## Open Systems Pharmacology Suite - 11 Installation Validation

User1

April 8, 2024

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## Chapter 1

## Installation Validation Results

#### **Overall Validation Result**

Valid

### 1.1 Validation Summary

#### **Run Duration**

Start time: 2024-04-08 05:54 End time: 2024-04-08 07:52

Validation performed in 01h:57m:29s:783ms

#### Input Configuration Folder

 $C: \label{lem:cology} Installation Validator \cite{C:ProgramData} Open Systems Pharmacology \cite{C:ProgramData} Batch Files Pharmacology \cite{C:ProgramData} Pharmacology \c$ 

#### **Local Outputs Location**

#### **Application Versions**

PK-Sim Version 11.3.208 MoBi Version 11.3.207

#### Language Settings

English (Germany) (en-DE)

#### Computer Name

DESKTOP-CF7981D

#### **Operating System**

Windows 10 Enterprise

#### Architecture

x64

#### Running on Virtual Machine

Yes

#### Running on Terminal Session

No

### 1.2 Comparison Results

#### Overall Comparison Result

Valid

#### **Installation Folder**

 $C: \ \ Program Data \ \ Open \ Systems \ Pharmacology \ \ Installation \ \ Validator \ \ \ 11.3 \ \ Outputs \ \ Batch Files$ 

#### Computed Folder

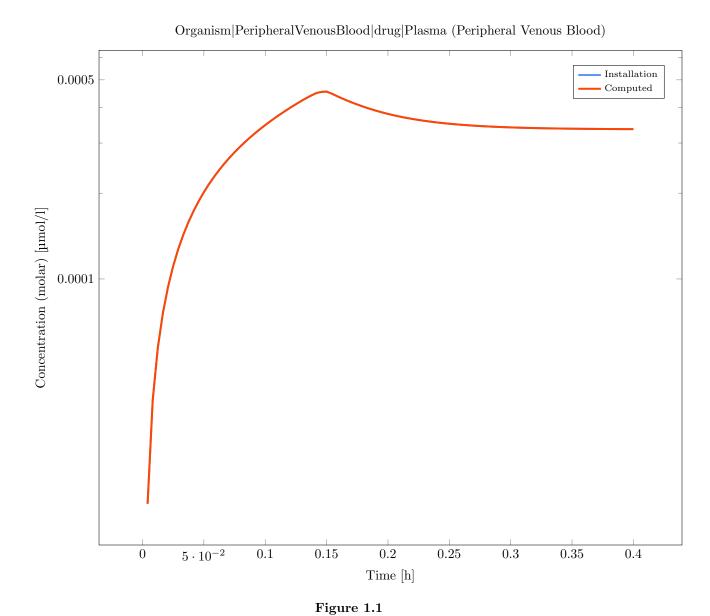
#### 1.2.1 Valid Simulations (155/155)

 $Simulation: Beagle\_SingleORAL\_Dissolved-Beagle\_SingleORAL\_Dissolved$ 

Result of the validation: Valid

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

Deviation: 0



 $Simulation: Beagle\_SingleORAL\_Dissolved-Beagle\_SingleORAL\_Dissolved\_MW\_200\_fu\_0.2\_LogP\_-5$ 

Result of the validation: Valid

Output Path: Organism |Peripheral Venous<br/>Blood |drug |Plasma (Peripheral Venous Blood)<br/> Deviation: 0



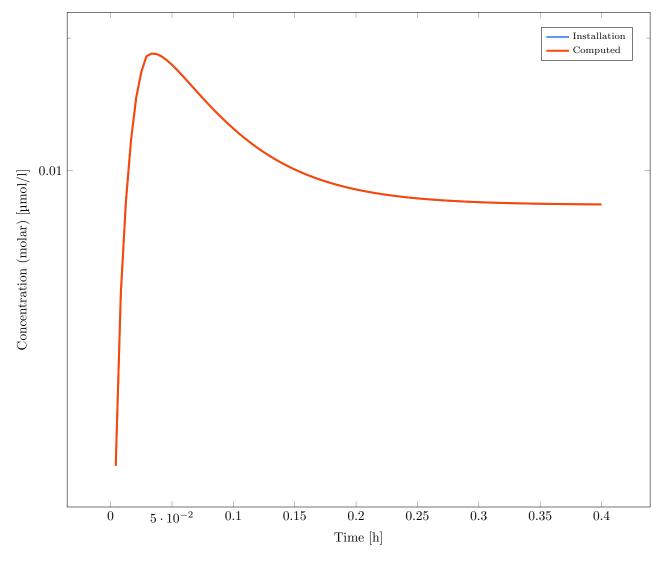


Figure 1.2

Simulation: Beagle\_SingleORAL\_Dissolved-Beagle\_SingleORAL\_Dissolved\_MW\_800\_fu\_0.6\_LogP\_--5 Result of the validation: Valid

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

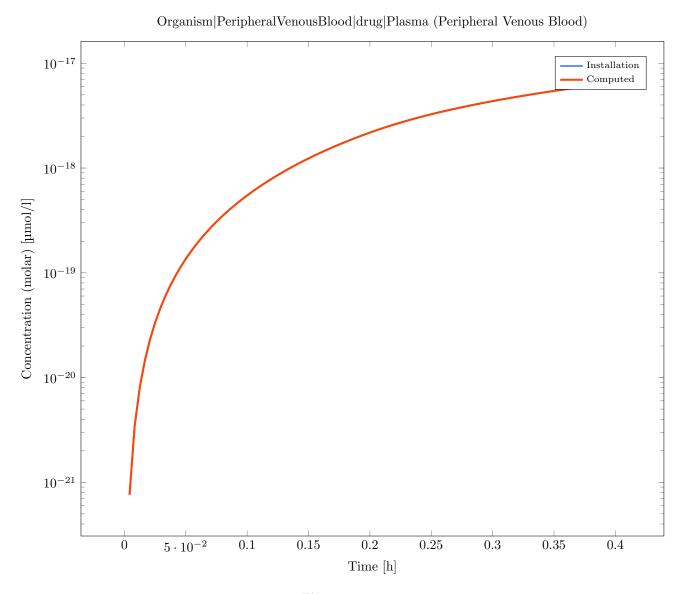
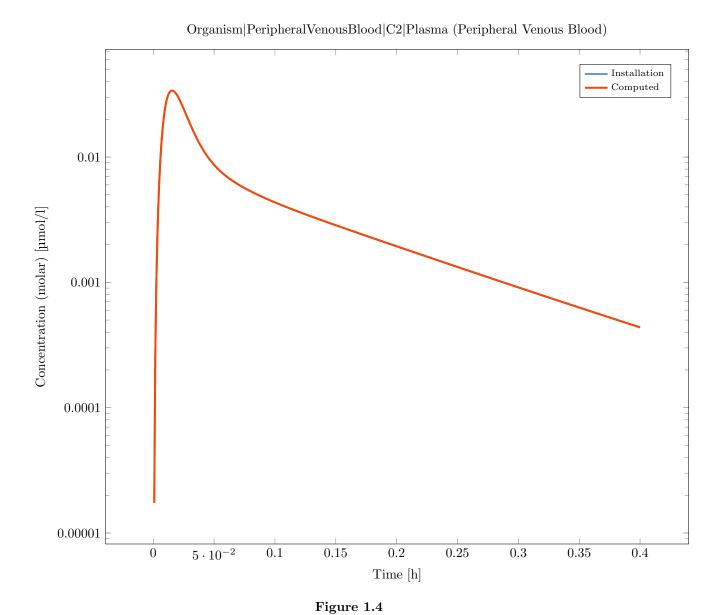


Figure 1.3

Simulation: DDI\_MultipleCombinations-01\_MM\_Competitive\_Competitive Result of the validation: Valid

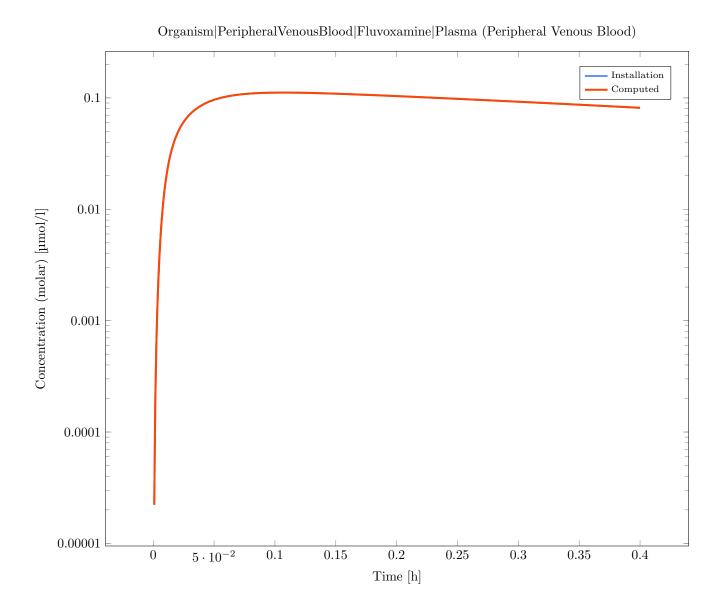
 $Output\ Path:\ Organism|Peripheral Venous Blood|C2|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 3.84E-4



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

Deviation: 2.00E-4



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

Figure 1.5

#### Organism|PeripheralVenousBlood|Itraconazole|Plasma (Peripheral Venous Blood)

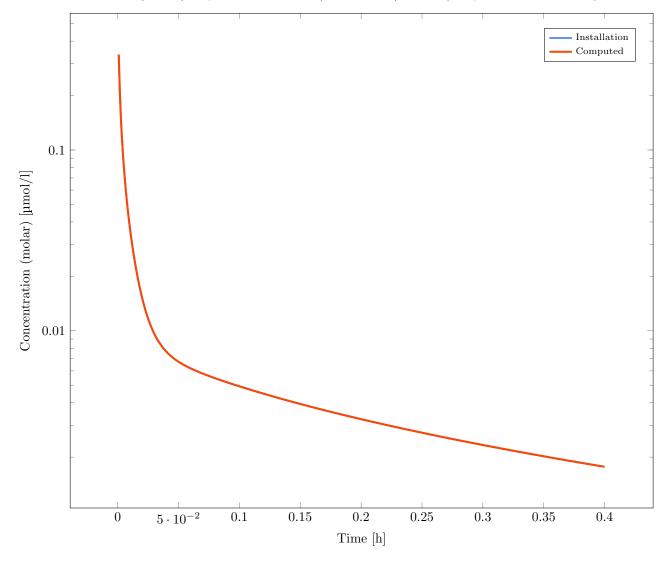


Figure 1.6

 ${\bf Simulation:\ DDI\_Multiple Combinations-02\_MM\_Uncompetitive\_Uncompetitive\_Result\ of\ the\ validation:\ Valid}$ 

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

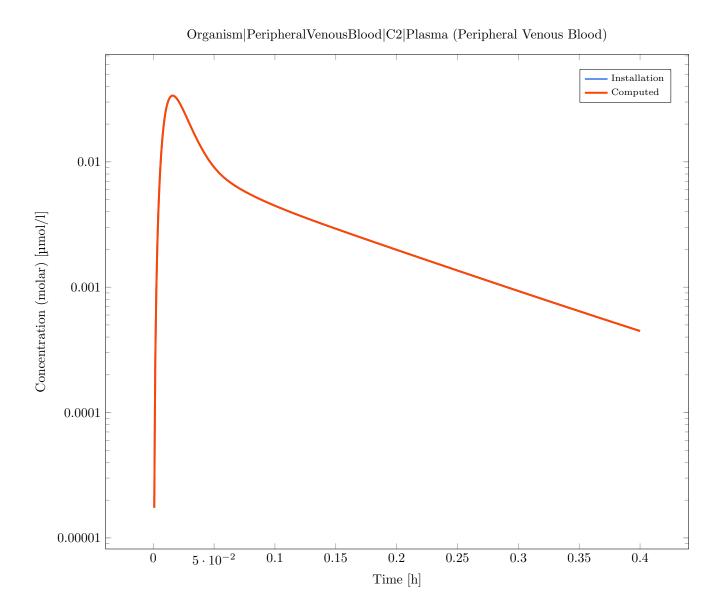


Figure 1.7

 $Output\ Path:\ Organism|Peripheral Venous Blood|Uncompetitive\_CYP3A4\_1|Plasma\ (Peripheral Venous\ Blood)$ 

