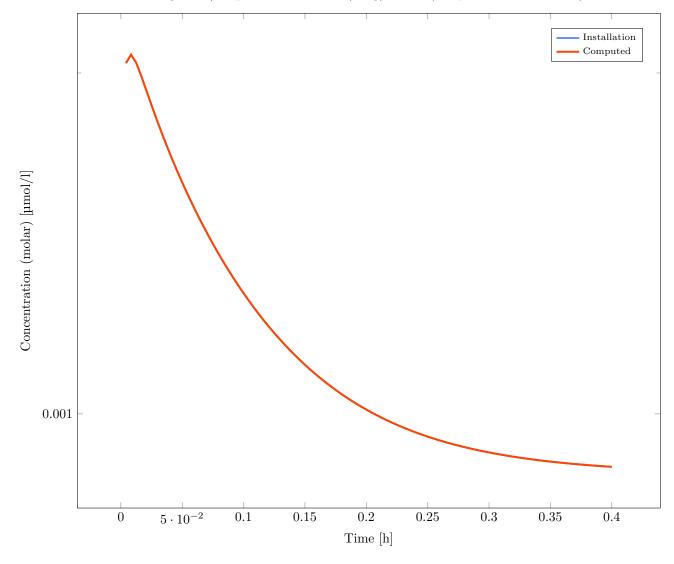
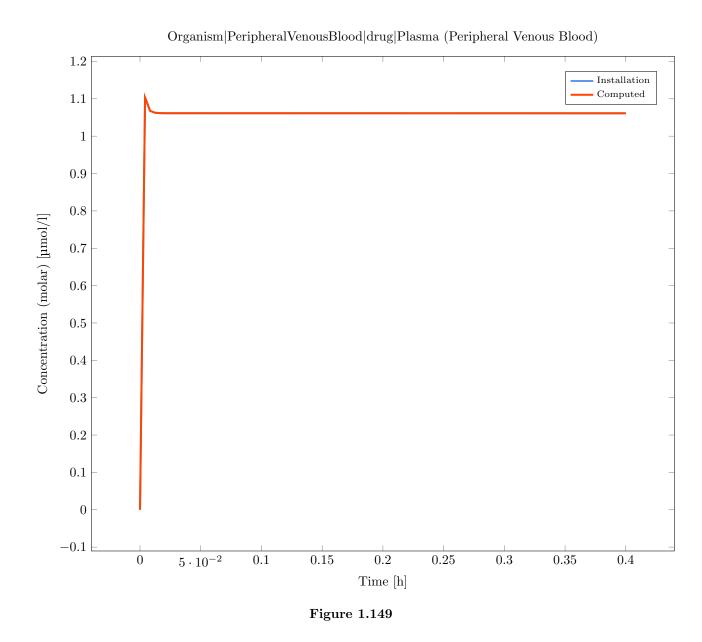


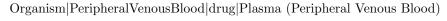
Figure 1.148

 $Simulation: \ Human_SingleIV-Human_SingleIV_MW_800_fu_0.6_LogP_-5$

Result of the validation: Valid



Simulation: Human_SingleORAL_Dissolved_PlasmaClearance-Human_SingleO



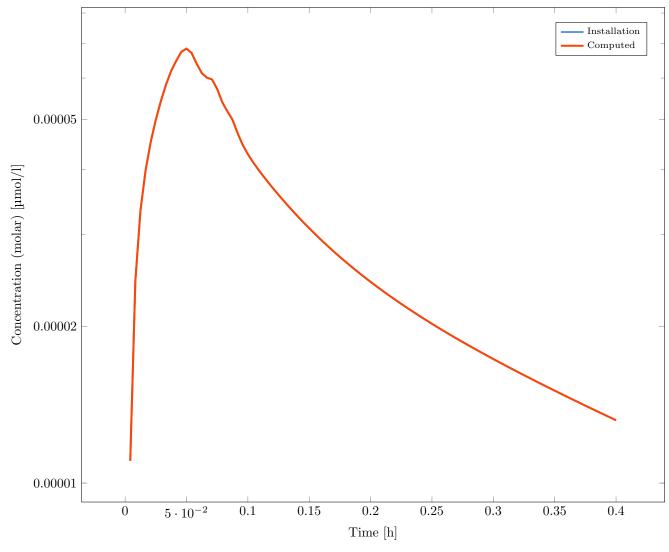


Figure 1.150

 $Simulation: Human_SingleORAL_Dissolved_PlasmaClearance-Human_Singl$

Result of the validation: Valid

 $Output\ Path:\ Organism|Peripheral Venous Blood|drug|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 0

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

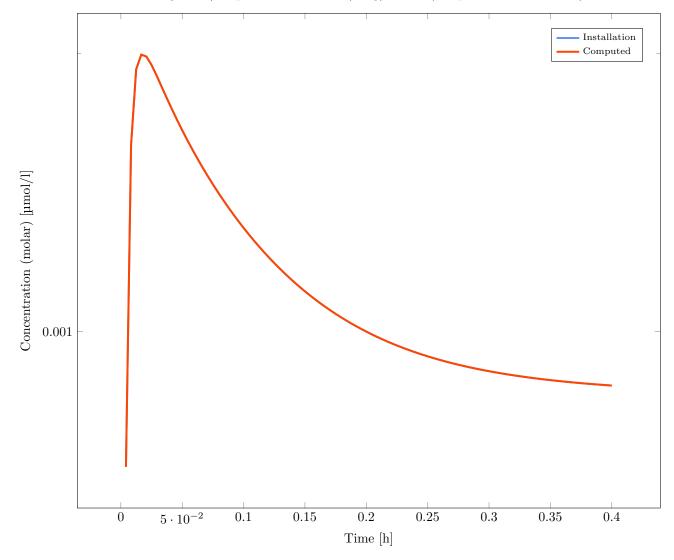


Figure 1.151

 $Simulation: Human_SingleORAL_Dissolved_PlasmaClearance-Human_Singl$

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

Deviation: 0

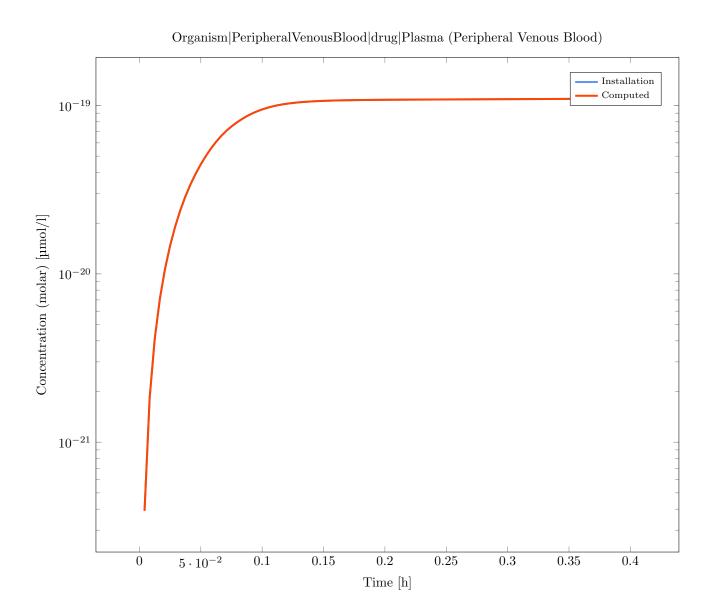


Figure 1.152

Simulation: Human_SingleORAL_Dissolved-Human_SingleORAL_Dissolved Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: 1.17E-6

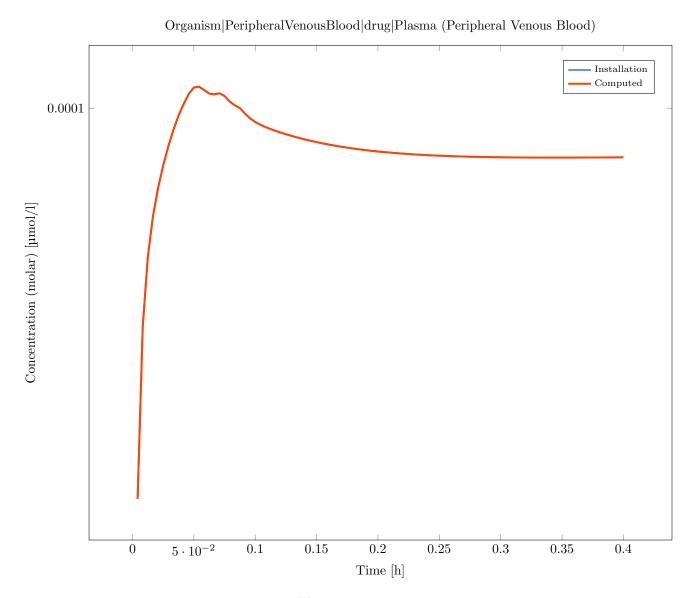


Figure 1.153

 $Simulation: Human_SingleORAL_Dissolved_Human_SingleORAL_Dissolved_MW_200_fu_0.2_LogP_5$ Result of the validation: Valid

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

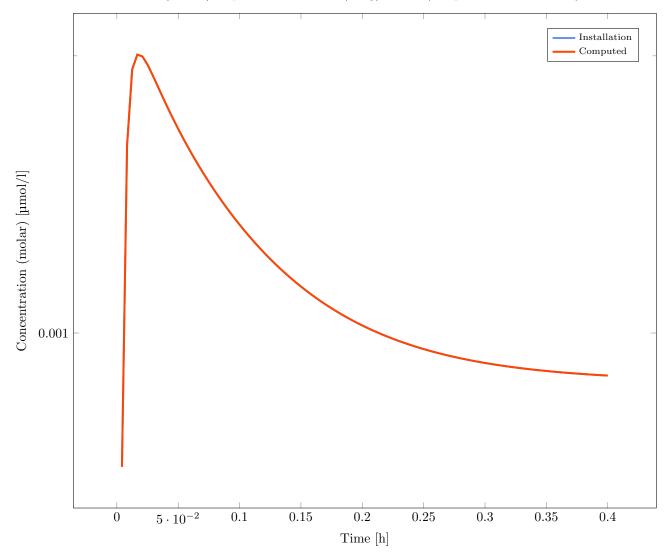
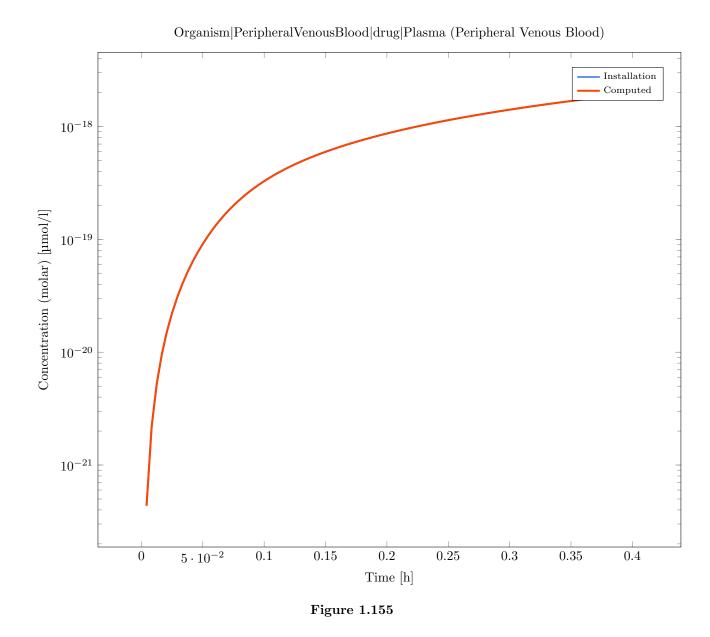


Figure 1.154

 $Simulation: Human_SingleORAL_Dissolved-Human_SingleORAL_Dissolved_MW_800_fu_0.6_LogP_-5\\ Result of the validation: Valid$

Output Path: Organism |PeripheralVenousBlood |
drug |Plasma (Peripheral Venous Blood) Deviation: ${\bf 0}$



 ${\bf Simulation: \ Human_SingleORAL_Lint80_AsSuspention-Human_SingleORAL_Lint80_AsSuspention.} \\ {\bf Result \ of \ the \ validation: \ Valid}$



Figure 1.156

 $Simulation: \ Human_SingleORAL_Lint80-Human_SingleORAL_Lint80$

Result of the validation: Valid

 ${\bf Output~Path:~Organism|Peripheral VenousBlood|drug|Plasma~(Peripheral~Venous~Blood)}$

Deviation: 0

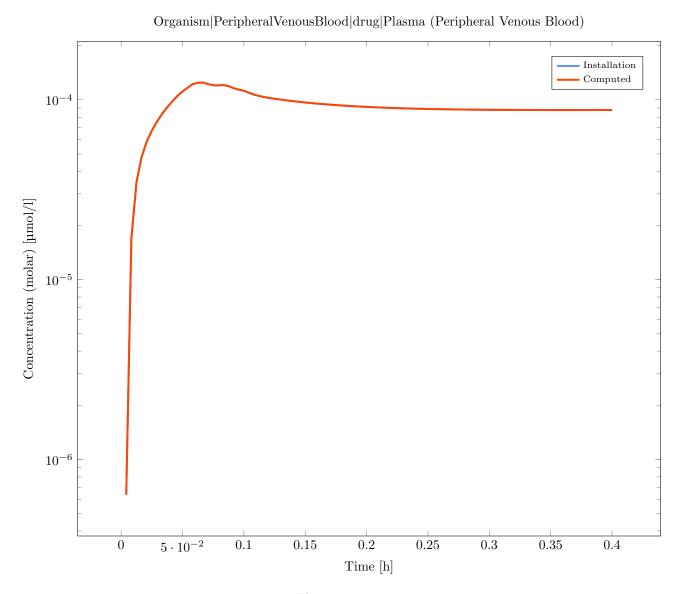


Figure 1.157

 $Simulation: Human_SingleORAL_MonoParticles_AsSuspention-Human_SingleORAL_MonoParticles_AsSuspention\\$