Deviation: 3.69E-4

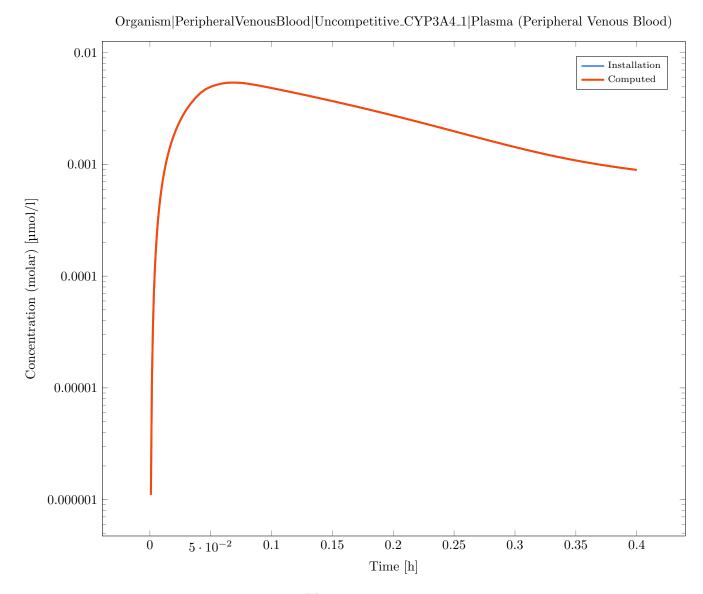
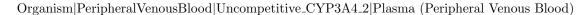


Figure 1.8

 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive\_CYP3A4\_2|Plasma\ (PeripheralVenous\ Blood)$ 

Deviation: 3.69E-4



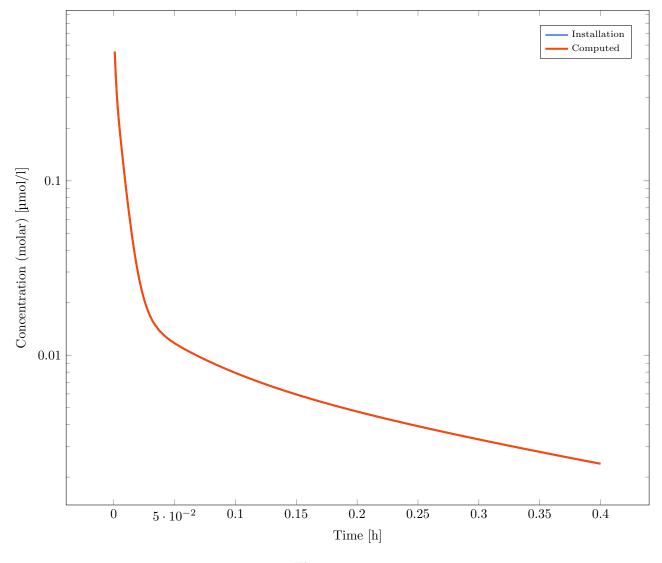


Figure 1.9

 ${\bf Simulation:\ DDI\_Multiple Combinations-03\_MM\_Noncompetitive\_N$ 

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

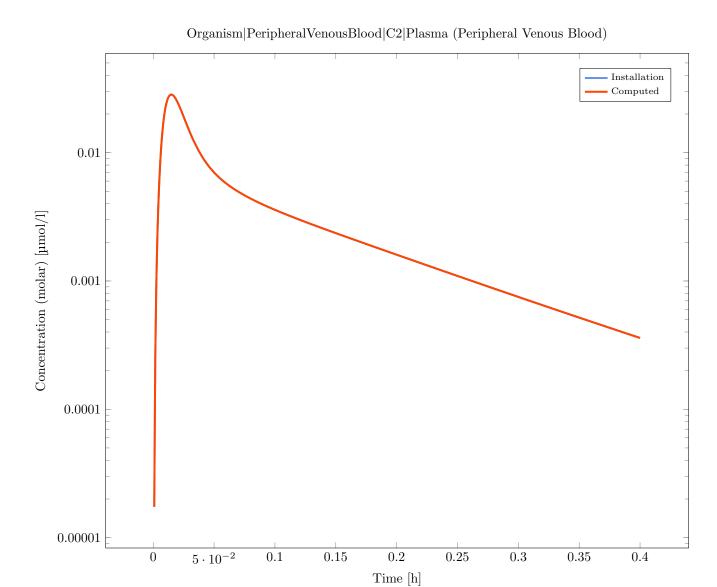


Figure 1.10

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive\_CYP3A4\_1|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 3.68E-4

Organism|PeripheralVenousBlood|Noncompetitive\_CYP3A4\_1|Plasma (Peripheral Venous Blood)

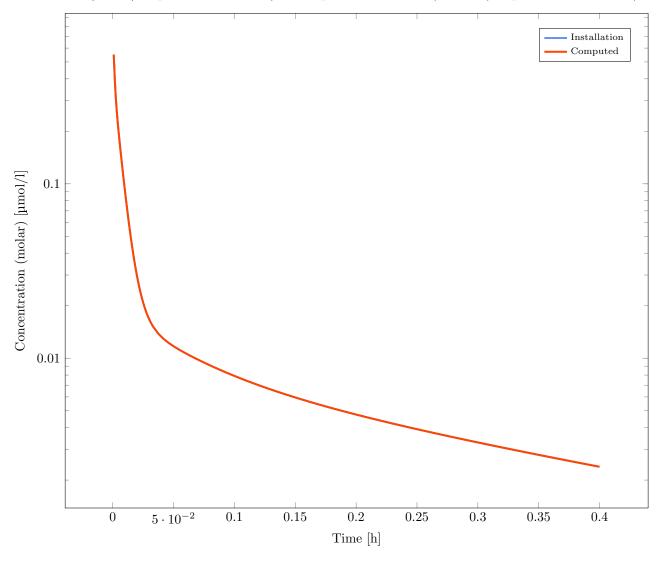


Figure 1.11

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive\_CYP3A4\_2|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 3.06E-4

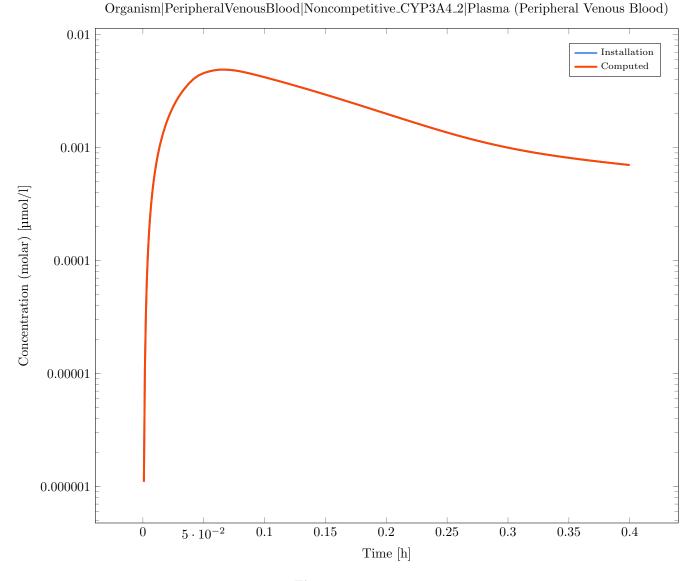


Figure 1.12

 $Simulation: DDI\_MultipleCombinations-04\_MM\_Mixed\_Mixed$ 

Result of the validation: Valid

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

Deviation: 3.82E-4

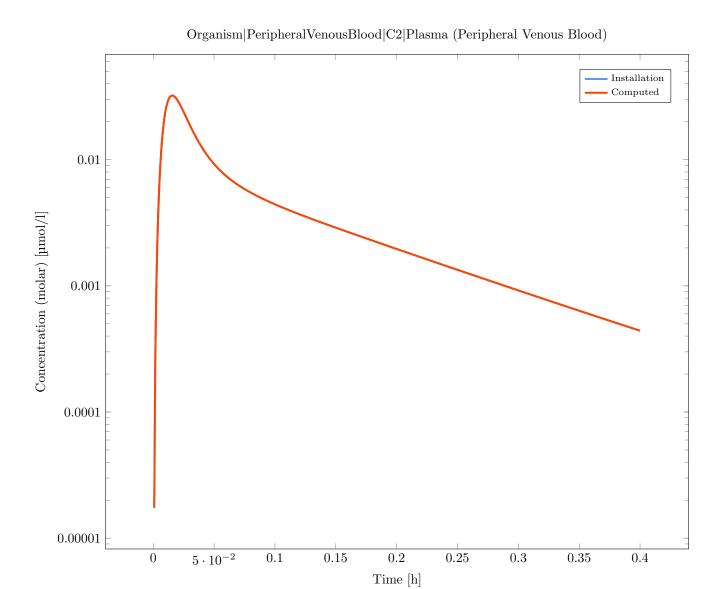


Figure 1.13

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed\_CYP3A4\_1|Plasma\ (Peripheral\ VenousBlood)$ 

Deviation: 3.16E-4

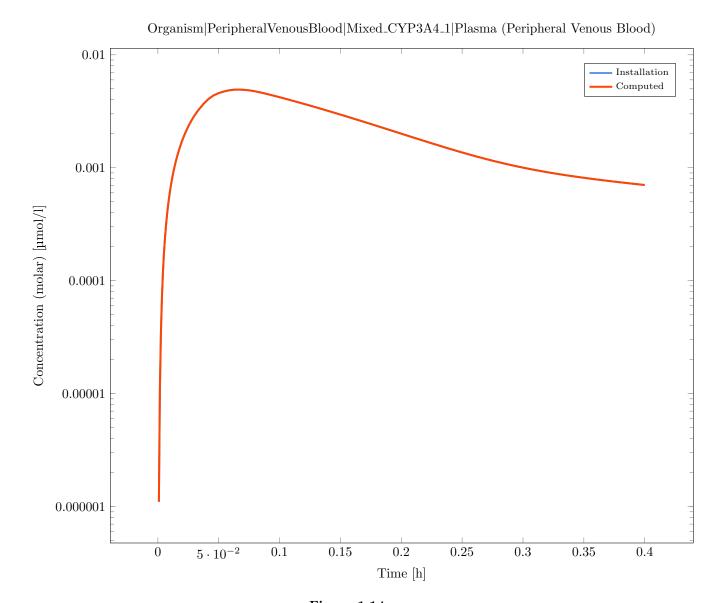


Figure 1.14

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed\_CYP3A4\_2|Plasma\ (Peripheral\ VenousBlood)$ 

Deviation: 3.68E-4



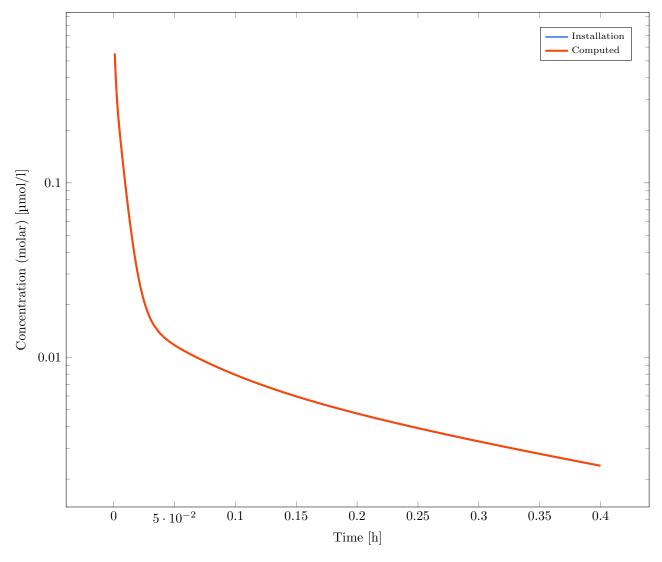


Figure 1.15

Simulation: DDI\_MultipleCombinations-05\_MM\_Mechanismbased\_Mechanismbased Result of the validation: Valid

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

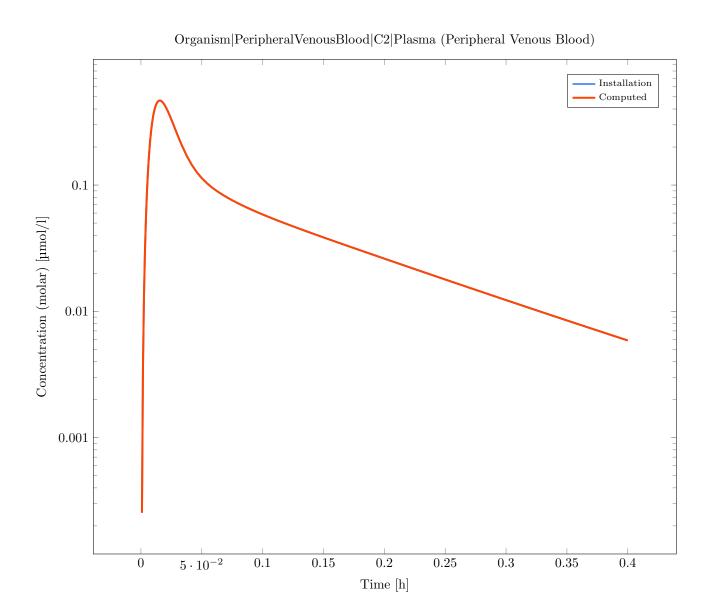
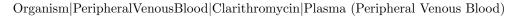


Figure 1.16

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



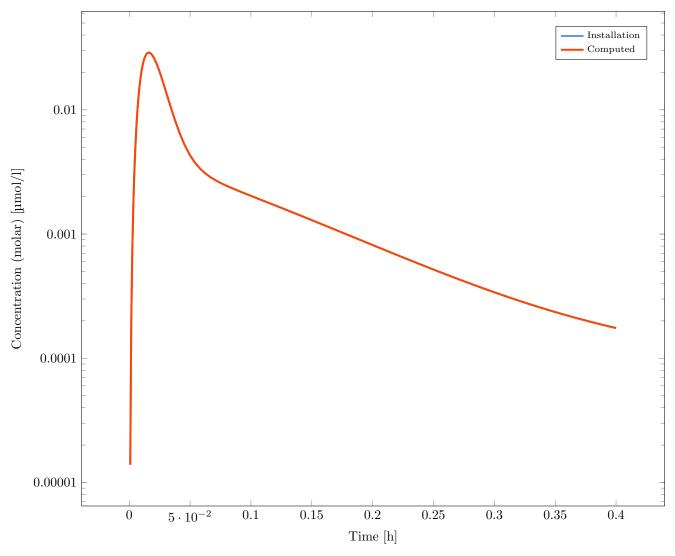


Figure 1.17

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

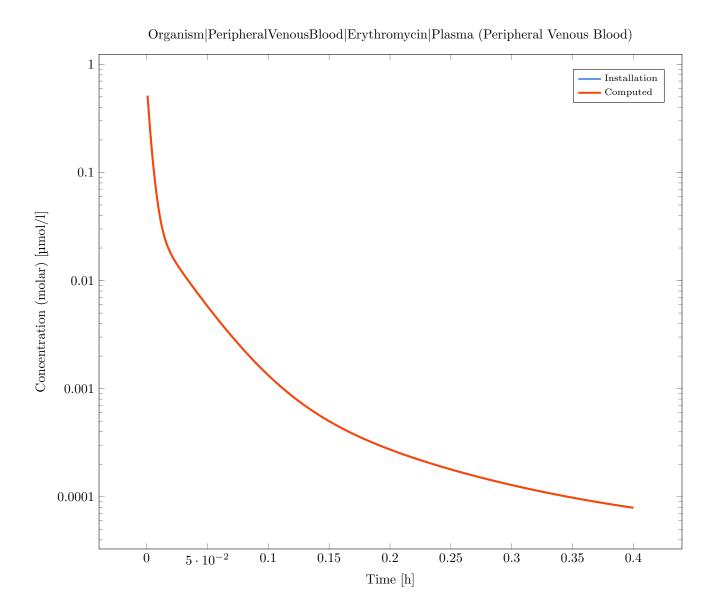


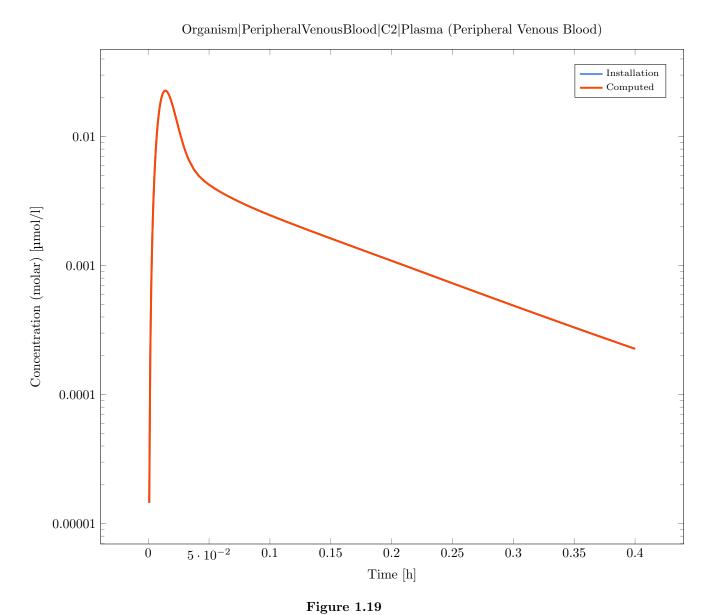
Figure 1.18

 $Simulation: \ DDI\_Multiple Combinations-06\_MM\_Induction\_Induction$ 

Result of the validation: Valid

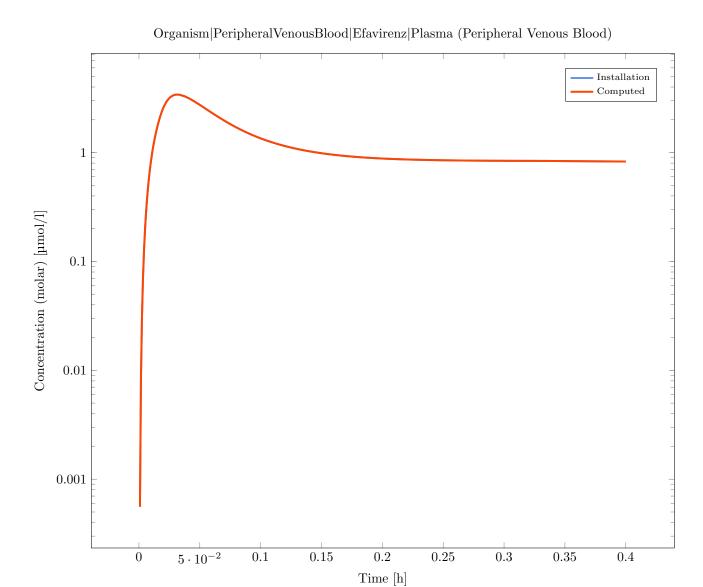
 $Output\ Path:\ Organism | Peripheral Venous Blood | C2 | Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 3.14E-4



118410 1110

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



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

Deviation: 3.68E-4

**Figure 1.20** 

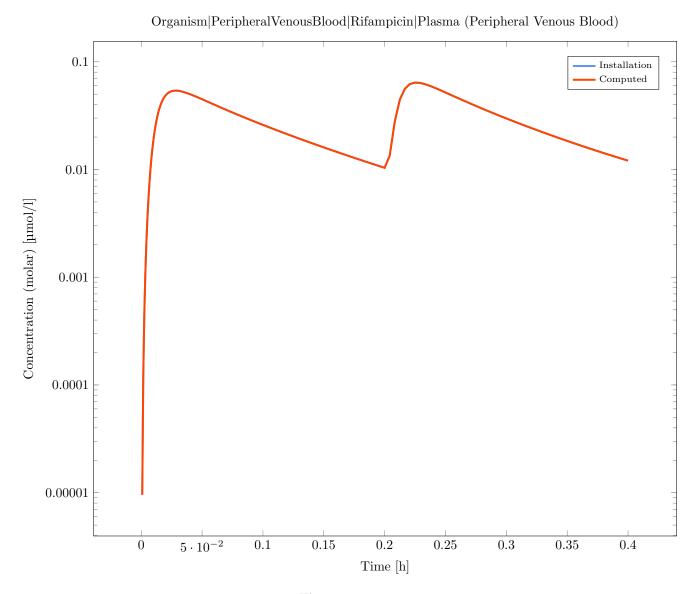
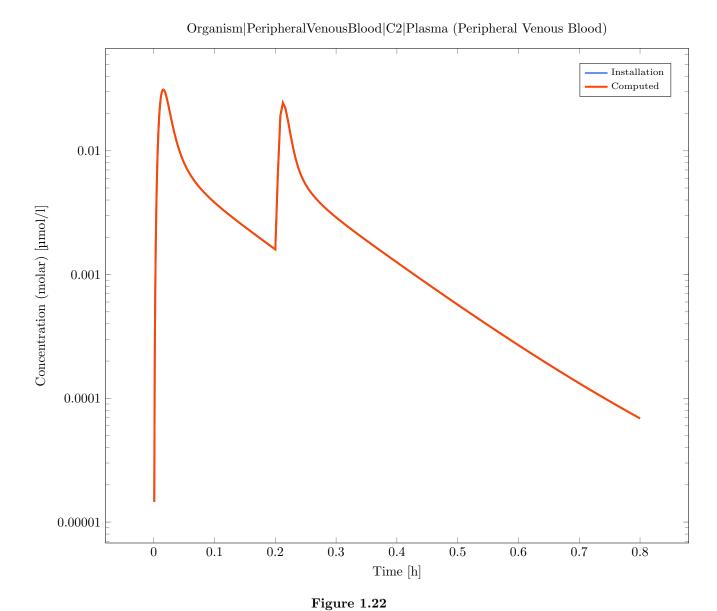


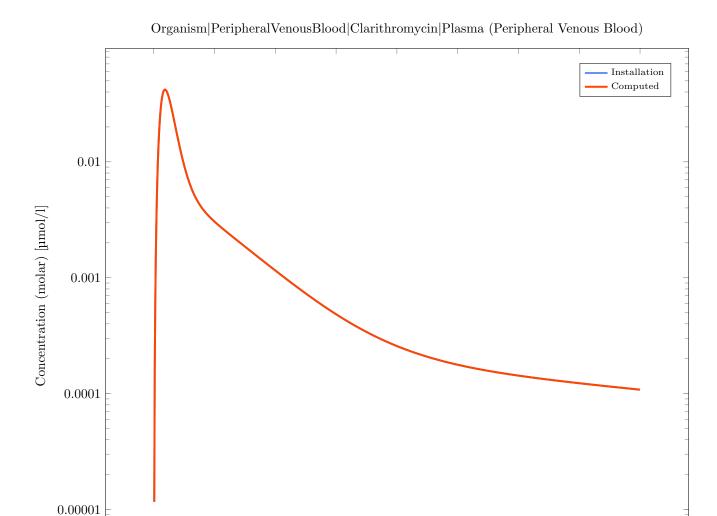
Figure 1.21

Simulation: DDI\_MultipleCombinations-07\_MM\_Competitive\_Competitive\_Mechanismbased\_Mechanismbased Result of the validation: Valid

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



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



0.4

Time [h]