Result of the validation: Valid

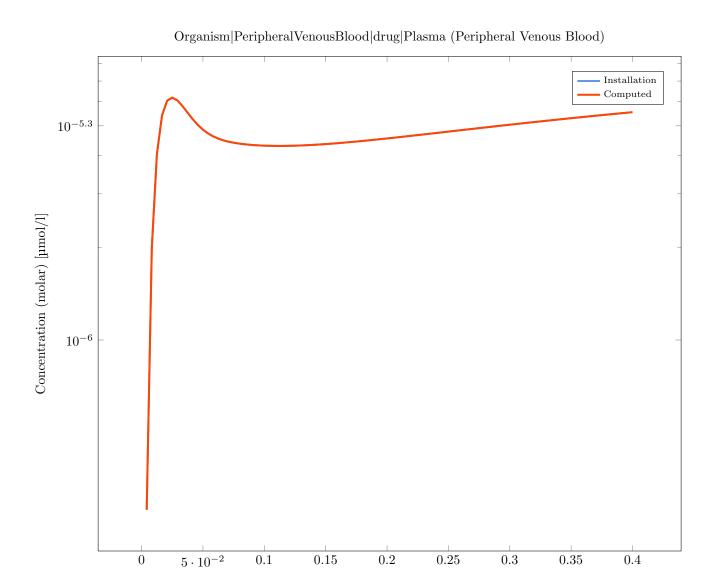


Figure 1.158

Time [h]

 $Simulation: Human_SingleORAL_PolyParticlesLogNormal_AsSuspention-Human_SingleORAL_PolyParticlesLogNormal_AsSuspention$

Result of the validation: Valid

 $Output\ Path:\ Organism|Peripheral Venous Blood|drug|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 8.76E-8

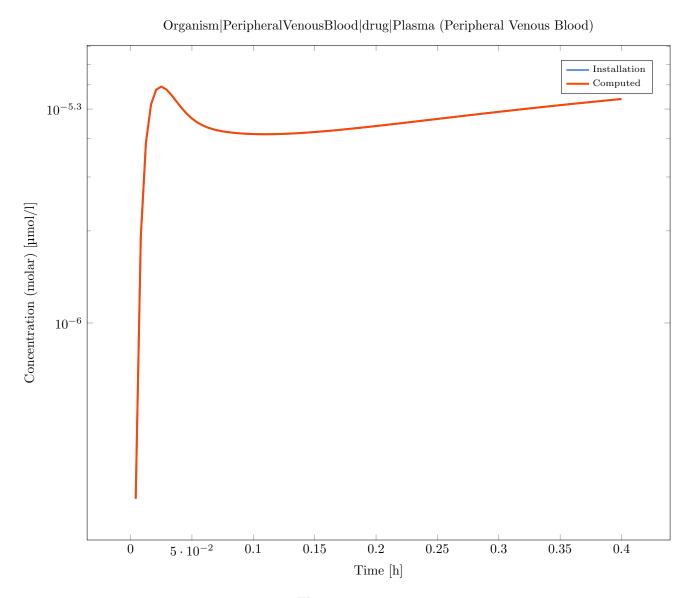


Figure 1.159

 $Simulation: Human_SingleORAL_PolyParticlesNormal_AsSuspention-Human_SingleORAL_PolyParticlesNormal_AsSuspention\\$

Result of the validation: Valid

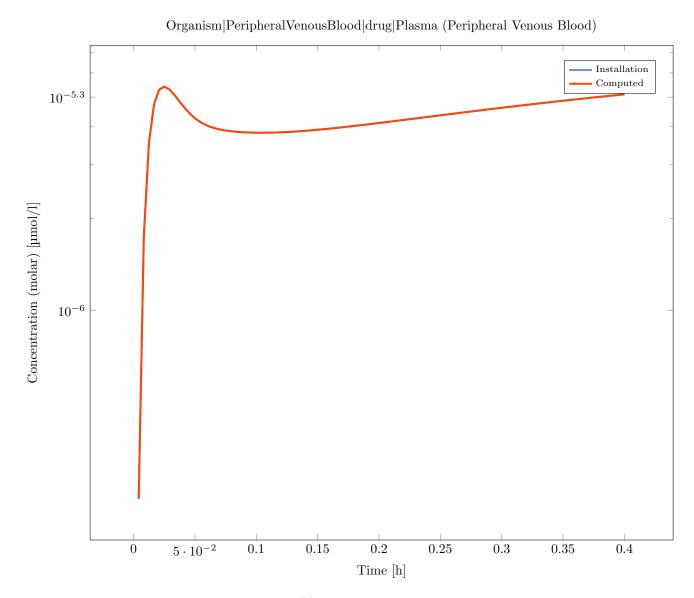


Figure 1.160

 $Simulation: Human_SingleORAL_PolyParticlesNormal_AsSuspention-Human_SingleORAL_PolyParticlesNormal_AsSuspention_dissolved_radius$

Result of the validation: Valid

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

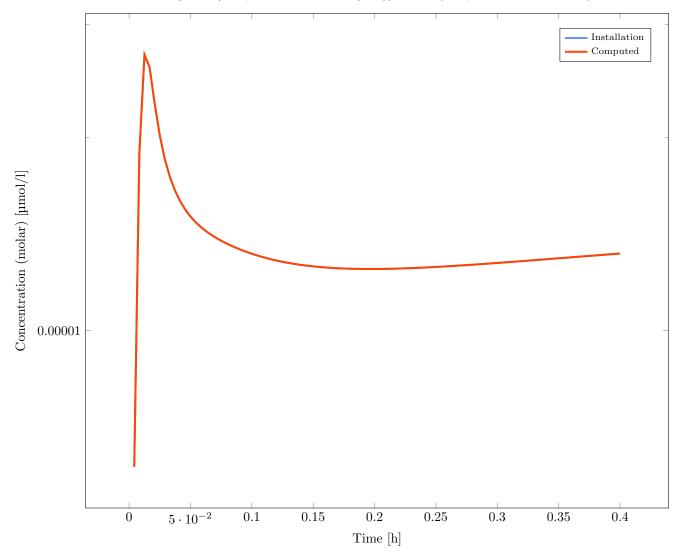


Figure 1.161

 $Simulation: Human_SingleORAL_PolyParticlesNormal_AsSuspention-Human_SingleORAL_PolyParticlesNormal_AsSuspention_treat_precipated_drug_as_soluble$

Result of the validation: Valid

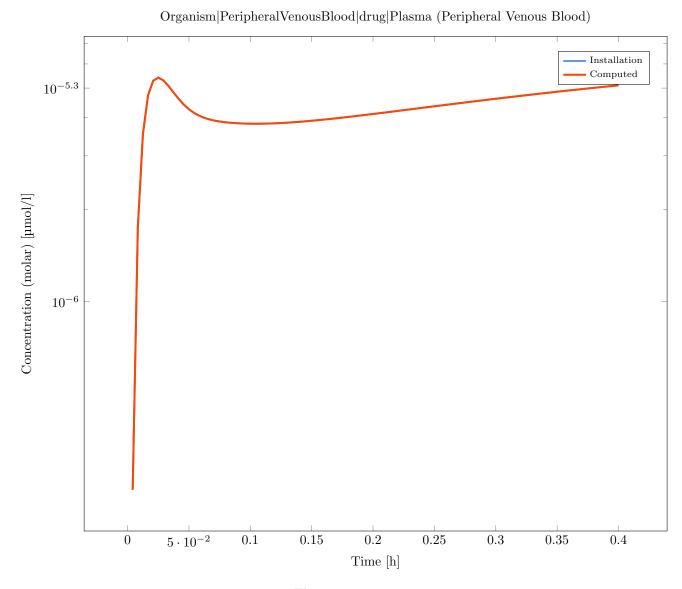


Figure 1.162

 ${\bf Simulation: Human_SingleORAL_Weibull_AsSuspention-Human_SingleORAL_Weibull_AsSuspention}. \\ {\bf Result\ of\ the\ validation:\ Valid}$

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: 8.81E-7

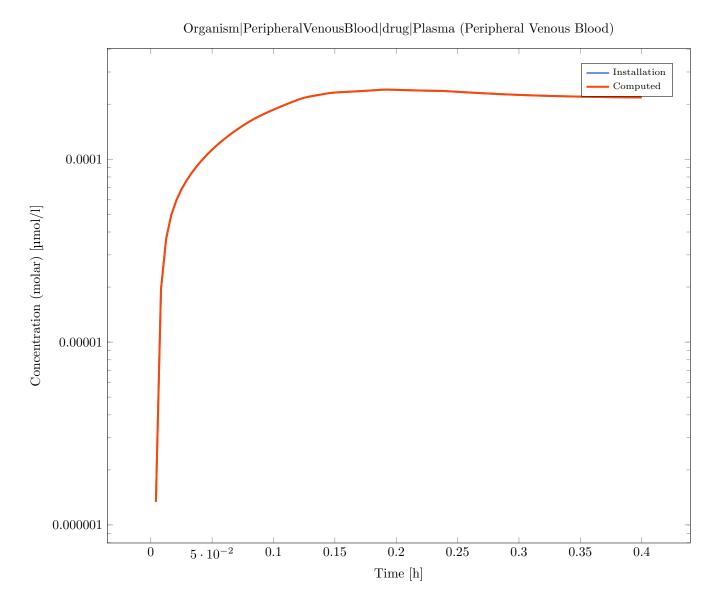


Figure 1.163

 $Simulation: Human_SingleORAL_Weibull_AsSuspention-Human_SingleORAL_Weibull_AsSuspention_MW_200_fu_0.2_LogP_5\\ Result of the validation: Valid$

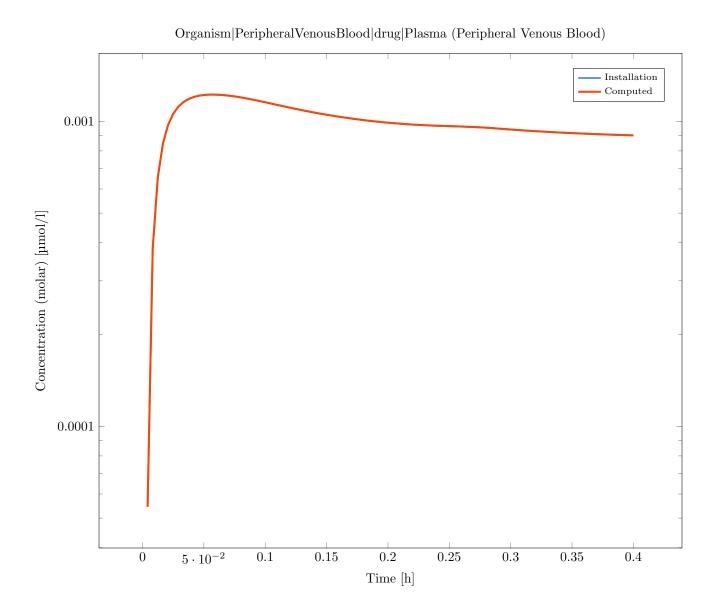


Figure 1.164

 $Simulation: Human_SingleORAL_Weibull_AsSuspention-Human_SingleORAL_Weibull_AsSuspention_MW_800_fu_0.6_LogP_-5\\ Result of the validation: Valid$

Output Path: Organism |PeripheralVenousBlood |
drug |Plasma (Peripheral Venous Blood) Deviation: ${\bf 0}$

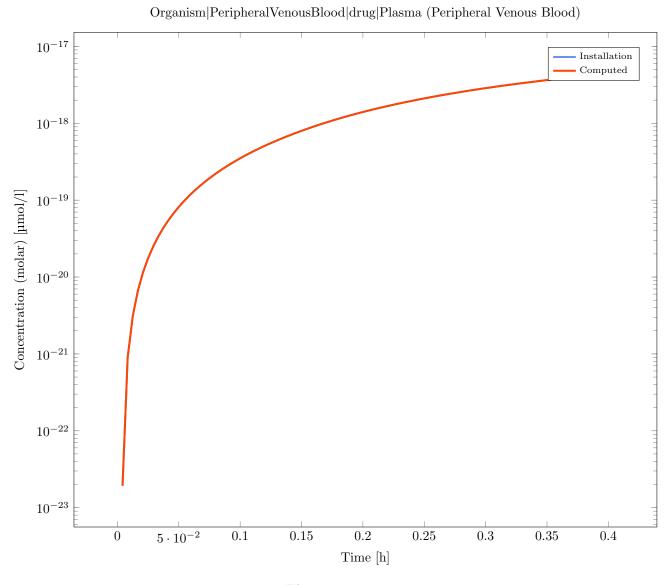
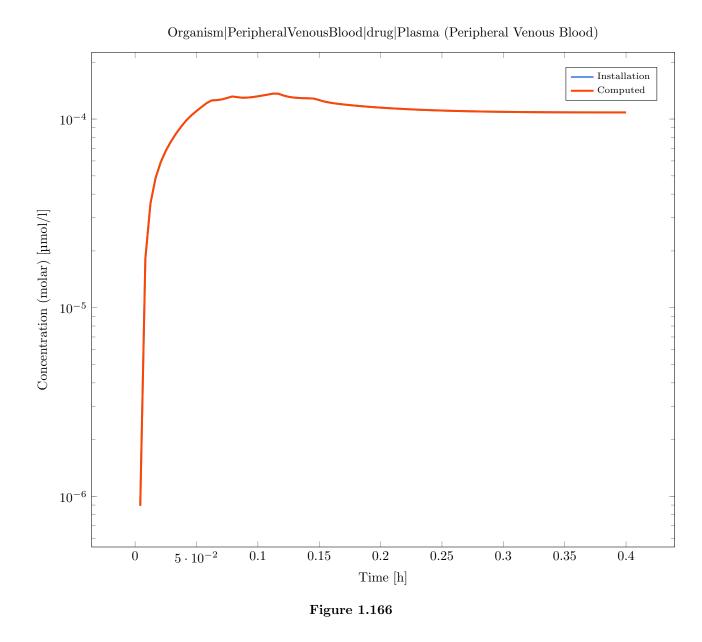