0.5

0.6

0.7

0.8

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

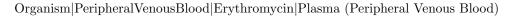
Figure 1.23

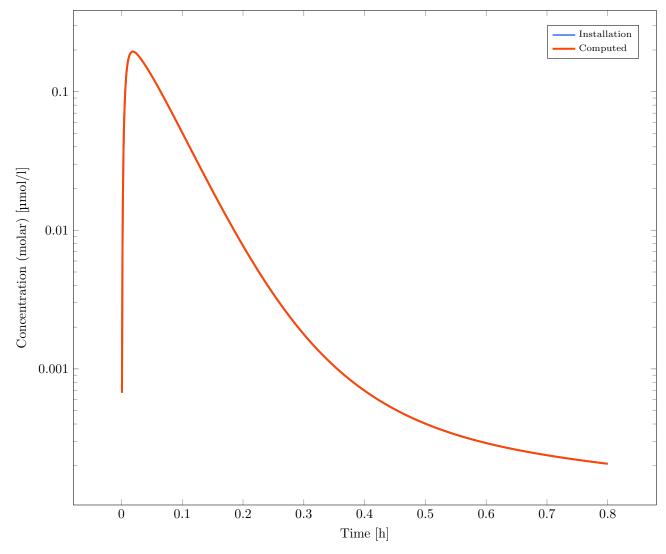
0.3

0

0.1

0.2





**Figure 1.24** 

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

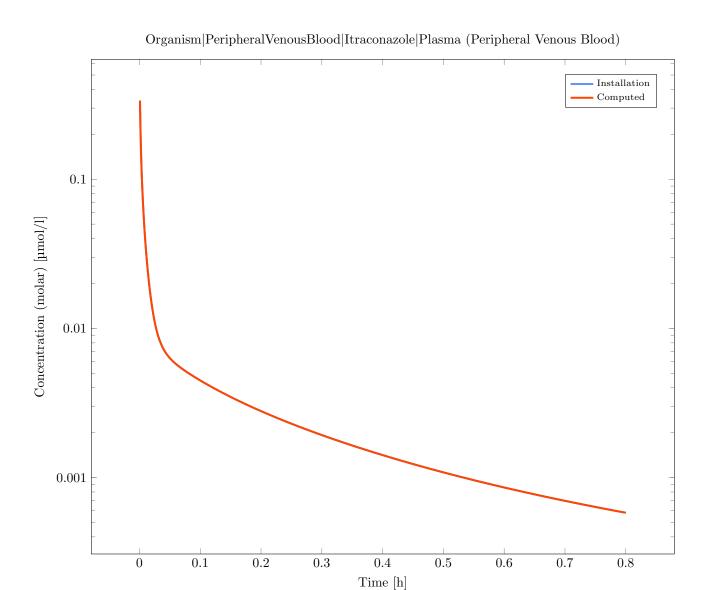


Figure 1.25

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

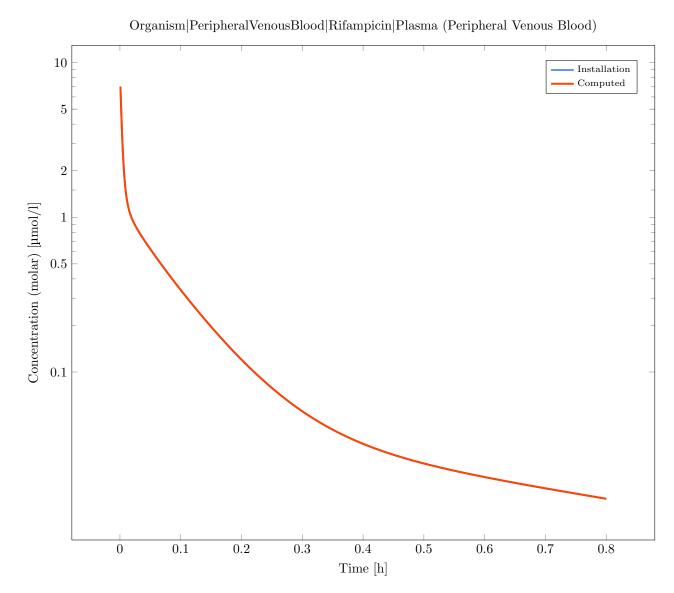


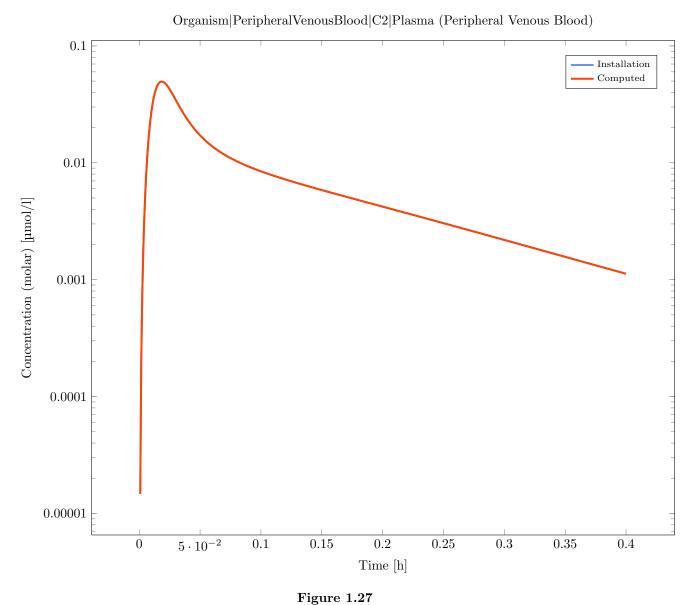
Figure 1.26

 $Simulation: \ DDI\_Multiple Combinations - 08\_MM\_Uncompetitive\_Uncompetitive\_Mechanism based\_Mechanism based$ 

Result of the validation: Valid

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

Deviation: 6.00E-4

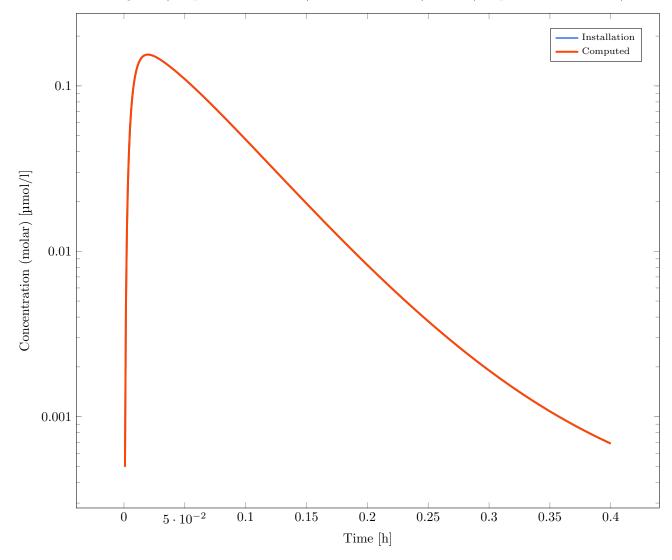


118410 1121

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased\_4|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 6.00E-4

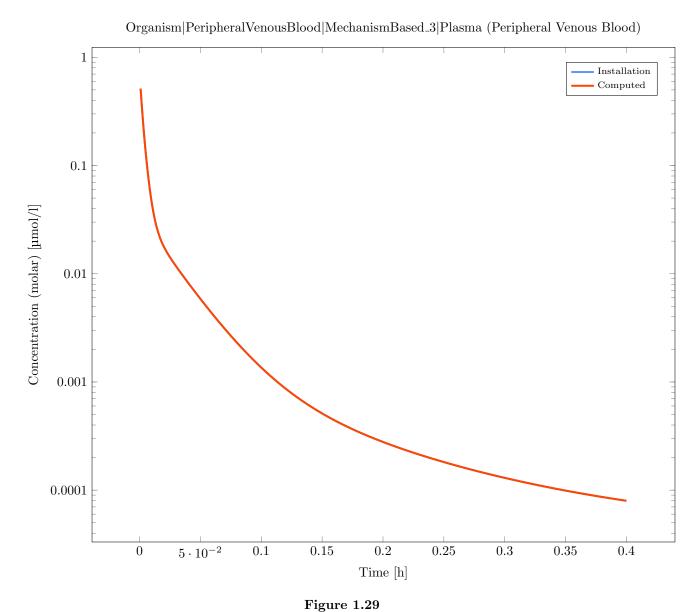
#### Organism|PeripheralVenousBlood|MechanismBased\_4|Plasma (Peripheral Venous Blood)



**Figure 1.28** 

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased\_3|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 3.66E-4



rigure 1.25

 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive\_CYP3A4\_4|Plasma\ (PeripheralVenous\ Blood)$ 

Deviation: 5.77E-5

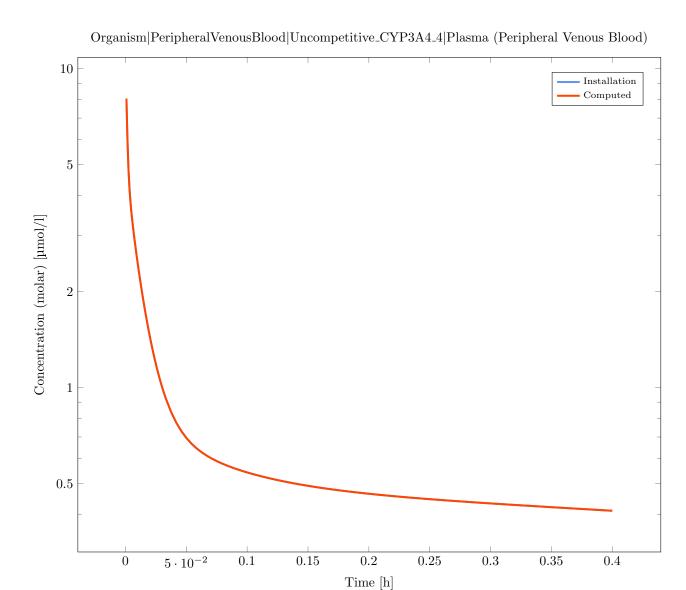
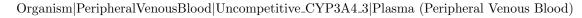


Figure 1.30

 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive\_CYP3A4\_3|Plasma\ (PeripheralVenous\ Blood)$ 

Deviation: 1.05E-4



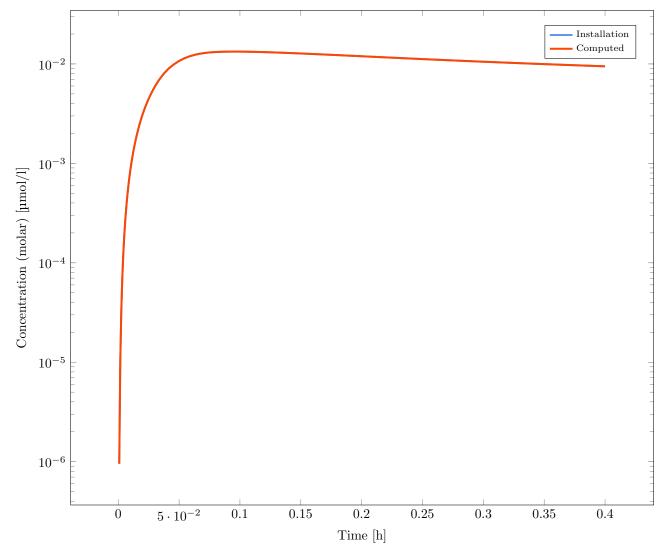


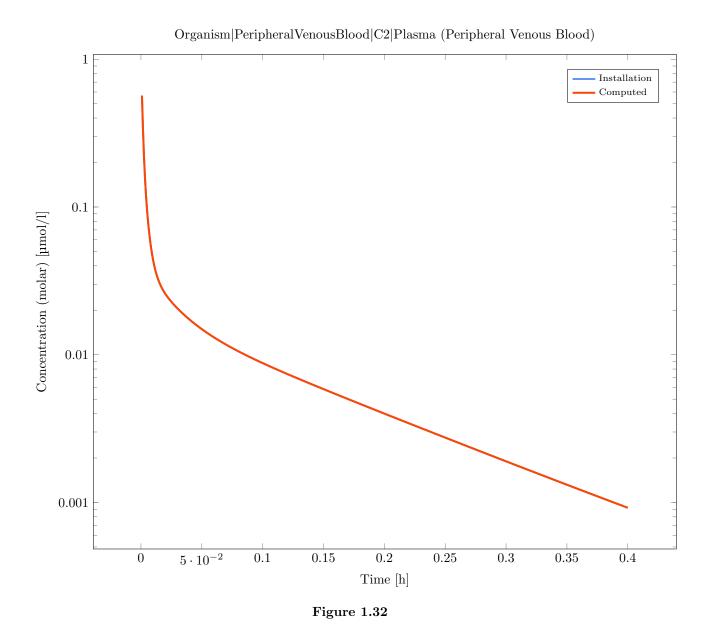
Figure 1.31

 $Simulation: \ DDI\_Multiple Combinations - 09\_MM\_Noncompetitive\_Noncompetitive\_Mechanism based\_Mechanism based$ 

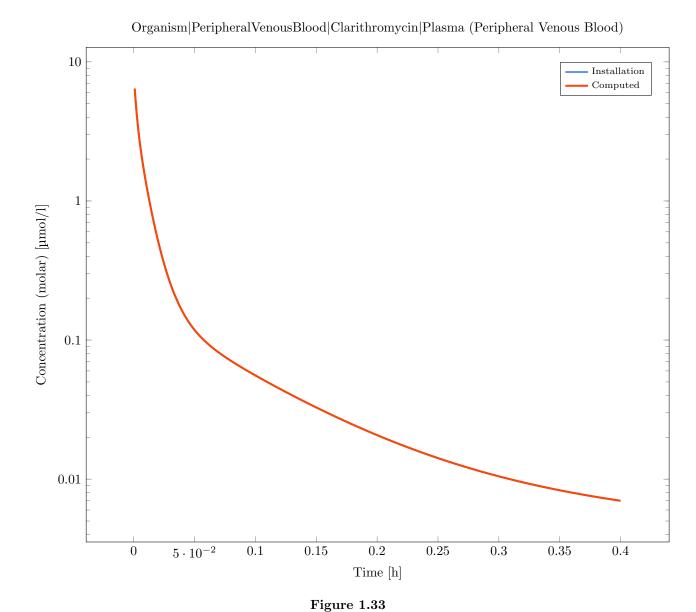
Result of the validation: Valid

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

Deviation: 3.07E-4



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



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

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

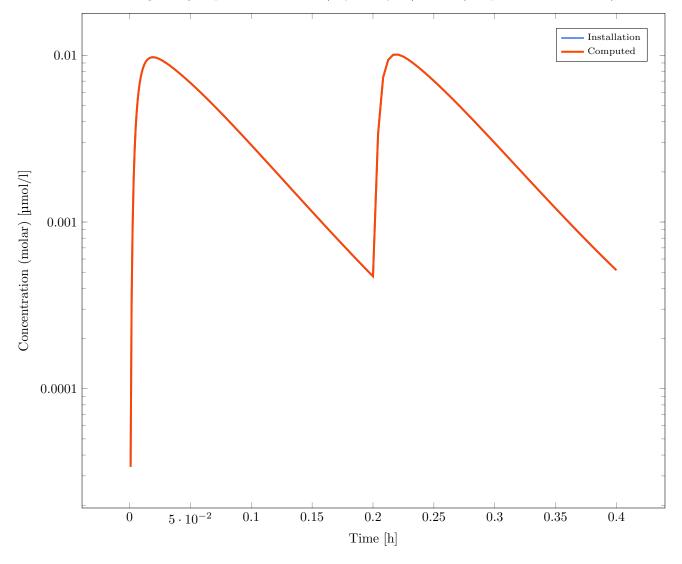


Figure 1.34

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive\_CYP3A4\_1|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 3.16E-4



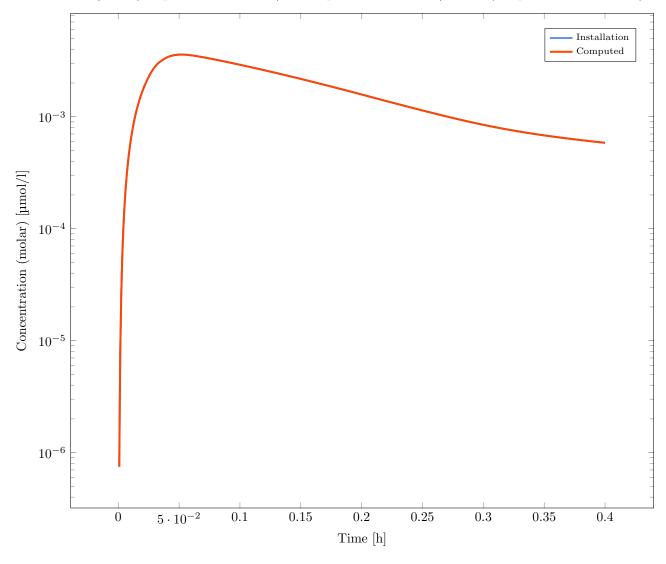


Figure 1.35

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive\_CYP3A4\_2|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 3.33E-4

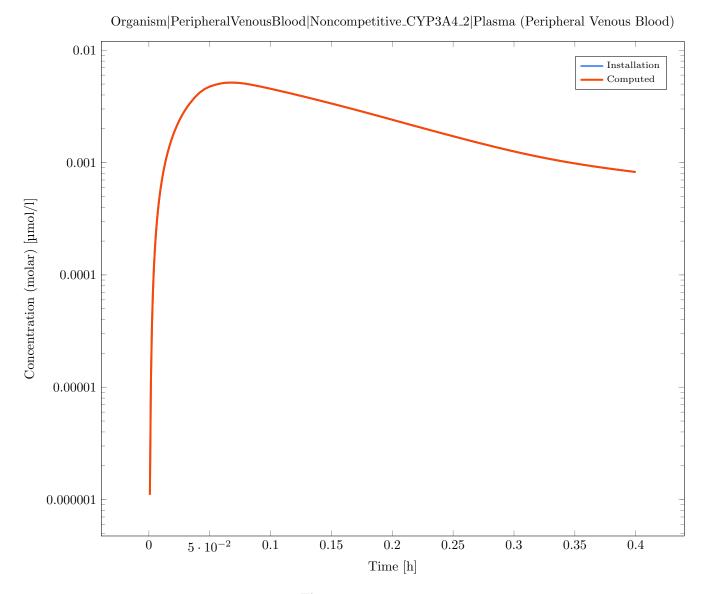
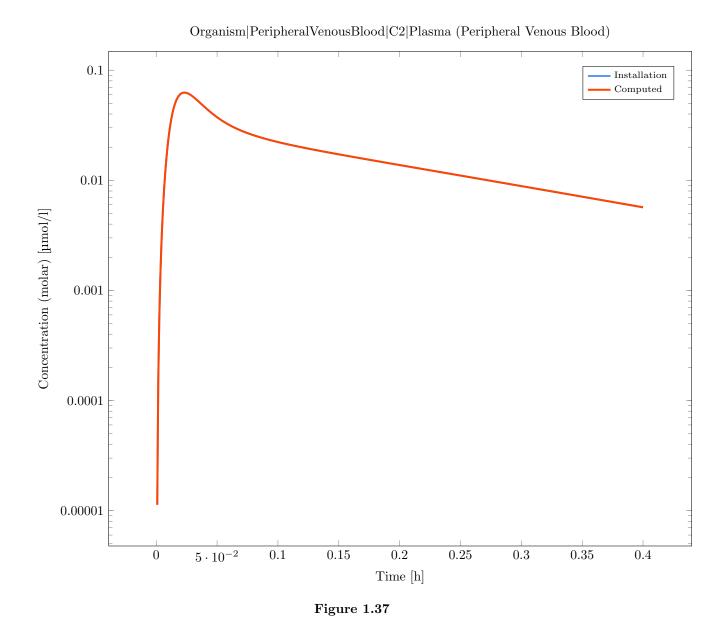


Figure 1.36

 ${\bf Simulation:\ DDI\_Multiple Combinations-10\_MM\_Mixed\_Mixed\_Mechanismbased\_Mech$ 

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



Output Path: Organism |PeripheralVenousBlood |MechanismBased\_4 |Plasma (Peripheral Venous Blood)

Deviation: 5.67E-4

## Organism|PeripheralVenousBlood|MechanismBased\_4|Plasma (Peripheral Venous Blood)

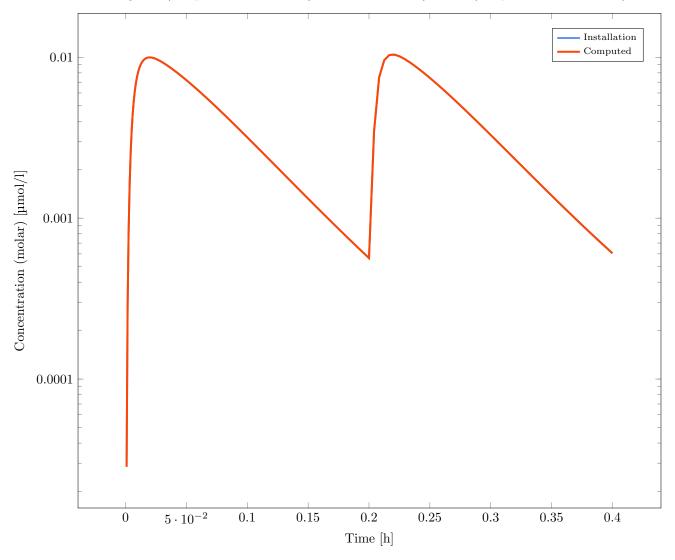


Figure 1.38

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased\_3|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 5.92E-4

## $Organism | Peripheral Venous Blood | Mechanism Based\_3 | Plasma \ (Peripheral Venous Blood)$

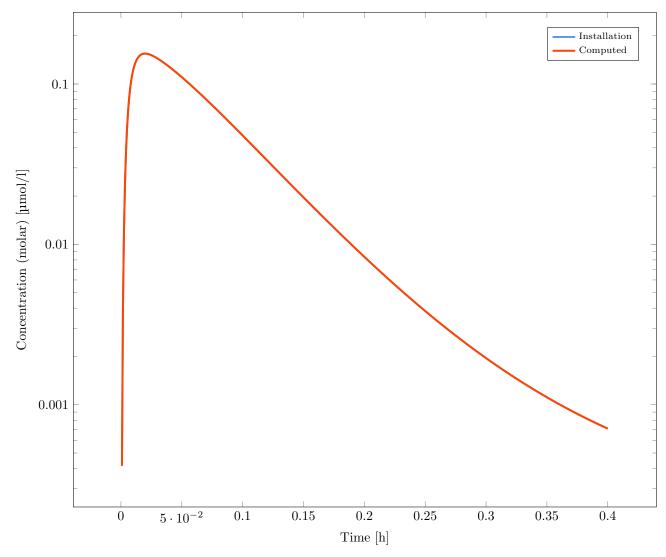
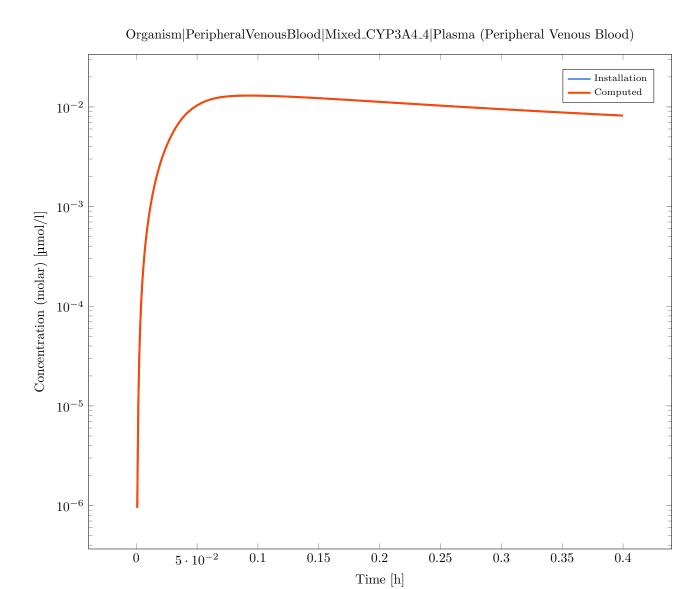