Figure 1.165

 ${\bf Simulation: \ Human_SingleORAL_Weibull-Human_SingleORAL_Weibull} \\ {\bf Result \ of \ the \ validation: \ Valid}$

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: 2.31E-4



 $Simulation: \ Human_SingleORAL_Weibull_Human_SingleORAL_Weibull_MW_200_fu_0.2_LogP_5 \\ Result of the validation: \ Valid$

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: 5.01E-6

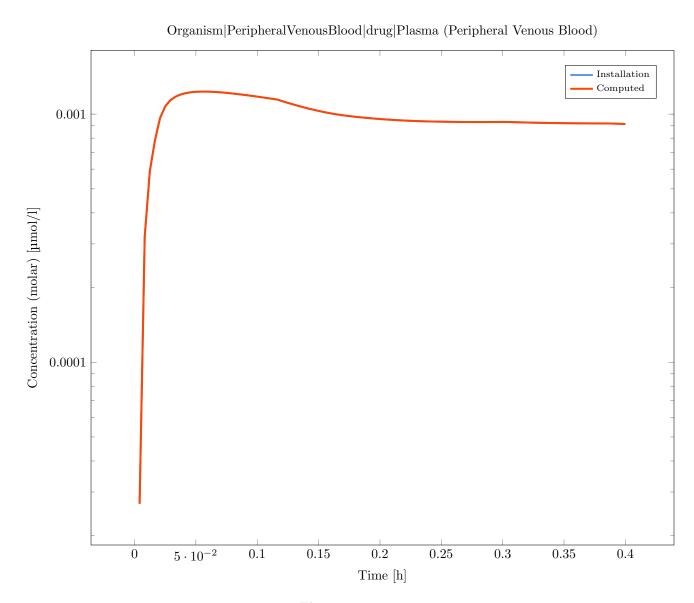


Figure 1.167

Simulation: Human_SingleORAL_Weibull-Human_SingleORAL_Weibull_MW_800_fu_0.6_LogP_5 Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |
drug |Plasma (Peripheral Venous Blood) Deviation: ${\bf 0}$

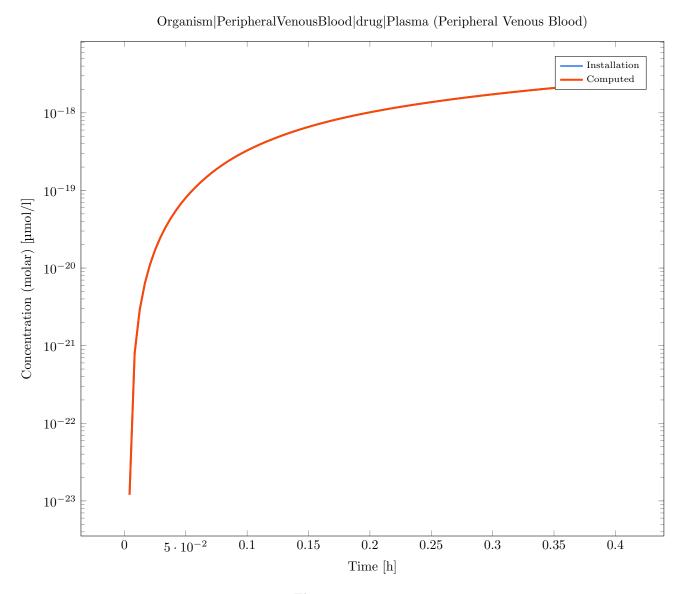
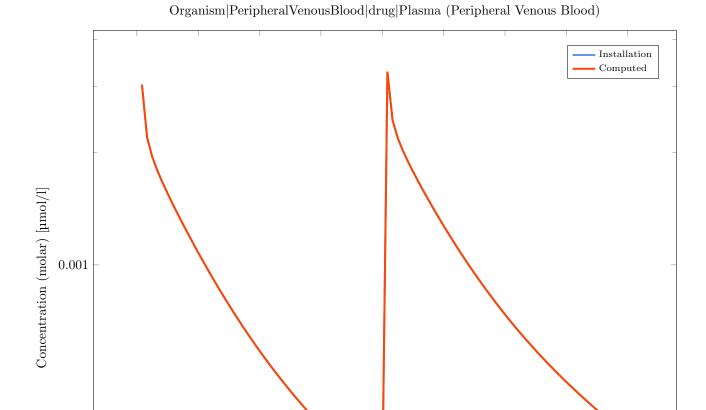


Figure 1.168

Simulation: Human_UncompetitiveInhibition-Human_UncompetitiveInhibition Result of the validation: Valid



0.2

Time [h]

0.25

0.3

0.35

0.4

Output Path: Organism |PeripheralVenousBlood |
inhibitor |Plasma (Peripheral Venous Blood) | Deviation:
 0

Figure 1.169

0.15

0.1

0

 $5 \cdot 10^{-2}$



Figure 1.170

Simulation: Minipig_SingleORAL_Dissolved-Minipig_SingleORAL_Dissolved Result of the validation: Valid



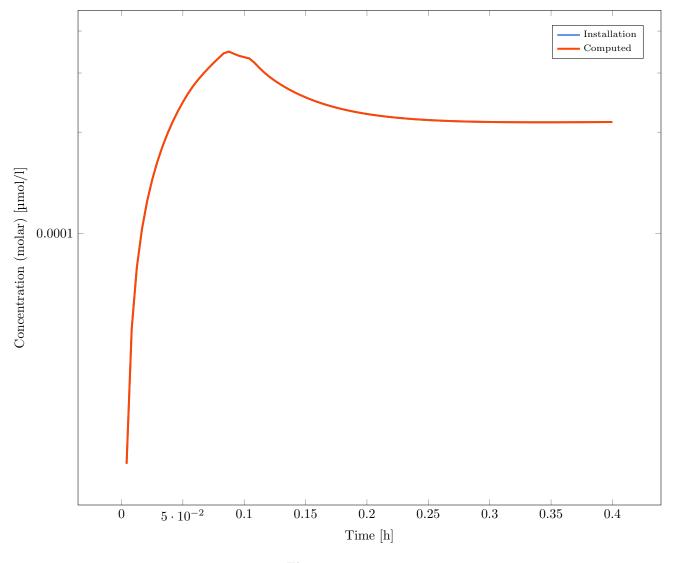


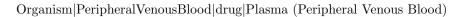
Figure 1.171

 $Simulation: Minipig_SingleORAL_Dissolved_Minipig_SingleORAL_Dissolved_MW_200_fu_0.2_LogP_5$

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

Deviation: 0



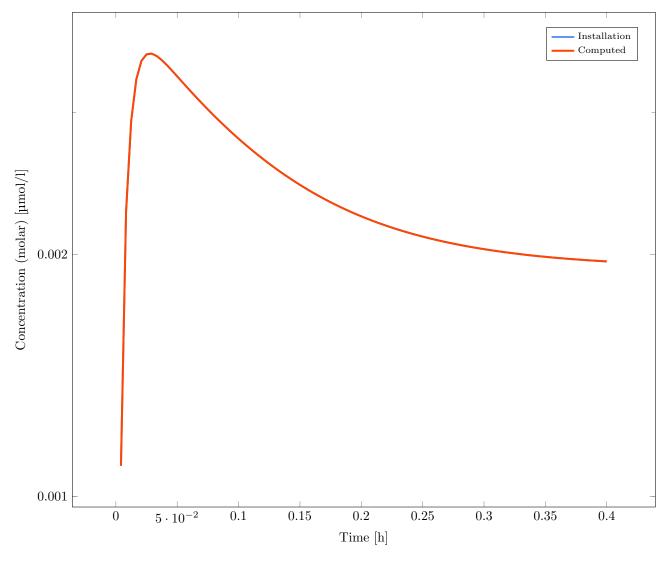


Figure 1.172

 $Simulation: \ Minipig_SingleORAL_Dissolved_Minipig_SingleORAL_Dissolved_MW_800_fu_0.6_LogP_-5$ Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |
drug |Plasma (Peripheral Venous Blood) Deviation: ${\bf 0}$

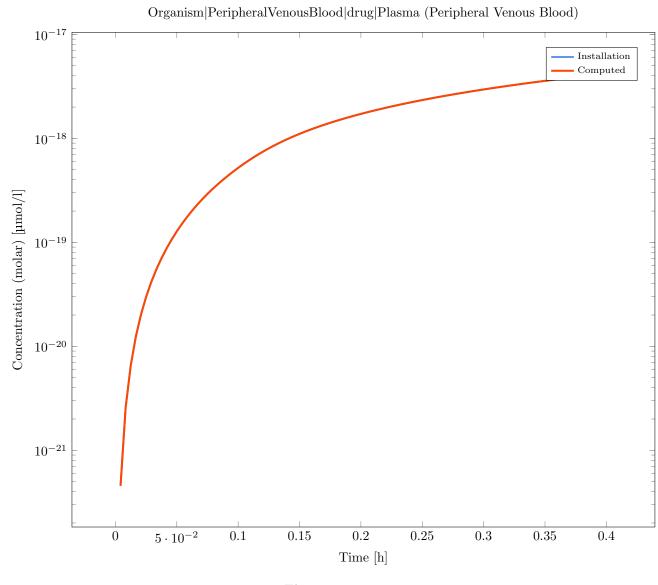


Figure 1.173

 ${\bf Simulation: \ Monkey_SingleORAL_Dissolved-Monkey_SingleORAL_Dissolved \ Result \ of \ the \ validation: \ Valid}$

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed 0.001

Figure 1.174

0.2

Time [h]

0.25

0.35

0.3

0.4

0.15

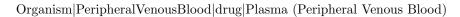
0.1

Simulation: Monkey_SingleORAL_Dissolved-Monkey_SingleORAL_Dissolved_MW_200_fu_0.2_LogP_5 Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |
drug |Plasma (Peripheral Venous Blood) Deviation: ${\bf 0}$

0

 $5 \cdot 10^{-2}$



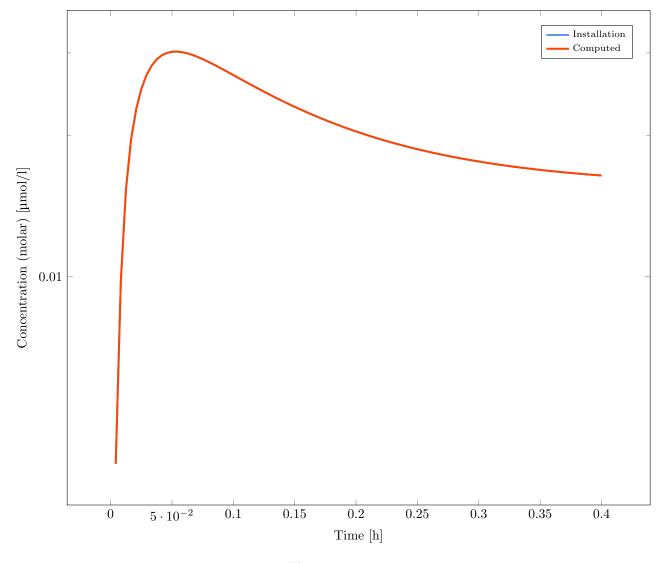


Figure 1.175

Simulation: Monkey_SingleORAL_Dissolved-Monkey_SingleORAL_Dissolved_MW_800_fu_0.6_LogP_--5 Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |
drug |Plasma (Peripheral Venous Blood) Deviation: ${\bf 0}$

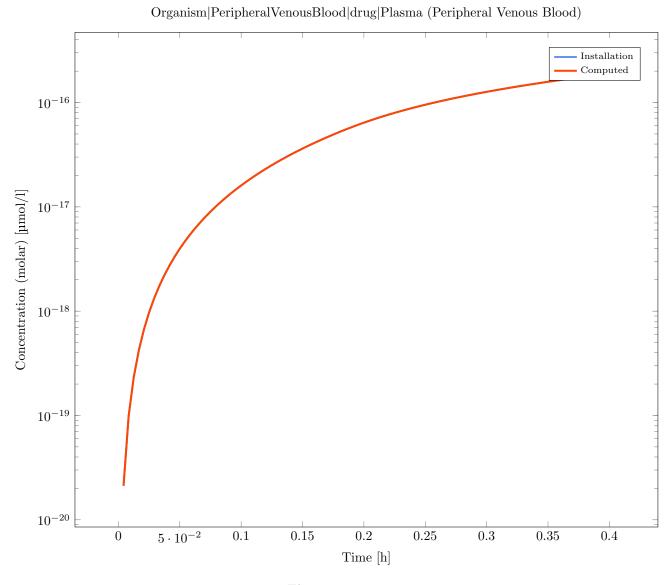


Figure 1.176

Simulation: Mouse_SingleORAL_Dissolved-Mouse_SingleORAL_Dissolved Result of the validation: Valid