Figure 1.39

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed\_CYP3A4\_4|Plasma\ (Peripheral\ VenousBlood)$ 

Deviation: 1.01E-4



 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed\_CYP3A4\_3|Plasma\ (Peripheral\ VenousBlood)$ 

Figure 1.40

Deviation: 1.61E-4

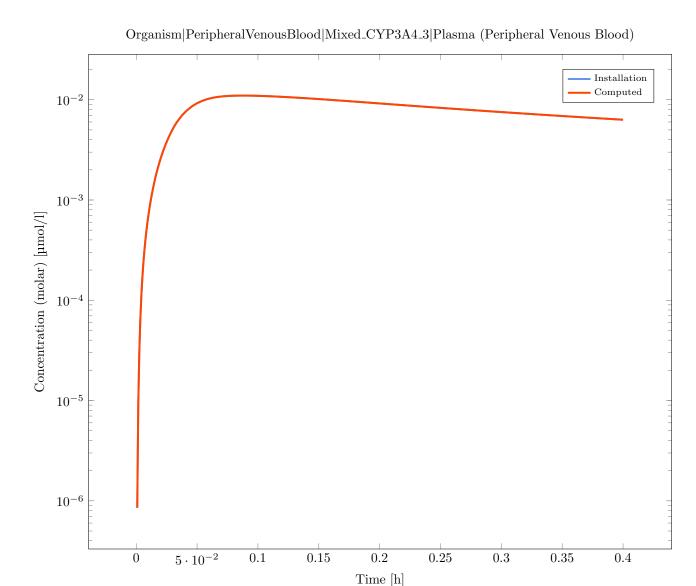
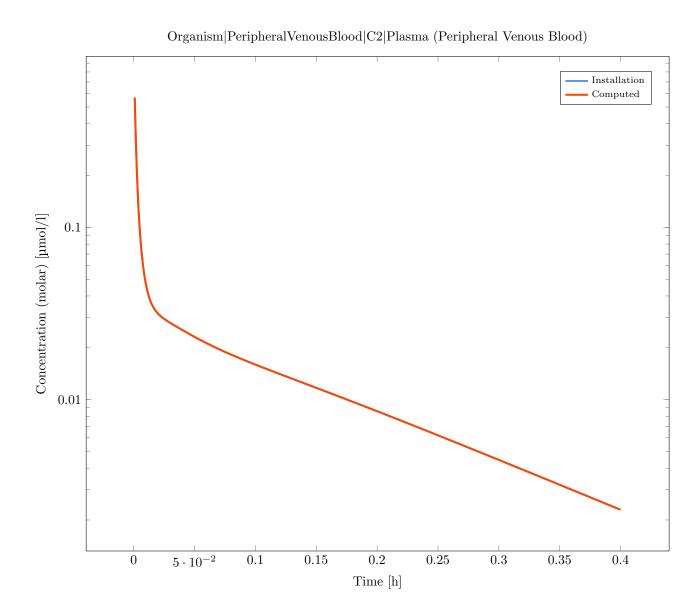


Figure 1.41

 $Simulation: \begin{tabular}{ll} DDI\_Multiple Combinations-11\_MM\_Mechanism based\_Mechanism based\_Induction\_Induction \end{tabular}$ 

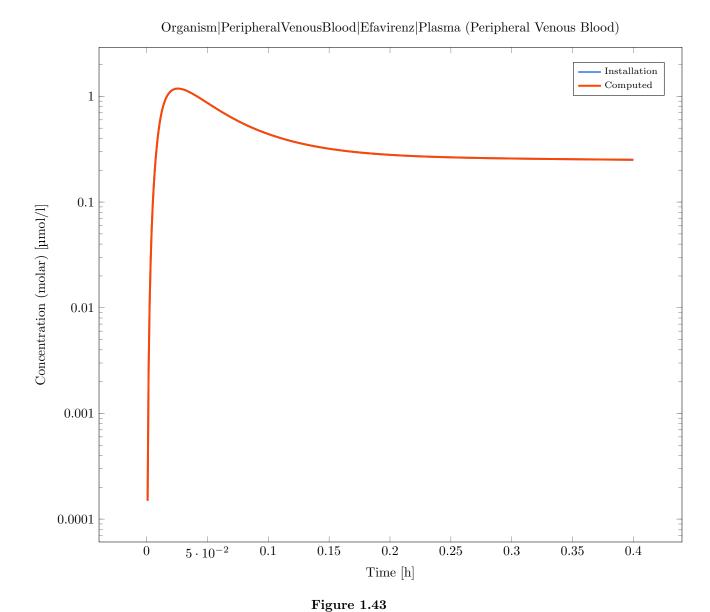
Result of the validation: Valid

Output Path: Organism |Peripheral Venous<br/>Blood |C2 |Plasma (Peripheral Venous Blood)<br/> Deviation:  $5.05\hbox{E-}4$ 



Output Path: Organism |Peripheral Venous<br/>Blood |Efavirenz |Plasma (Peripheral Venous Blood) Deviation:<br/>  $1.73 \pm .4$ 

**Figure 1.42** 



 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased\_3|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 5.98E-4

## Organism|PeripheralVenousBlood|MechanismBased\_3|Plasma (Peripheral Venous Blood)

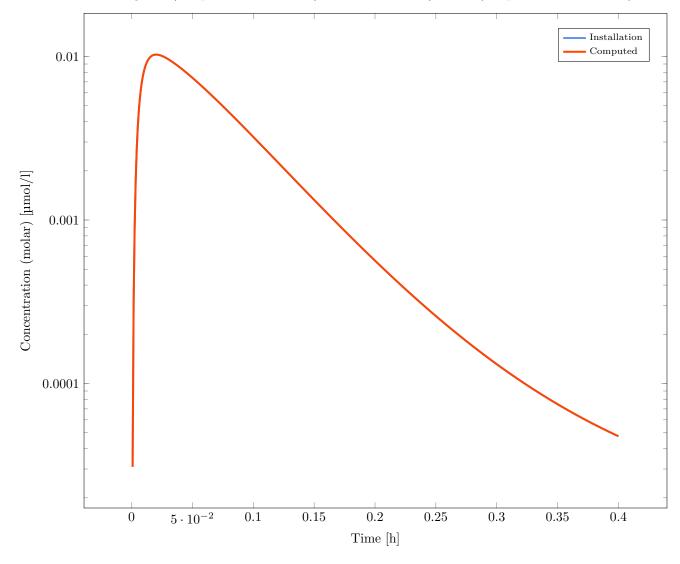


Figure 1.44

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased\_4|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 6.00E-4



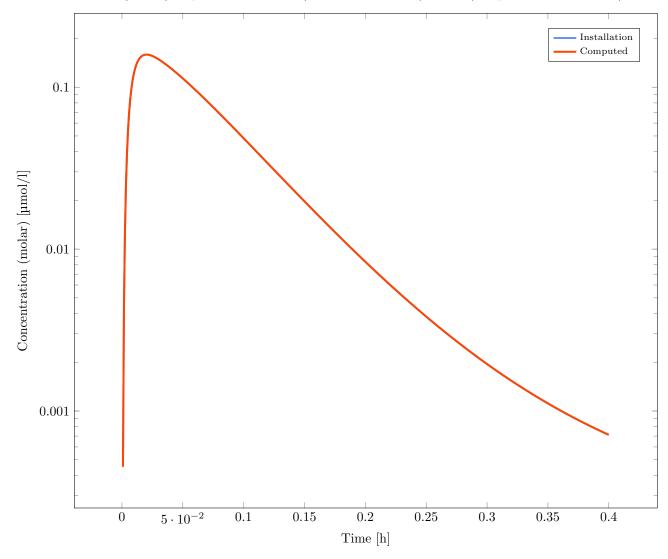
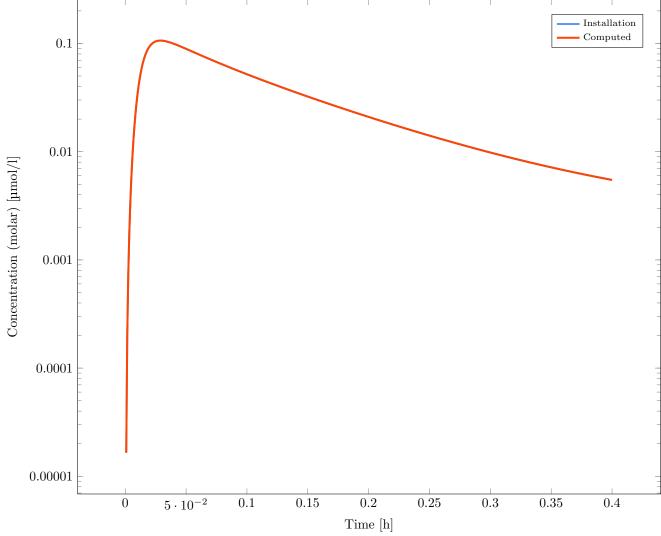


Figure 1.45

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

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



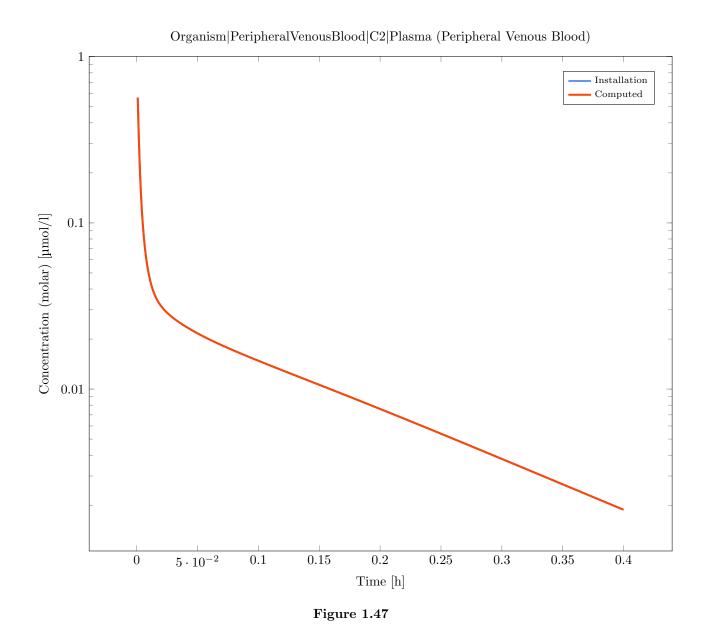
**Figure 1.46** 

 $Simulation: \ DDI\_MultipleCombinations-12\_MM\_All\_DDI\_Types$ 

Result of the validation: Valid

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

Deviation: 5.68E-4



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

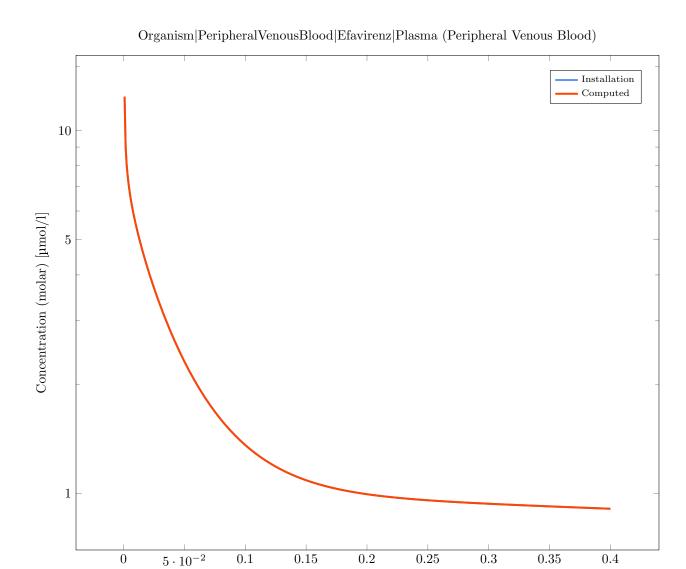
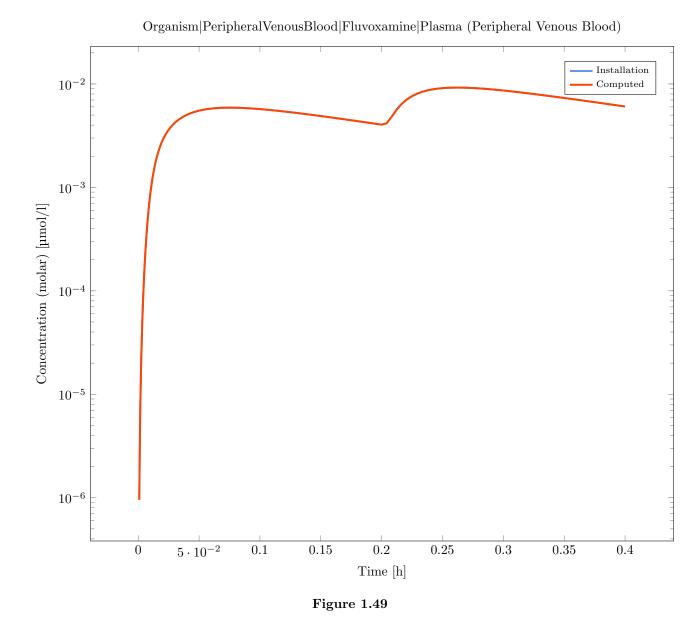