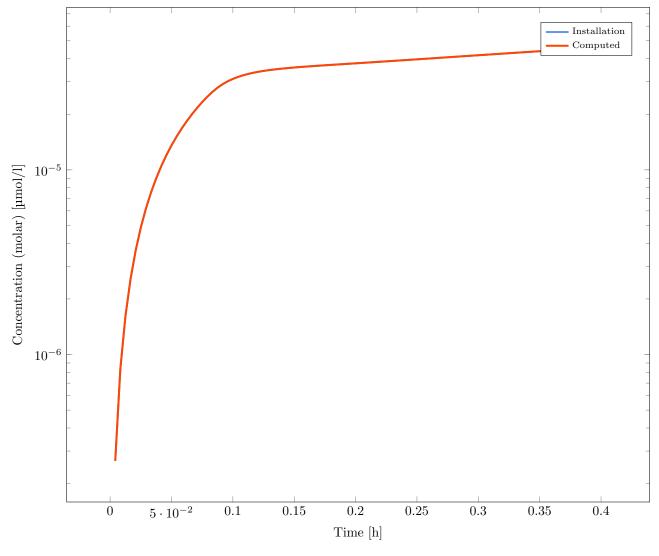


Figure 1.177

 $Simulation: Mouse_SingleORAL_Dissolved_MW_200_fu_0.2_LogP_5$

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: $\boldsymbol{0}$

Result of the validation: Valid

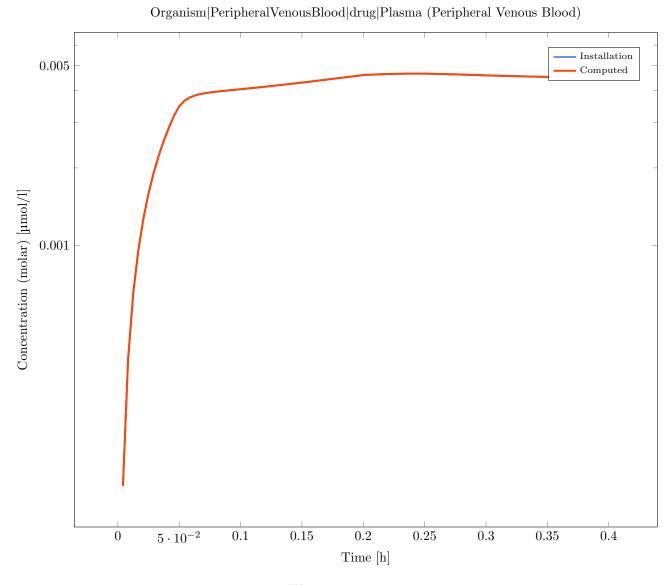
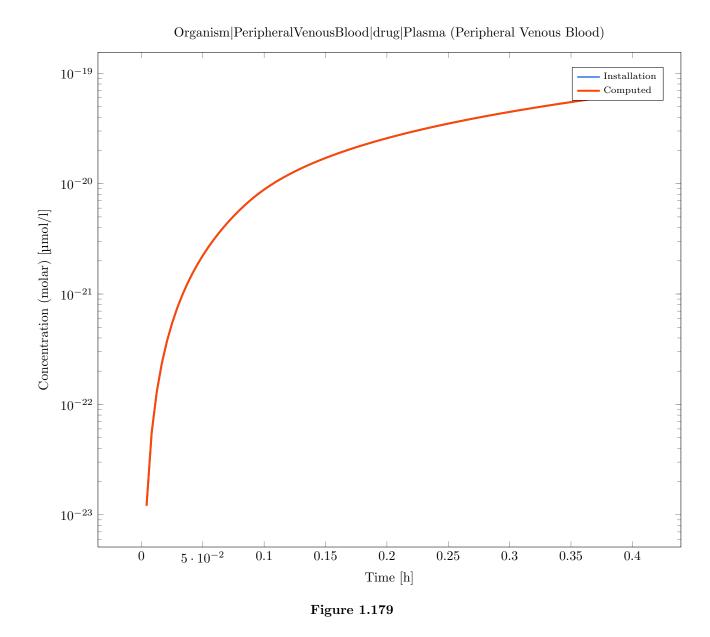


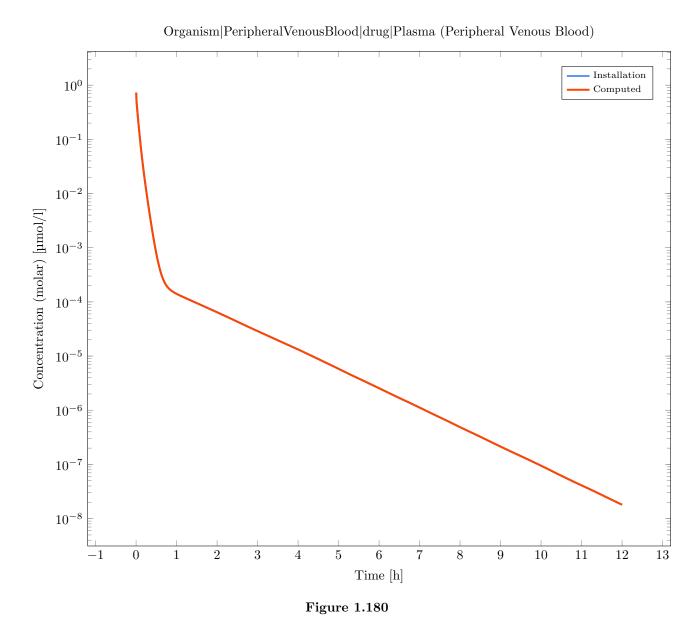
Figure 1.178

Simulation: Mouse_SingleORAL_Dissolved-Mouse_SingleORAL_Dissolved_MW_800_fu_0.6_LogP_--5 Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |
drug |Plasma (Peripheral Venous Blood) Deviation: ${\bf 0}$



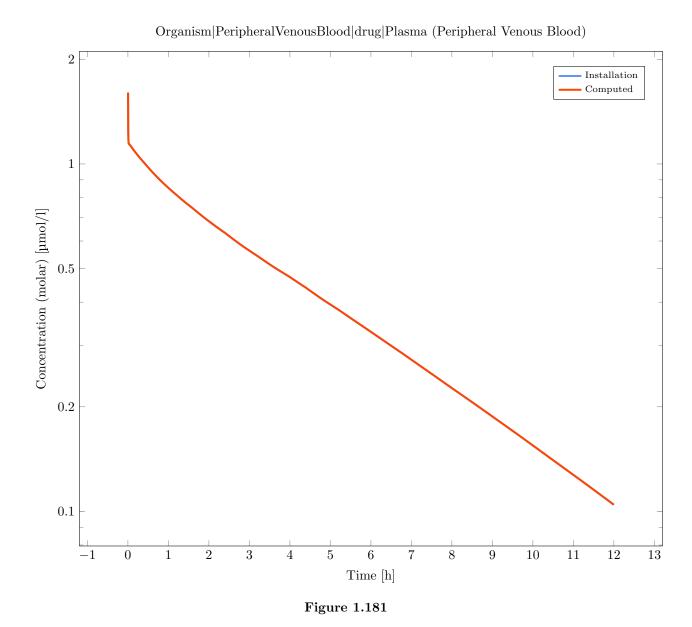
Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: 1.17E-7



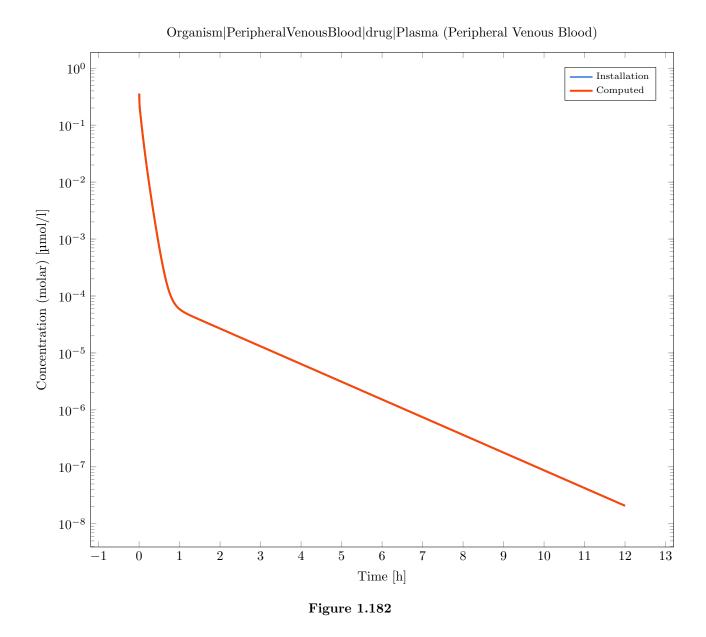
 $Simulation: \ Preterm_SingleIV_Age_0_GA_32_GFR-Preterm_SingleIV_Age_0_GA_32_GFR$

Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood)
 Deviation: 3.66E-5



 $\label{lem:single_index} \textbf{Simulation: Preterm_SingleIV_Age_15_GA_32_CYP3A4-Preterm_SingleIV_Age_15_CYP3A4-Pr$



 $\label{lem:single_index} \textbf{Simulation: Preterm_SingleIV_Age_15_GA_32_GFR-Preterm_SingleIV_Age_15_GA_32_GFR} \\ \textbf{Result of the validation: Valid}$

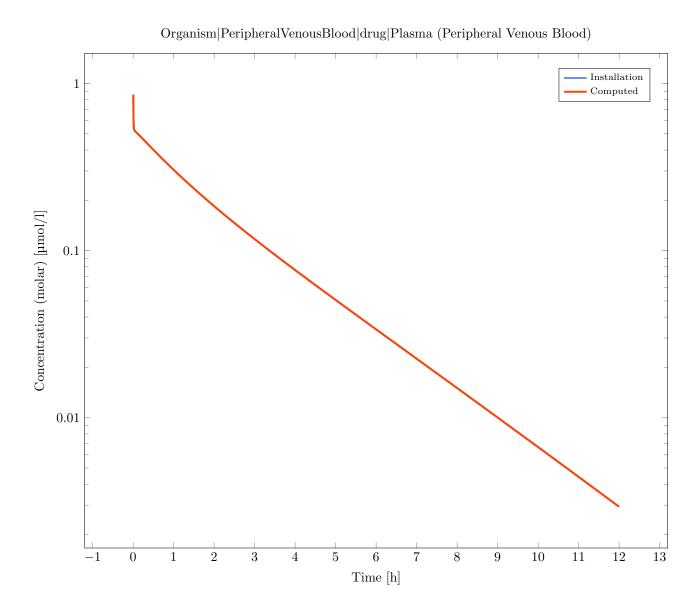


Figure 1.183

 ${\bf Simulation: Rabbit_SingleORAL_Dissolved-Rabbit_SingleORAL_Dissolved} \\ {\bf Result \ of \ the \ validation: \ Valid}$

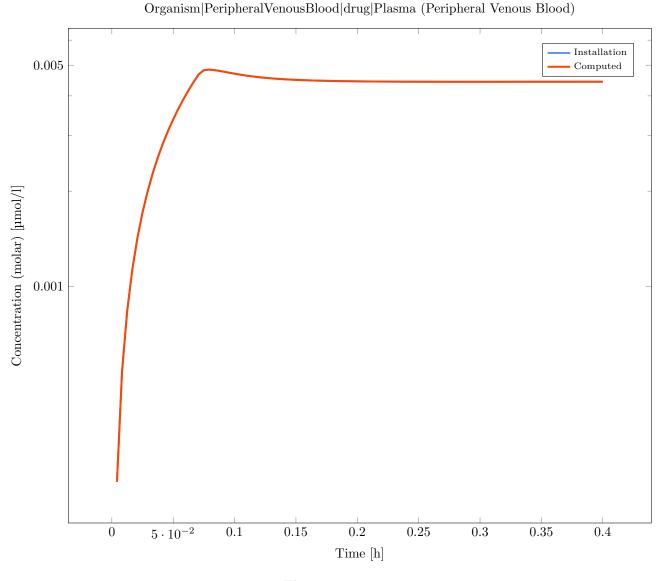
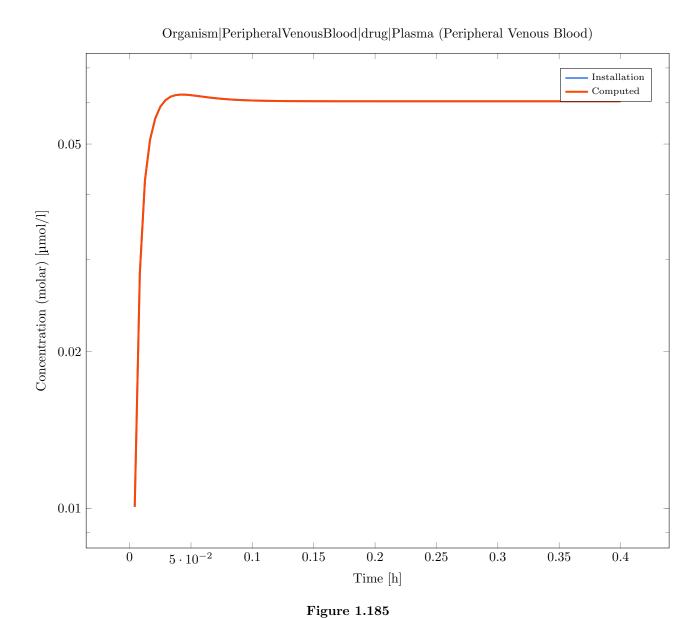


Figure 1.184

 $Simulation: Rabbit_SingleORAL_Dissolved_Rabbit_SingleORAL_Dissolved_MW_200_fu_0.2_LogP_5$ Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |
drug |Plasma (Peripheral Venous Blood) Deviation: ${\bf 0}$



 $Simulation: Rabbit_SingleORAL_Dissolved_Rabbit_SingleORAL_Dissolved_MW_800_fu_0.6_LogP_-logP_-$