Figure 1.48

Time [h]

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



 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased\_3|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 4.79E-4



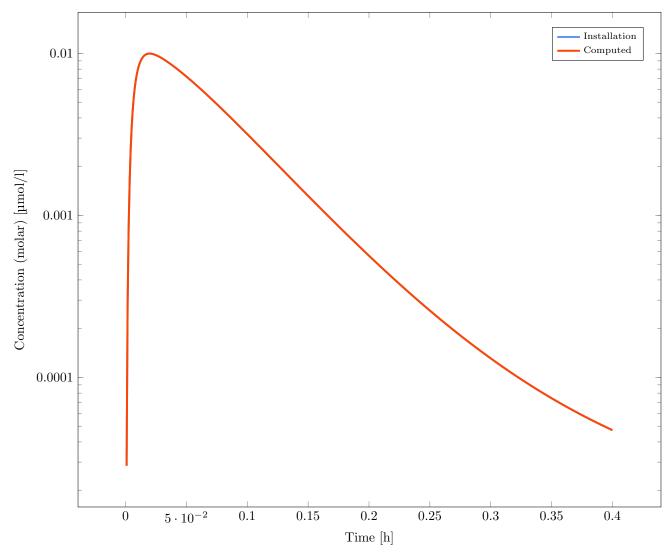


Figure 1.50

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed\_CYP3A4\_3|Plasma\ (Peripheral\ VenousBlood)$ 

Deviation: 4.20E-4

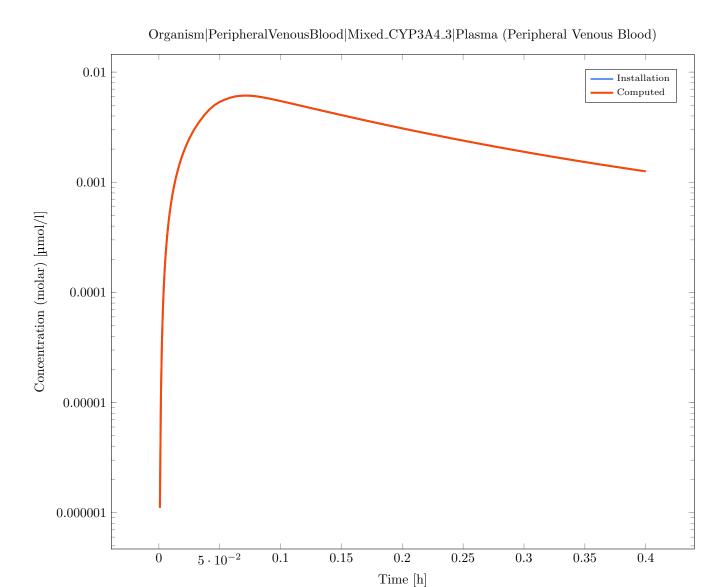


Figure 1.51

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive\_CYP3A4\_1|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 5.23E-4



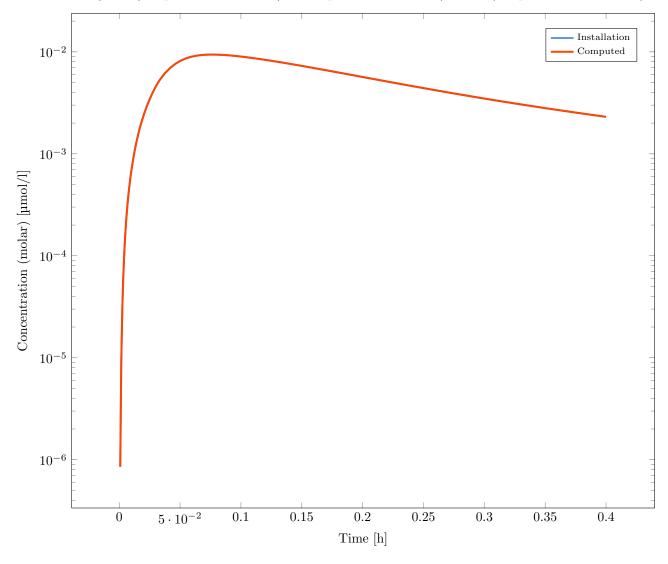


Figure 1.52

 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive\_CYP3A4\_3|Plasma\ (PeripheralVenous\ Blood)$ 

Deviation: 5.07E-4

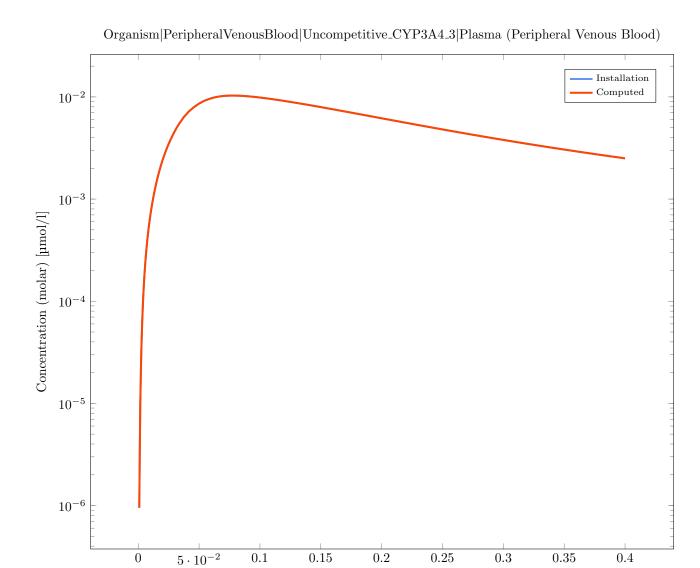
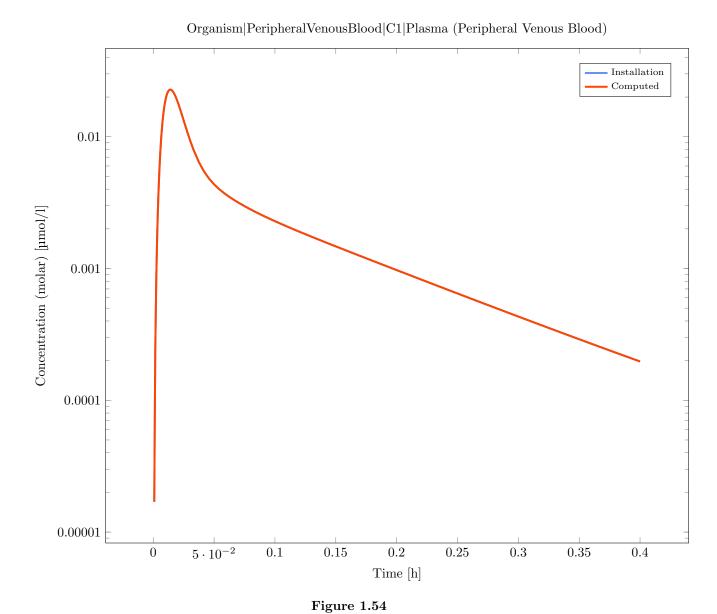


Figure 1.53

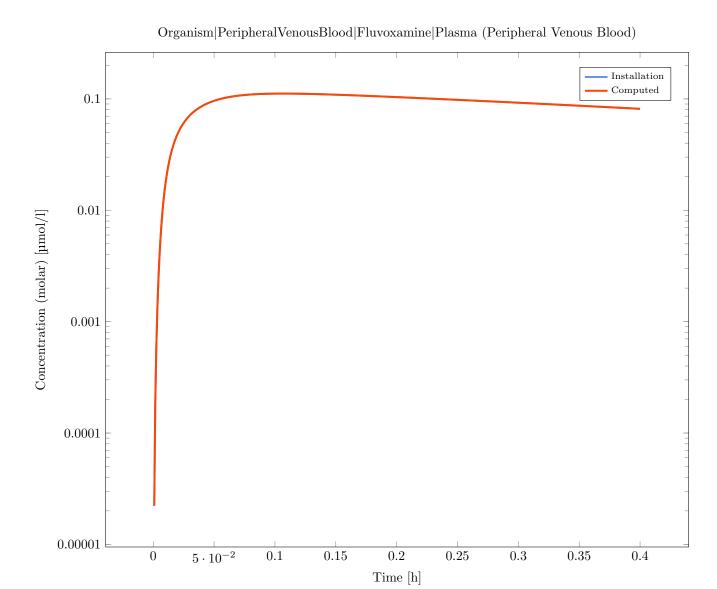
Time [h]

 ${\bf Simulation:\ DDI\_Multiple Combinations-21\_1st\_Competitive\_Competitive\_Result\ of\ the\ validation:\ Valid}$ 

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



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



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

Figure 1.55

# Organism | Peripheral Venous Blood | Itraconazole | Plasma (Peripheral Venous Blood) Ontage | Installation | Computed | Ontage | Install

Figure 1.56

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

Simulation: DDI\_MultipleCombinations-23\_1st\_Noncompetitive\_Noncompetitive Result of the validation: Valid

0.1

 $5 \cdot 10^{-2}$ 

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive\_CYP3A4\_1|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 3.68É-4

0

Organism|PeripheralVenousBlood|Noncompetitive\_CYP3A4\_1|Plasma (Peripheral Venous Blood)

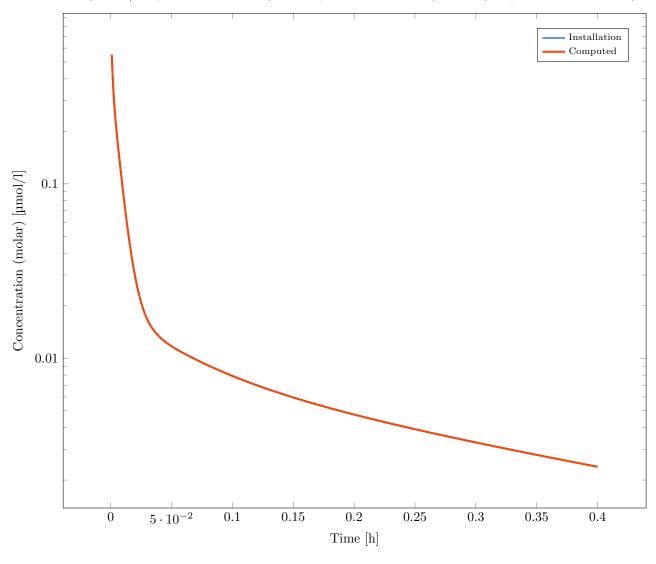


Figure 1.57

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive\_CYP3A4\_2|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 3.32E-4