Result of the validation: Valid

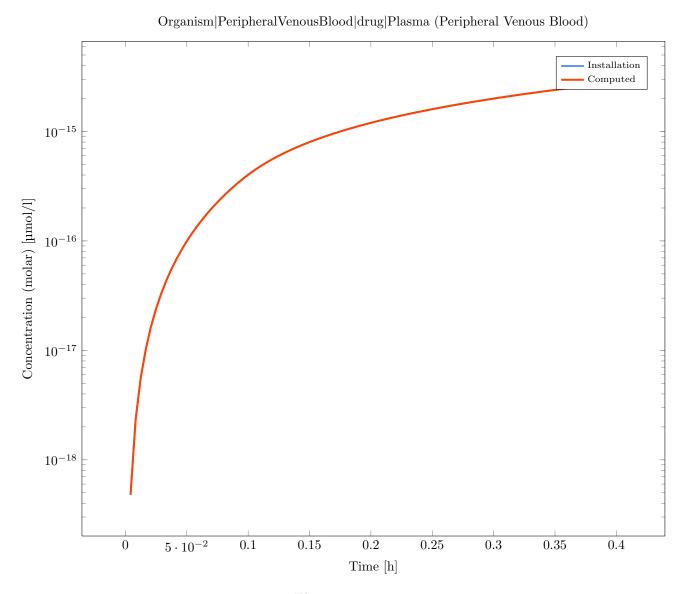
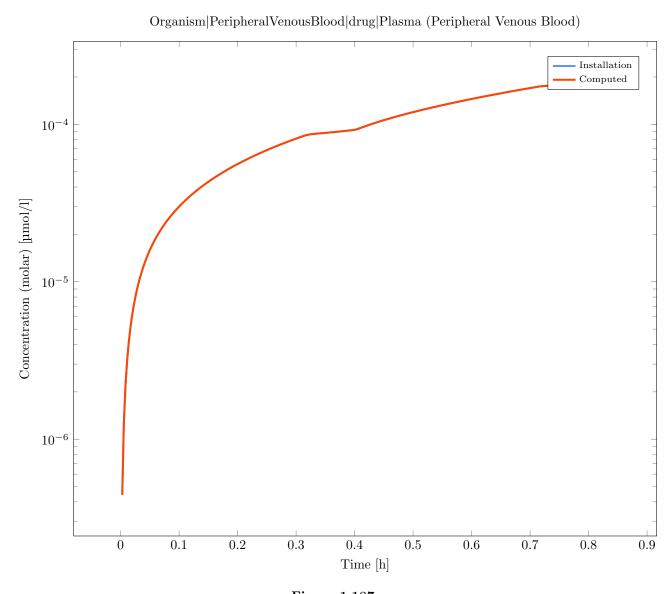


Figure 1.186

Simulation: Rat_MultiORAL_6_6_12_Dissolved-Rat_MultiORAL_6_6_12_Dissolved Result of the validation: Valid



 ${\bf Figure~1.187}$

 $\begin{tabular}{ll} \bf Simulation: & Rat_MultiORAL_6_6_6_6_6_0 \\ \bf Dissolved-Rat_MultiORAL_6_6_6_6_0 \\ \bf Dissolved-Rat_MultiORAL_6_6_6_0 \\ \bf Dissolved-Rat_MultiORAL_6_6_6_0 \\ \bf Dissolved-Rat_MultiORAL_6_6_6_0 \\ \bf Dissolved-Rat_MultiORAL_6_6_0 \\ \bf Dissolved-Rat_MultiORAL_6_0 \\ \bf Dissol$

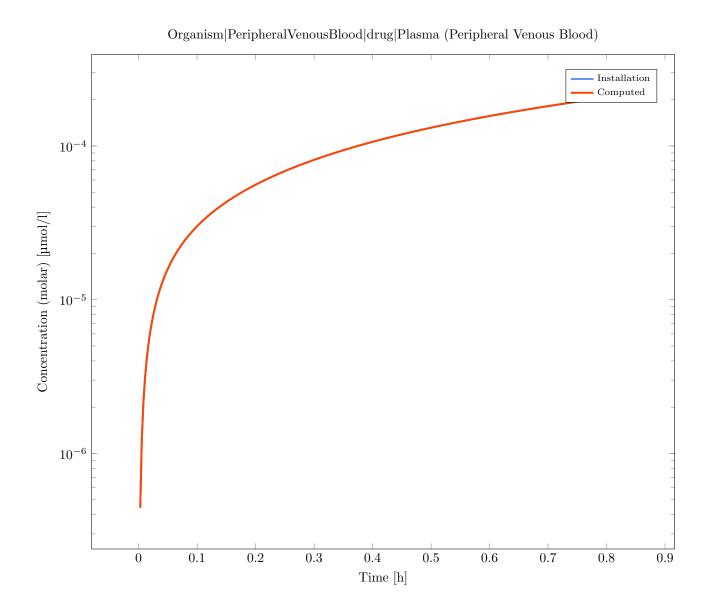


Figure 1.188

Output Path: Organism |PeripheralVenousBlood |drug |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

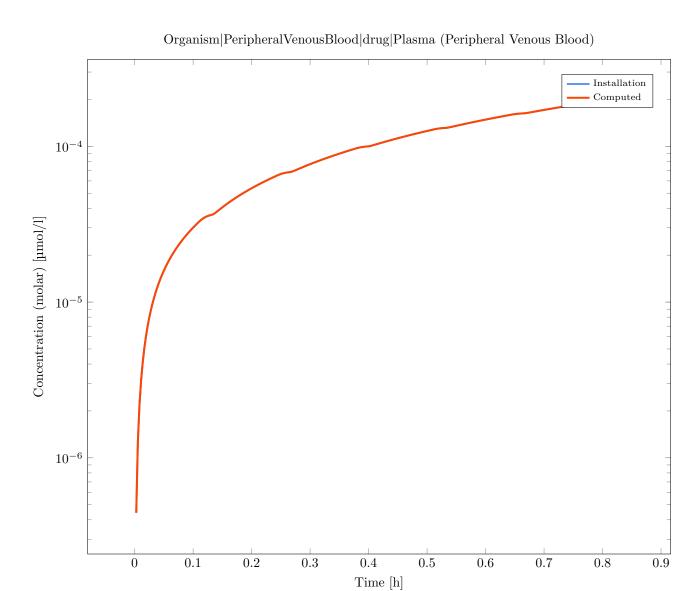


Figure 1.189

 $Simulation: Single IV_2 Pores_Human-Single IV_2 Pores_Human$

Result of the validation: Valid

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed 0.5 0.2

Figure 1.190

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

Simulation: SingleIV_2Pores_Human-SingleIV_2Pores_Human_SimulationC Result of the validation: Valid

0.1

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood) Deviation:
 0

0.1

0

 $5\cdot 10^{-2}$

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

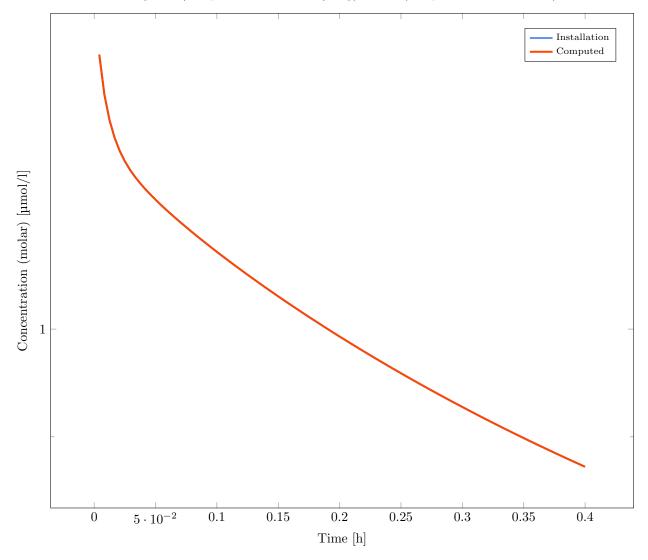


Figure 1.191

Simulation: SingleIV_2Pores_Human-SingleIV_2Pores_Human_SimulationD Result of the validation: Valid

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)

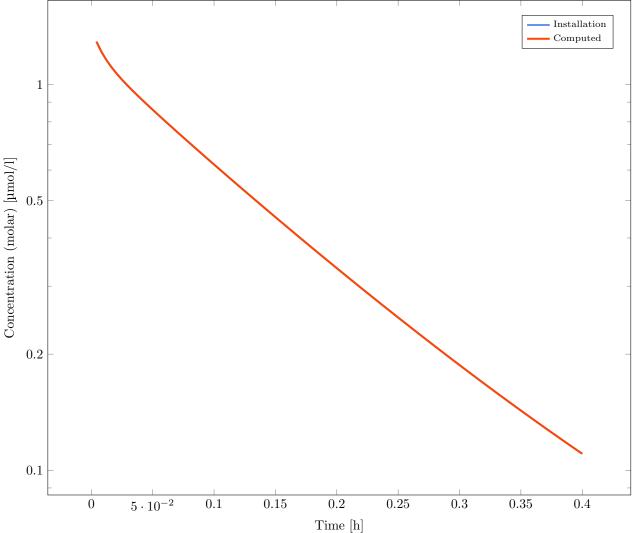


Figure 1.192

Simulation: SingleIV_2Pores_Human-SingleIV_2Pores_Human_SimulationF Result of the validation: Valid

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)



Figure 1.193

 $Simulation: Single IV_2 Pores_Monkey-Single IV_2 Pores_Monkey$

Result of the validation: Valid

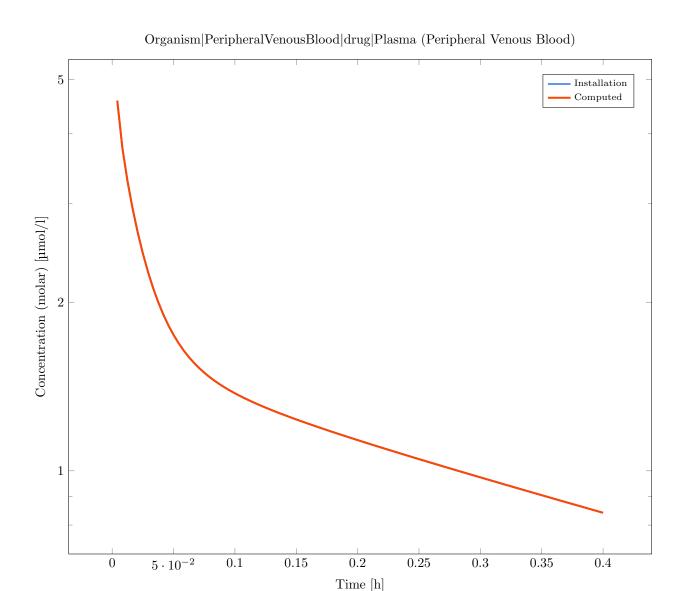


Figure 1.194

Simulation: SingleIV_2Pores_Monkey-SingleIV_2Pores_Monkey_SimulationG Result of the validation: Valid



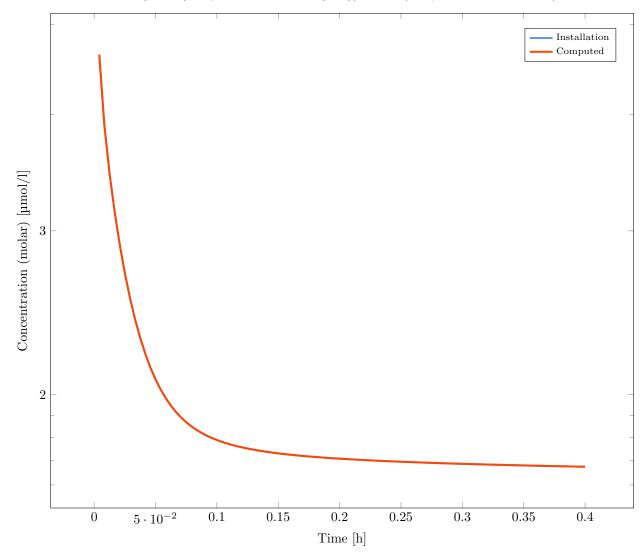


Figure 1.195

Simulation: SingleIV_2Pores_Monkey-SingleIV_2Pores_Monkey_SimulationH Result of the validation: Valid

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed

Figure 1.196

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

 ${\bf Simulation: \ Single IV_2 Pores_Mouse-Single IV_2 Pores_Mouse}$

0.1

 $5\cdot 10^{-2}$

Result of the validation: Valid

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed 0.5 0.2

Figure 1.197

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

Simulation: SingleIV_2Pores_Mouse-SingleIV_2Pores_Mouse_SimulationA Result of the validation: Valid

0.1

Output Path: Organism |Peripheral Venous
Blood |drug |Plasma (Peripheral Venous Blood) Deviation:
 0

0

 $5\cdot 10^{-2}$

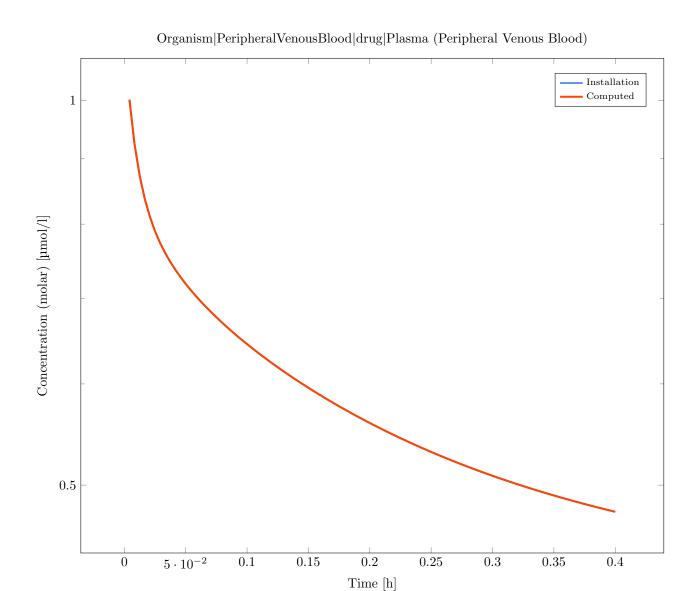


Figure 1.198

Simulation: SingleIV_2Pores_Mouse-SingleIV_2Pores_Mouse_SimulationB Result of the validation: Valid

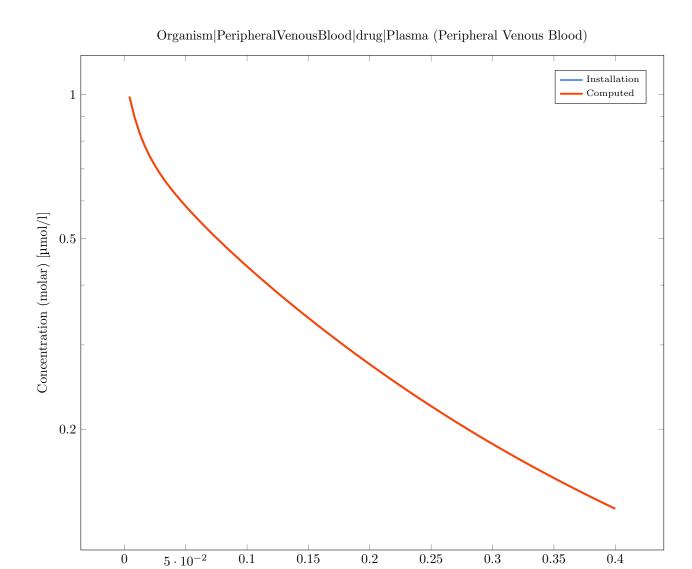


Figure 1.199

Time [h]

Simulation: SingleIV_2Pores_Mouse-SingleIV_2Pores_Mouse_SimulationE Result of the validation: Valid

Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) | Time | Installation | Computed | Compu

Figure 1.200

 $Simulation: Single IV_C1_4 Comp_standard_stand$

Time [h]

Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |C1|Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

${\it Organism}|{\it Peripheral Venous Blood}|{\it C1}|{\it Plasma}~({\it Peripheral Venous Blood})$

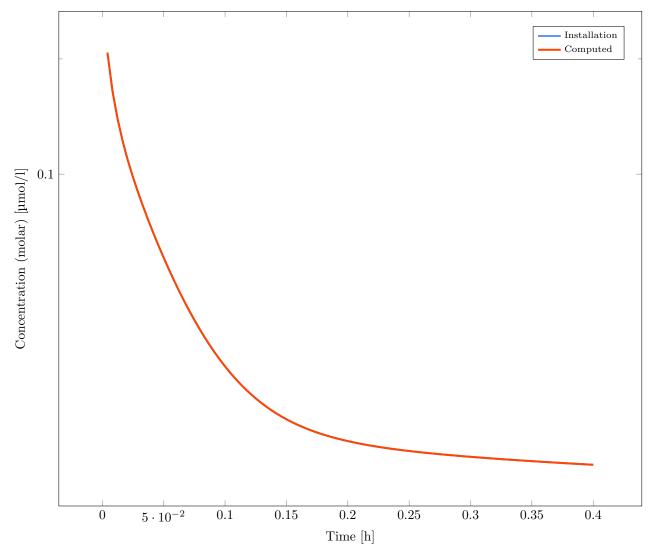


Figure 1.201

 $Simulation: Single IV_C2_4 Comp_PT_standard_st$

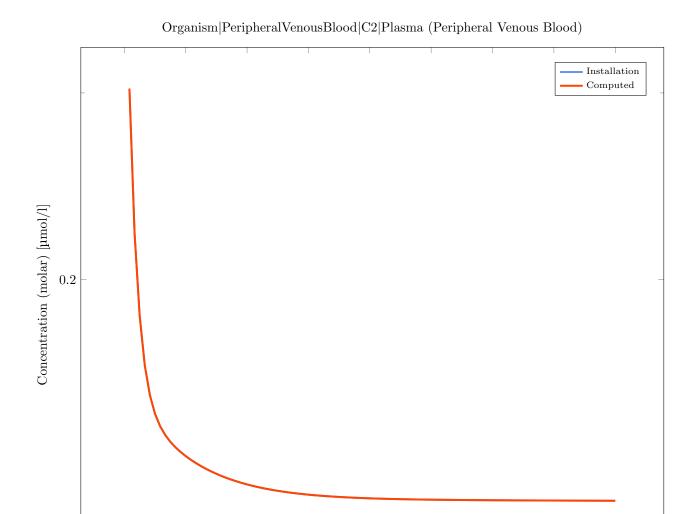


Figure 1.202

 $Simulation: Single IV_C2_4 Comp_RR_standard_st$

0.2

Time [h]

0.25

0.35

0.4

0.3

Output Path: Organism |Peripheral Venous
Blood |C2 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

0.15

0.1

0

 $5\cdot 10^{-2}$

1.4 — Installation — Computed — C

Organism|PeripheralVenousBlood|C2|Plasma (Peripheral Venous Blood)

Figure 1.203

 $Simulation: Single IV_C2_4 Comp_standard_schmitt_standard-Single IV_C2_4 Comp_standard-Single IV_C2_5 Comp_standard-Single IV_C2_$

0.2

Time [h]

0.25

0.3

0.35

0.4

Result of the validation: Valid

0

 $5\cdot 10^{-2}$

0.2

0

Output Path: Organism |Peripheral Venous
Blood |C2 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

0.15

0.1

Organism|PeripheralVenousBlood|C2|Plasma (Peripheral Venous Blood) Installation Computed 0.5

Figure 1.204

0.2

Time [h]

0.25

0.3

0.35

0.4

 $Simulation: Single IV_C3_4 Comp_RR_schmitt_standard-Single IV_C3_schmitt_standard-Single IV_C3_schmitt_schmitt_standard-Single IV_C3_schmitt_s$

Output Path: Organism |Peripheral Venous
Blood |C3 |Plasma (Peripheral Venous Blood) Deviation:
 0

0.15

0.1

0

 $5\cdot 10^{-2}$

Organism|PeripheralVenousBlood|C3|Plasma (Peripheral Venous Blood)



Figure 1.205

 $Simulation: Single IV_C3_4 Comp_standard_schmittnorm lized_standard-Single IV_C3_4 Comp_standard_schmittnorm lized_standard$

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C3|Plasma (Peripheral Venous Blood)

Deviation: 0

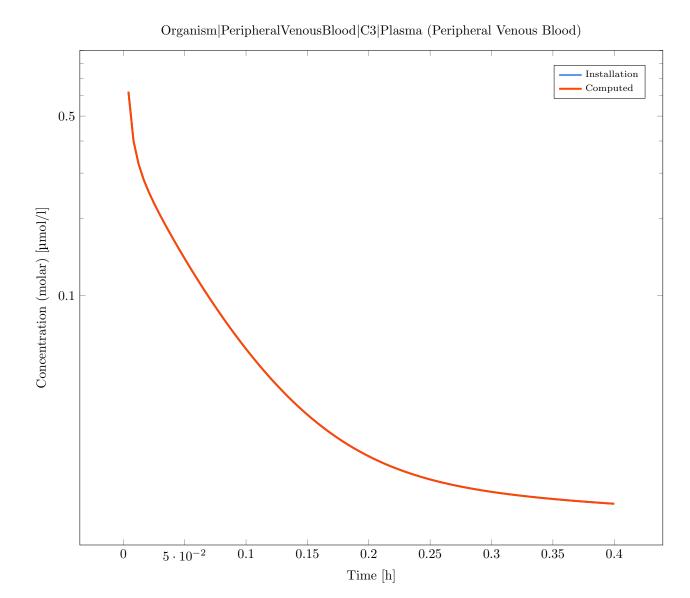


Figure 1.206

 $Simulation: Single IV_C4_2 Pores_RR_standard_s$

Output Path: Organism |Peripheral Venous
Blood |C4 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

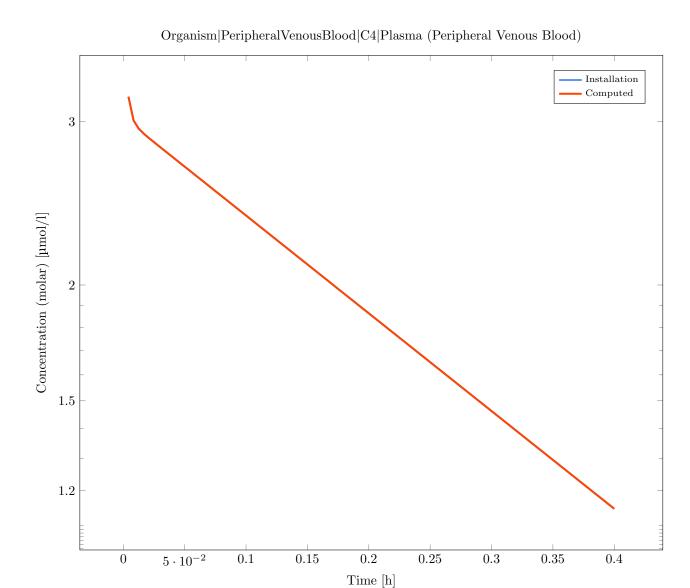


Figure 1.207

 $Simulation: Single IV_C4_4 Comp_Ber_standard_s$

Output Path: Organism |Peripheral Venous
Blood |C4 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

$Organism|Peripheral Venous Blood|C4|Plasma\ (Peripheral Venous Blood)$

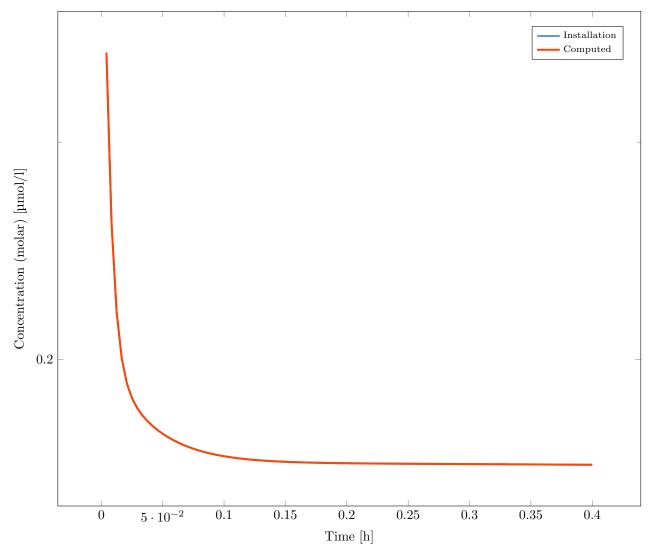


Figure 1.208

 $Simulation: Single IV_C5_2 Pores_Ber_standard_$



Figure 1.209

 $Simulation: Single IV_C5_2 Pores_PT_standard_s$

Output Path: Organism |Peripheral Venous
Blood |C5 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

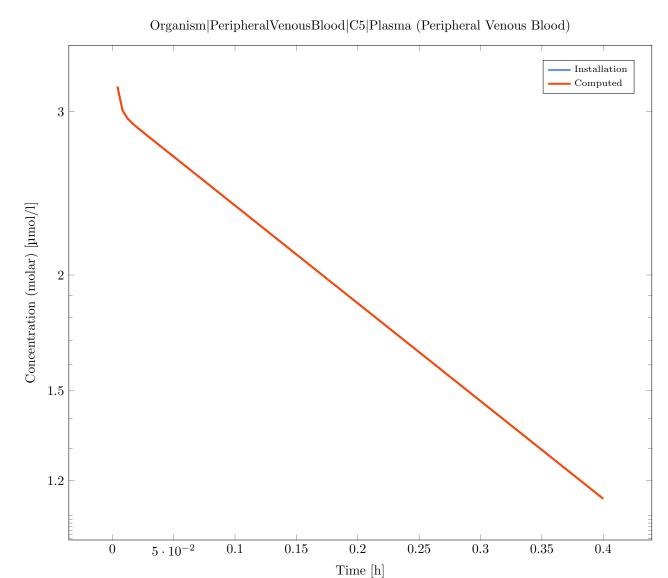


Figure 1.210

 $Simulation: SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_C5_2Pores_RR_schmitt_standard-SingleIV_schmitt_sch$

Output Path: Organism |Peripheral Venous
Blood |C5 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

Organism|Peripheral Venous Blood|C5|Plasma (Peripheral Venous Blood) Installation Computed Computed

Figure 1.211

 $Simulation: Single IV_C6_2 Pores_standard_stan$

0.2

Time [h]

0.25

0.3

0.35

0.4

Result of the validation: Valid

0

 $5\cdot 10^{-2}$

1.2

Output Path: Organism |PeripheralVenousBlood |C6 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

0.15

0.1

Organism|PeripheralVenousBlood|C6|Plasma (Peripheral Venous Blood) Installation Computed 1.5

Figure 1.212

0.2

Time [h]

0.25

0.3

0.35

0.4

 $Simulation: Single IV_C7_2 Pores_standard_schmitt_standard_Single IV_C7_2 Pores_standard_schmitt_schmitt$

Result of the validation: Valid

0

 $5\cdot 10^{-2}$

Output Path: Organism |PeripheralVenousBlood |C7 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

0.15

0.1

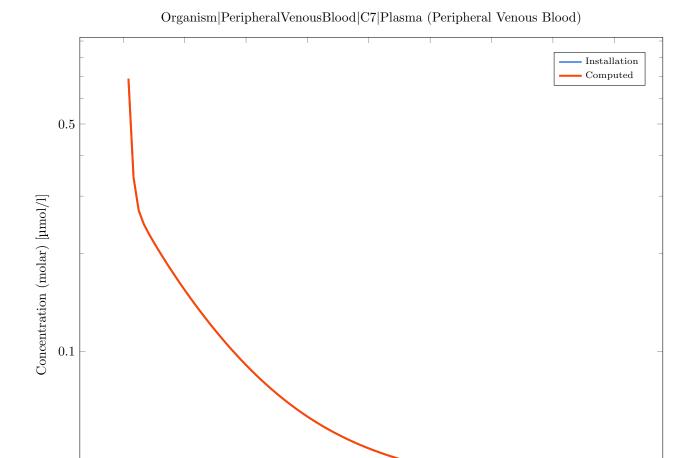


Figure 1.213

0.2

Time [h]

0.25

0.3

0.35

0.4

 $Simulation: Single IV_C7_4 Comp_schmitt_standard_standa$

Result of the validation: Valid

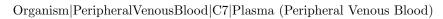
0

 $5\cdot 10^{-2}$

Output Path: Organism |PeripheralVenousBlood |C7 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

0.15

0.1



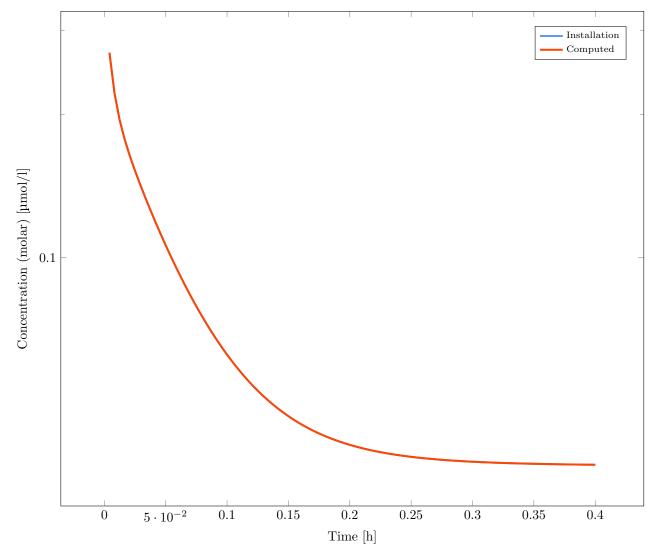


Figure 1.214

 $Simulation: Single IV_C8_2 Pores_standard_schmittnormalized_standard_Single IV_C8_2 Pores_standard_schmittnormalized_schmittnormalized_schmittnor$

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C8|Plasma (Peripheral Venous Blood)

Organism|PeripheralVenousBlood|C8|Plasma (Peripheral Venous Blood)

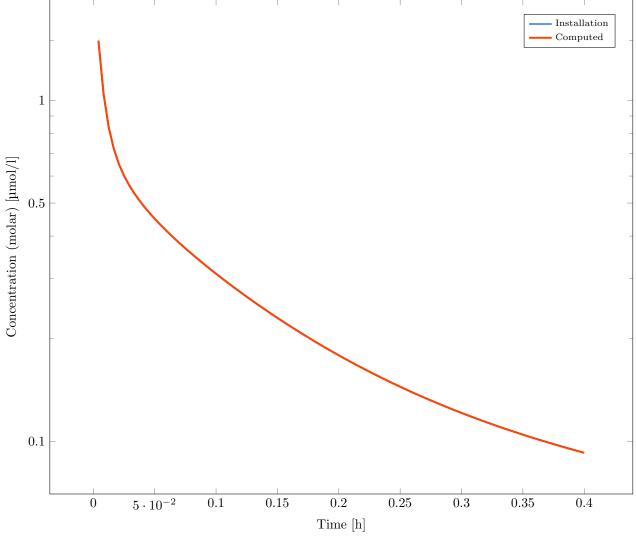


Figure 1.215

 $Simulation: Single IV_C9_2 Pores_schmitt_standard_standard_Single IV_C9_2 Pores_schmitt_standard_sta$

Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |C9 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

Organism|PeripheralVenousBlood|C9|Plasma (Peripheral Venous Blood) Installation Computed 3 Concentration (molar) $[\mu mol/1]$

0.15 0.2 0.25 0.3 0.35 0.4 Time [h]

Figure 1.216

 $Simulation: Single ORAL_C10_4 Comp_PT_standard_standard_Single ORAL_C10_4 Comp_PT_standard_$ standard

Result of the validation: Valid

0

 $5\cdot 10^{-2}$

0.1

Output Path: Organism|PeripheralVenousBlood|C10|Plasma (Peripheral Venous Blood) Deviation: 0

2

1.5

1.2

Organism|PeripheralVenousBlood|C10|Plasma (Peripheral Venous Blood)

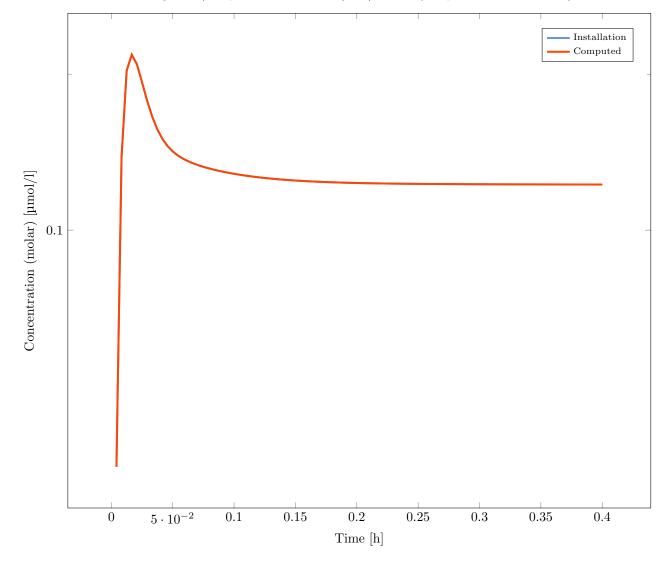


Figure 1.217

 $Simulation: Single ORAL_C11_4 Comp_schmitt_standard_standard_Single ORAL_C11_4 Comp_schmitt_standard$

Result of the validation: Valid

 $Output \ Path: \ Organism | Peripheral Venous Blood | C11 | Plasma \ (Peripheral \ Venous \ Blood)$

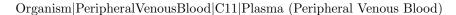


Figure 1.218

 $Simulation: Single ORAL_C11_4 Comp_standard_st$

Result of the validation: Valid

 $Output \ Path: \ Organism | Peripheral Venous Blood | C11 | Plasma \ (Peripheral \ Venous \ Blood)$



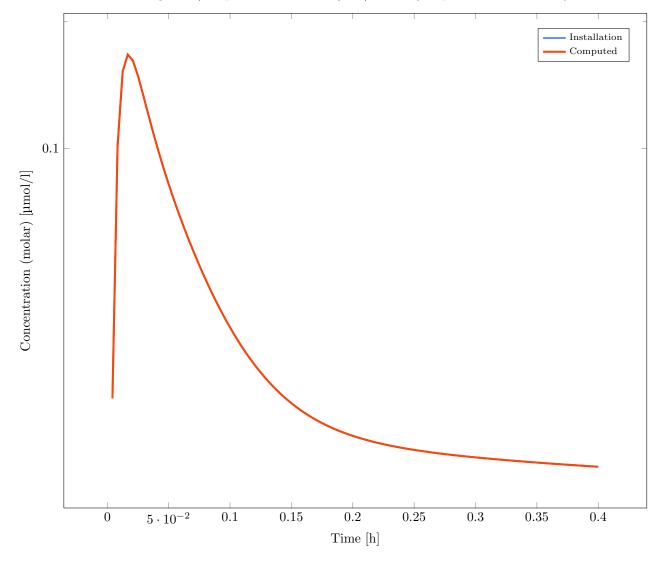


Figure 1.219

 $Simulation: Single ORAL_C12_4 Comp_standard_schmitt_standard-Single ORAL_C12_4 Comp_standard_schmitt_standard\\$

Result of the validation: Valid

 $Output \ Path: \ Organism | Peripheral Venous Blood | C12 | Plasma \ (Peripheral \ Venous \ Blood)$

Organism|PeripheralVenousBlood|C12|Plasma (Peripheral Venous Blood) Installation Computed O.01 O.001 O.001 O.001

Figure 1.220

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

 $Simulation: Single ORAL_C13_2 Pores_schmitt_standard_st$

Result of the validation: Valid

0

 $5\cdot 10^{-2}$

0.1

Output Path: Organism |PeripheralVenousBlood | C13 |Plasma (Peripheral Venous Blood)
 Deviation: 0



Figure 1.221

 $Simulation: Single ORAL_C13_4 Comp_standard_schmittnormalized_schmittnormalized_schmittnorm$

Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |C13 |Plasma (Peripheral Venous Blood)
 Deviation: $\bf 0$

Organism|PeripheralVenousBlood|C13|Plasma (Peripheral Venous Blood)

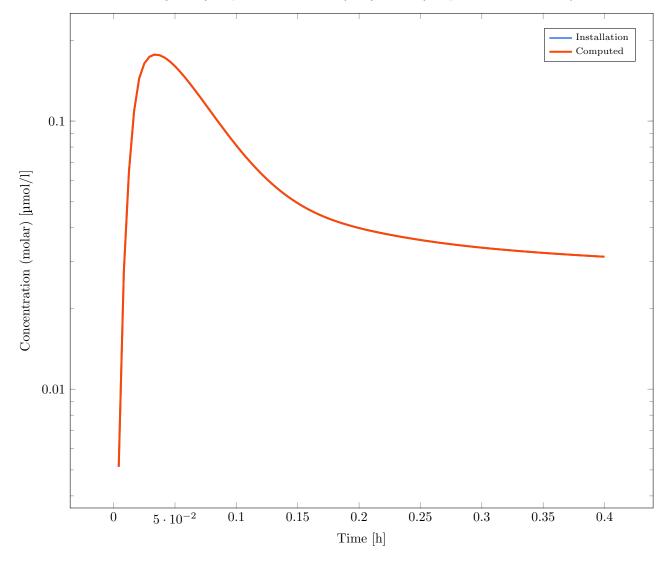
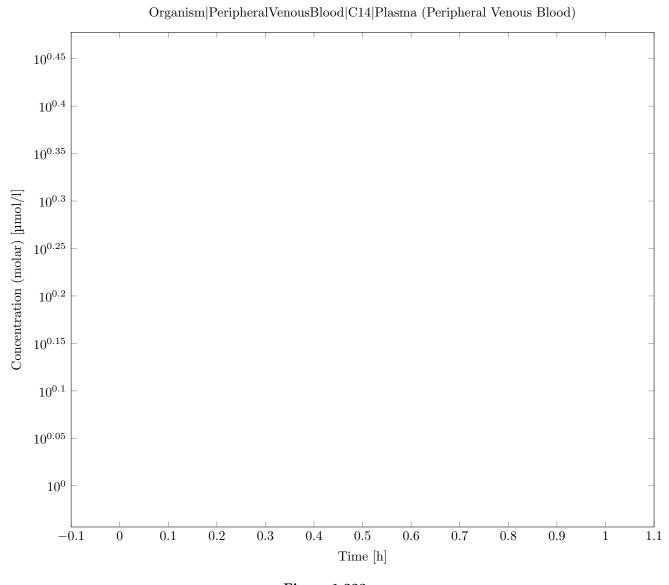


Figure 1.222

 $Simulation: Single ORAL_C14_2 Pores_PT_standard_standard_Single ORAL_C14_2 Pores_PT_standard_standar$ standard

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C14|Plasma (Peripheral Venous Blood)

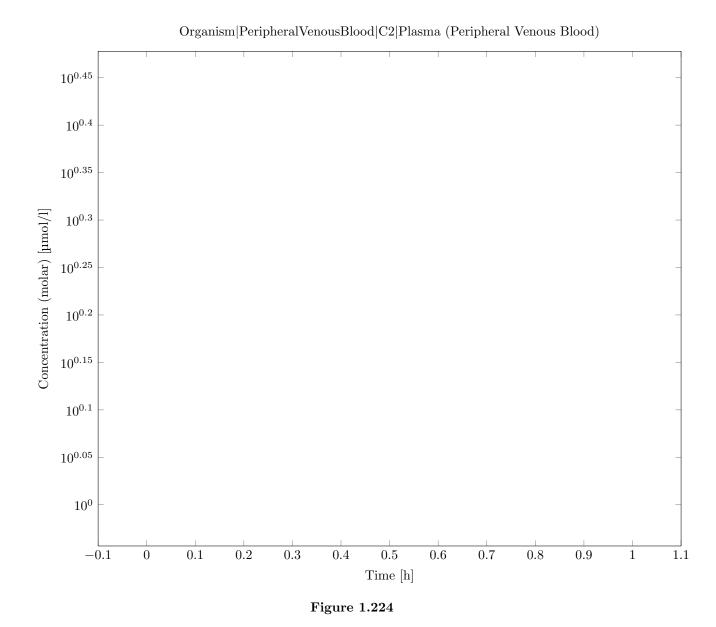


 ${\bf Figure~1.223}$

 $Simulation: Single ORAL_C2_2 Pores_standard_st$

Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |C2 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$



 $Simulation: Single ORAL_C3_2 Pores_standard_schmitt_standard-Single ORAL_C3_2 Pores_standard_schmitt_standard$

Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |C3 |Plasma (Peripheral Venous Blood) Deviation:
 0



Figure 1.225

 $Simulation: Single ORAL_C4_2 Pores_standard_schmittnormalized_standard_Single ORAL_C4_2 Pores_standard_schmittnormalized_standard$

Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |C4 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

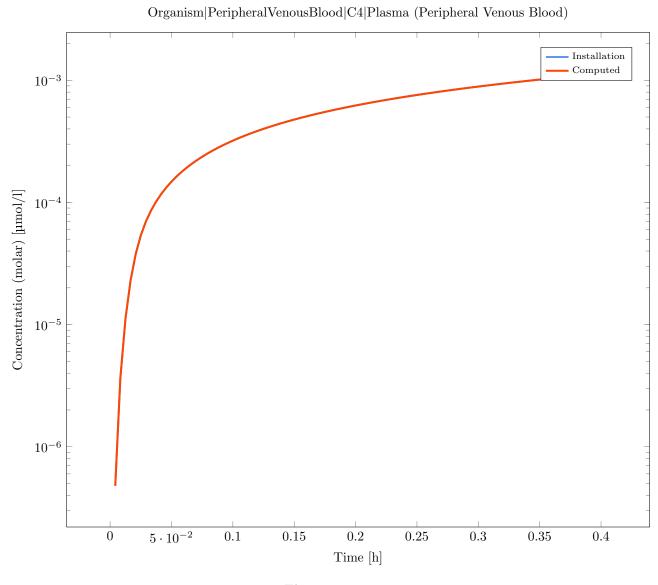


Figure 1.226

 $Simulation: Single ORAL_C6_4 Comp_Ber_standard_standard_Single ORAL_C6_4 Comp_Ber_standard_$

Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |C6 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

Organism|PeripheralVenousBlood|C6|Plasma (Peripheral Venous Blood)

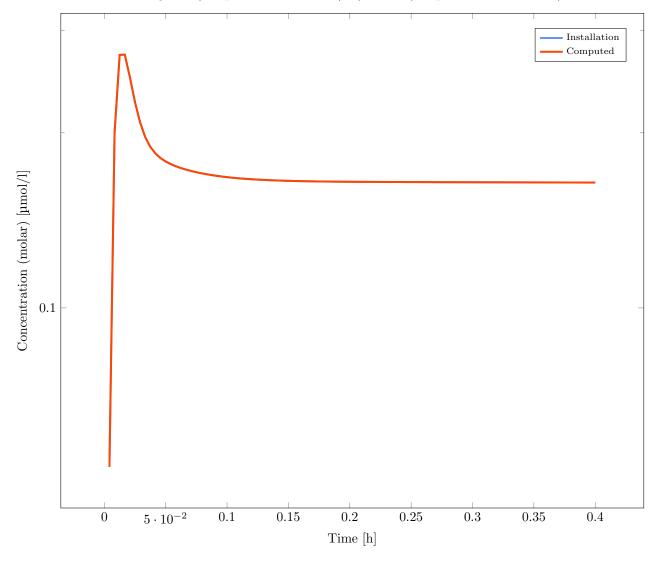


Figure 1.227

 $Simulation: Single ORAL_C6_4 Comp_RR_standard_standard_Single ORAL_C6_4 Comp_RR_standard_st$

Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |C6 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

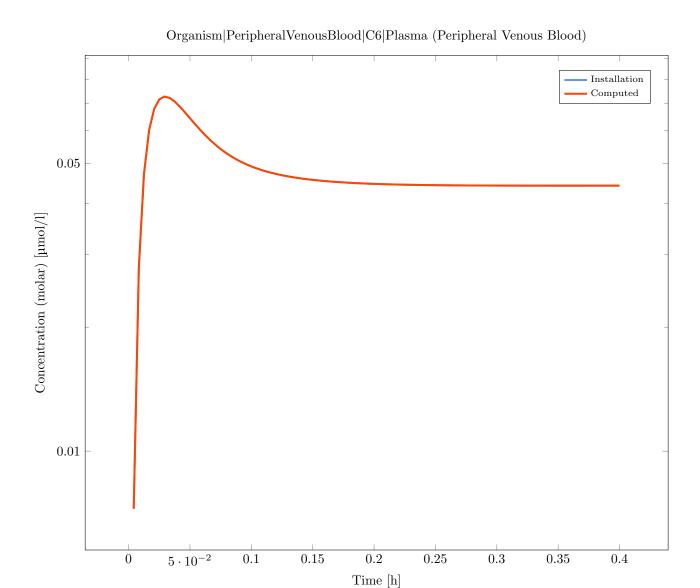


Figure 1.228

 $Simulation: Single ORAL_C7_2 Pores_Ber_standard_standard_Single ORAL_C7_2 Pores_Ber_standard_standar$

Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |C7 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$



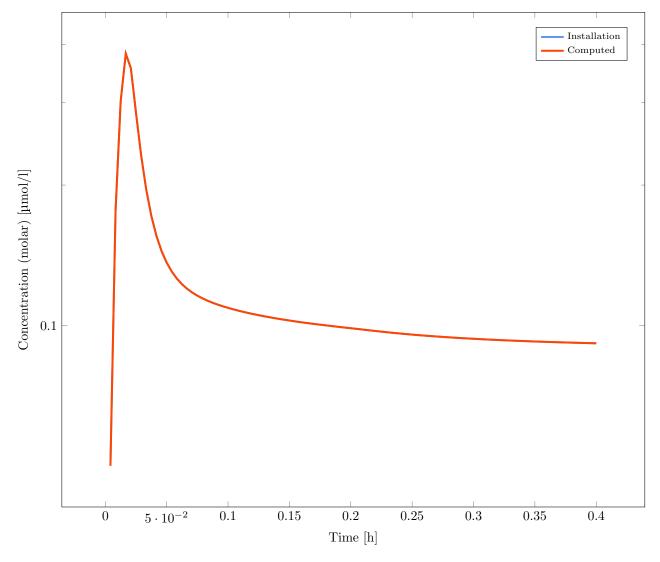


Figure 1.229

 $Simulation: Single ORAL_C7_4 Comp_RR_schmitt_standard-Single ORAL_C7_5 Comp_RR_schmitt_standard-Single ORAL_Schmitt_standard-Single ORAL_Schmitt_standard-Single ORAL_Schmitt_standard-Single ORAL_Schmitt_standard-Single ORAL_Schmitt_standard-Single ORAL_Schmitt_standard-Single ORAL_Schmitt_Schmitt_standard-Single ORAL_Sch$ standard

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C7|Plasma (Peripheral Venous Blood)

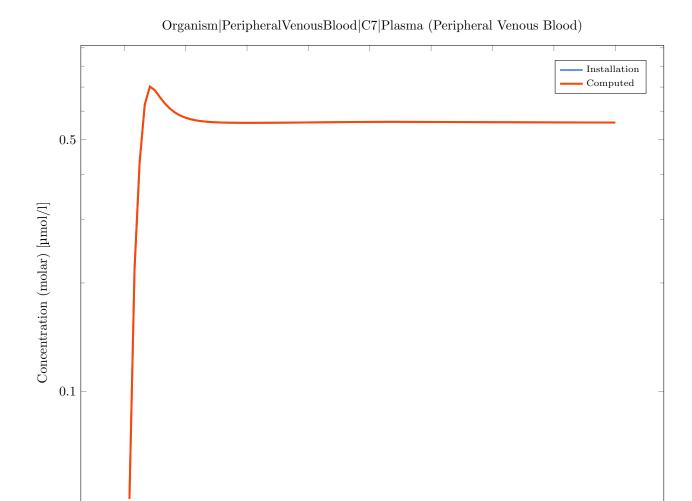


Figure 1.230

0.2

Time [h]

0.25

0.3

0.35

0.4

 $Simulation: Single ORAL_C8_2 Pores_RR_standard_standard_Single ORAL_C8_2 Pores_RR_standard_$

Result of the validation: Valid

0

 $5\cdot 10^{-2}$

Output Path: Organism |PeripheralVenousBlood |C8 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

0.15

0.1

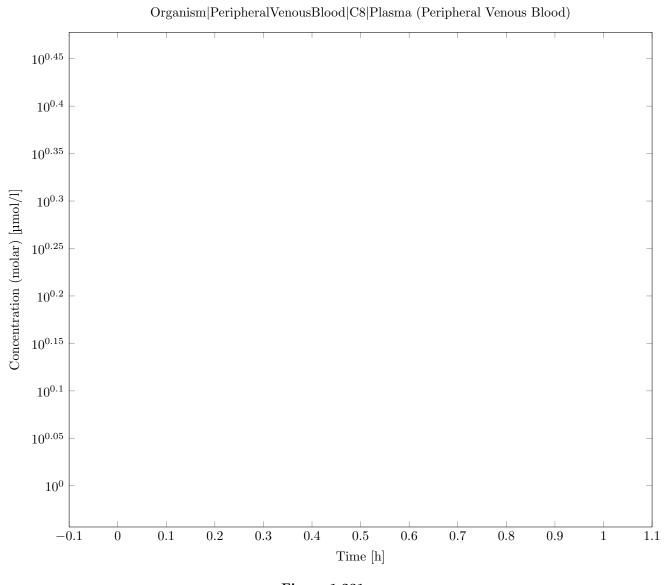
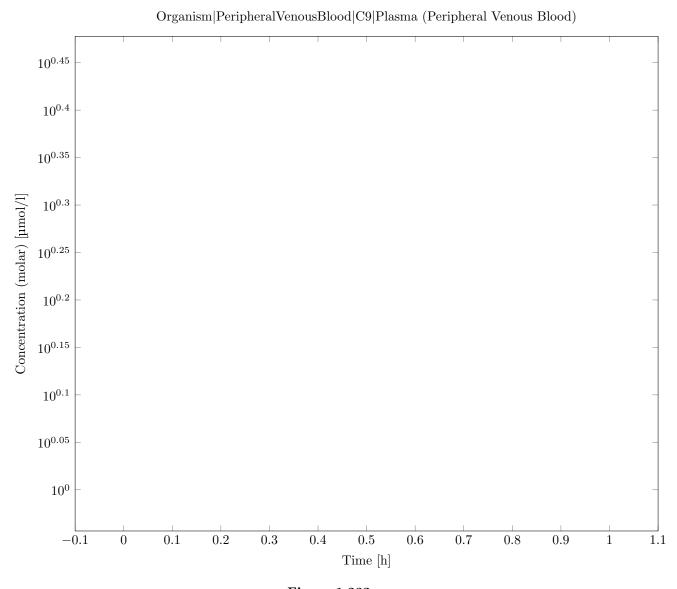


Figure 1.231

 $Simulation: Single ORAL_C9_2 Pores_RR_schmitt_standard-Single ORAL_SChmitt_standard-Single ORAL_Schmitt_standard-Single ORAL_Schmitt_Standard-Single ORAL_Schmitt_Standard-Single ORAL_Schmitt$

Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood |C9 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$



 ${\bf Figure~1.232}$

Simulation: Test 18.1_I1_C1_A1_Config1-Test 18.1_I1_C1_A1_Config1 Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |C1 |Plasma (Peripheral Venous Blood) Deviation:
 $\boldsymbol{0}$

Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood)

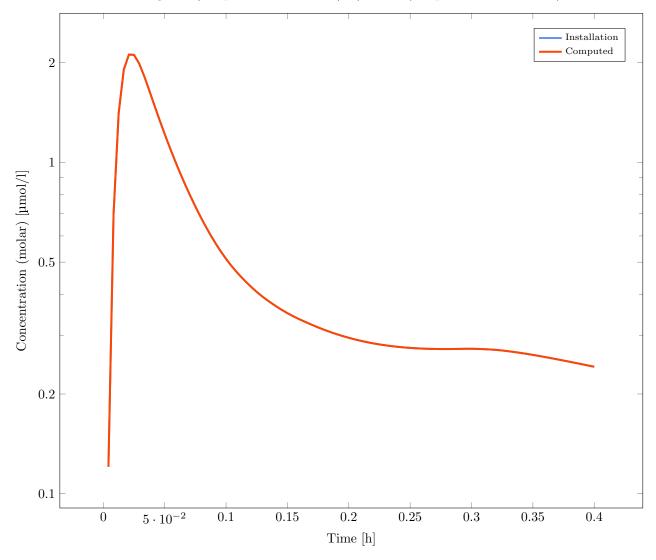


Figure 1.233

Simulation: Test $18.1_I2_C1_A1_Config2$ -Test $18.1_I2_C1_A1_Config2$ Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood)

Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood)



Figure 1.234

Simulation: Test 18.1_I2_C3_A1_Config2-Test 18.1_I2_C3_A1_Config2 Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |C3 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

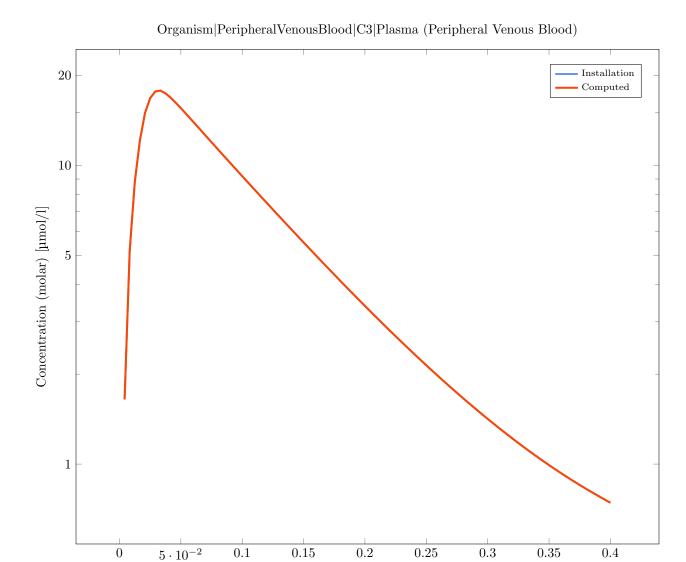


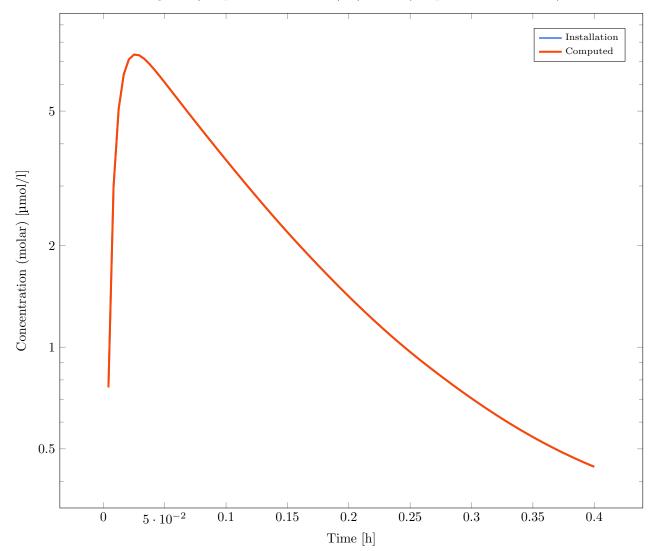
Figure 1.235

Time [h]

Simulation: Test 18.1_I3_C3_A3_Config2-Test 18.1_I3_C3_A3_Config2 Result of the validation: Valid

Output Path: Organism |Peripheral Venous
Blood |C3 |Plasma (Peripheral Venous Blood)
 Deviation: ${\bf 0}$

$Organism|Peripheral Venous Blood|C3|Plasma\ (Peripheral Venous Blood)$



 $Figure \ 1.236$