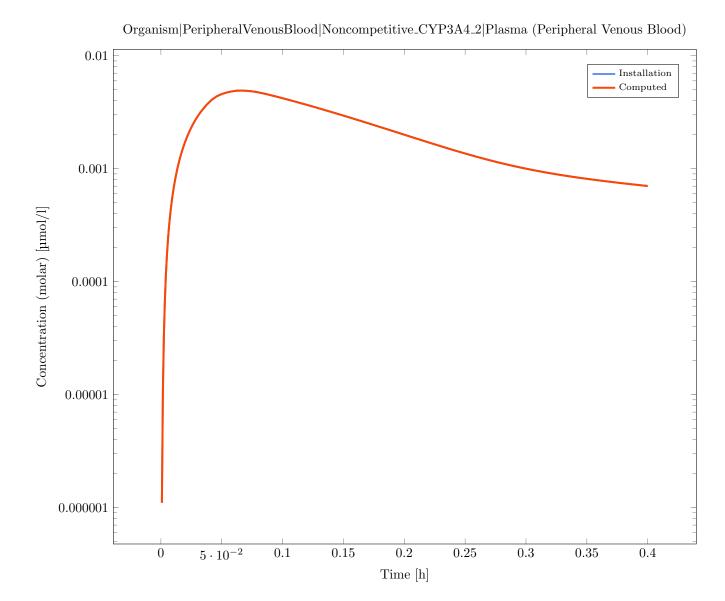


Figure 1.58

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

Deviation: 2.67E-4

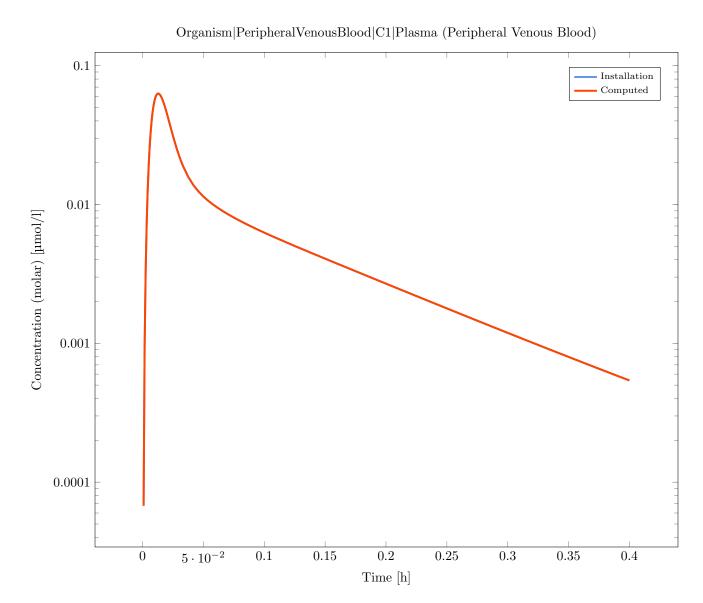


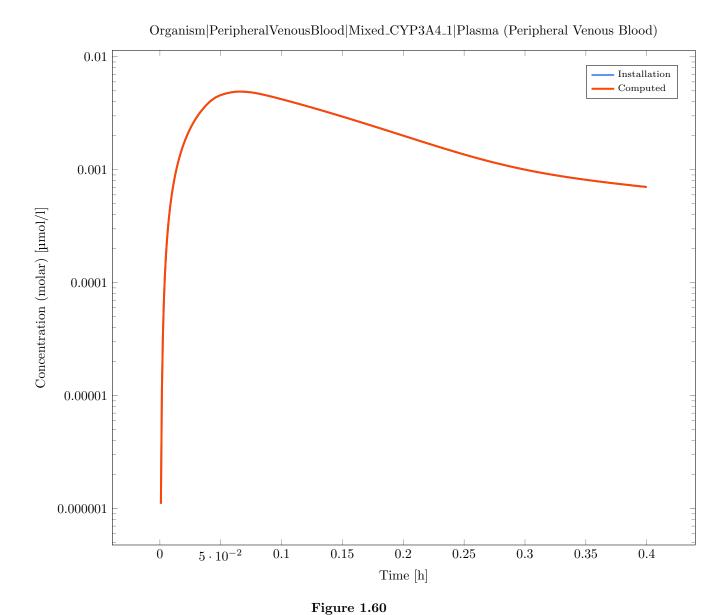
Figure 1.59

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



Output Path: Organism |PeripheralVenousBlood |Mixed\_CYP3A4\_2 |Plasma (Peripheral VenousBlood)

Deviation: 3.68E-4

## Organism|PeripheralVenousBlood|Mixed\_CYP3A4\_2|Plasma (Peripheral Venous Blood)

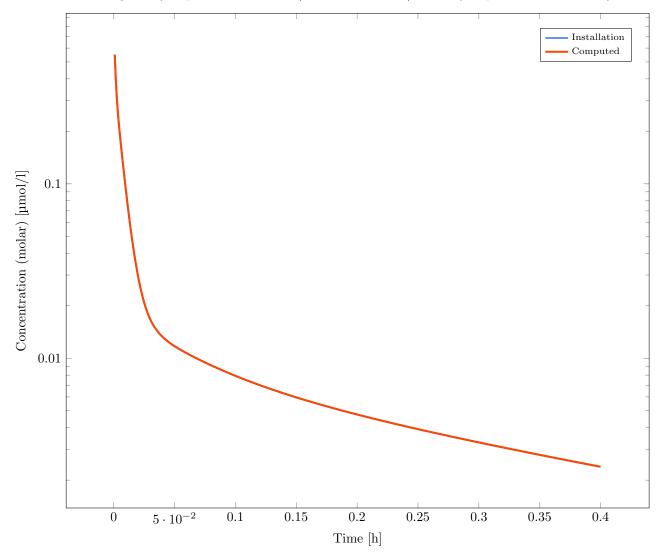
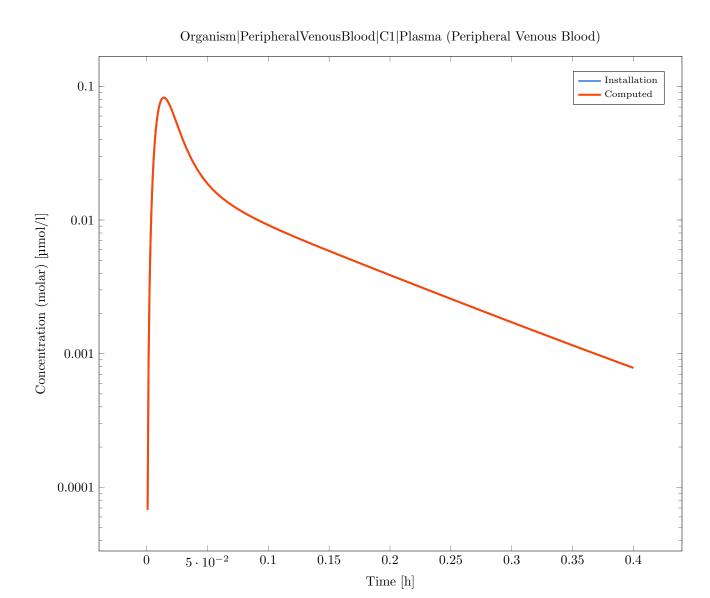


Figure 1.61

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

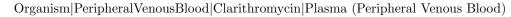
Deviation: 2.84E-4



**Figure 1.62** 

 ${\bf Simulation:\ DDI\_Multiple Combinations\hbox{--}25\_1st\_Mechanismbased\_Mechanismbased}. Result of the validation:\ Valid$ 

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



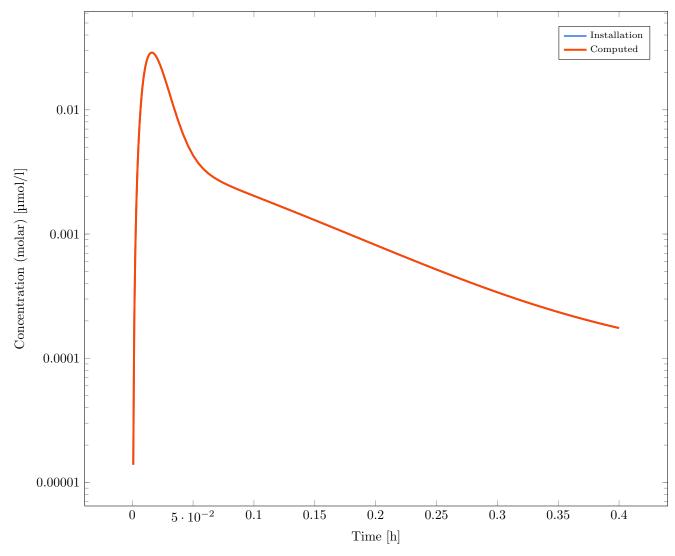
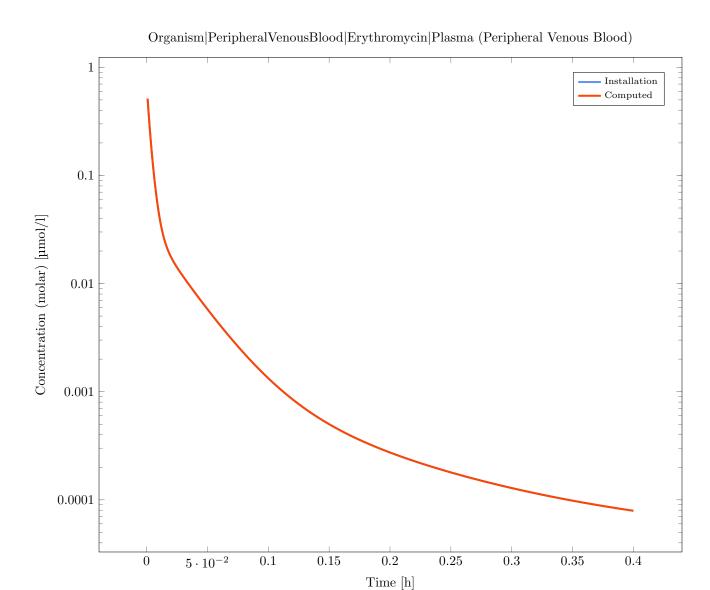


Figure 1.63

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



**Figure 1.64** 

Output Path: Organism |Peripheral Venous<br/>Blood |C1 |Plasma (Peripheral Venous Blood)<br/> Deviation: 2.67E-4

## O.1 Installation Computed O.1 O.001 O.001

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

Figure 1.65

0.15

0.2

Time [h]

0.25

0.3

0.35

0.4

### Simulation: DDI\_MultipleCombinations-26\_1st\_Induction\_Induction

0.1

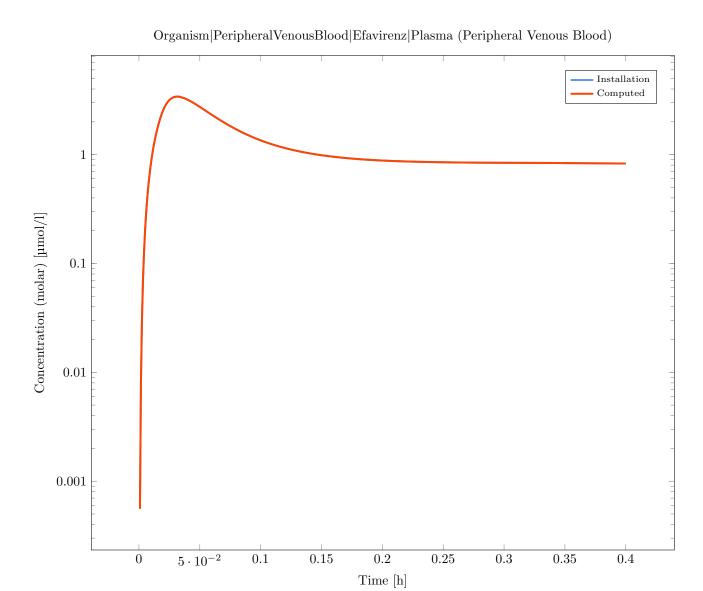
Result of the validation: Valid

0

 $5\cdot 10^{-2}$ 

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

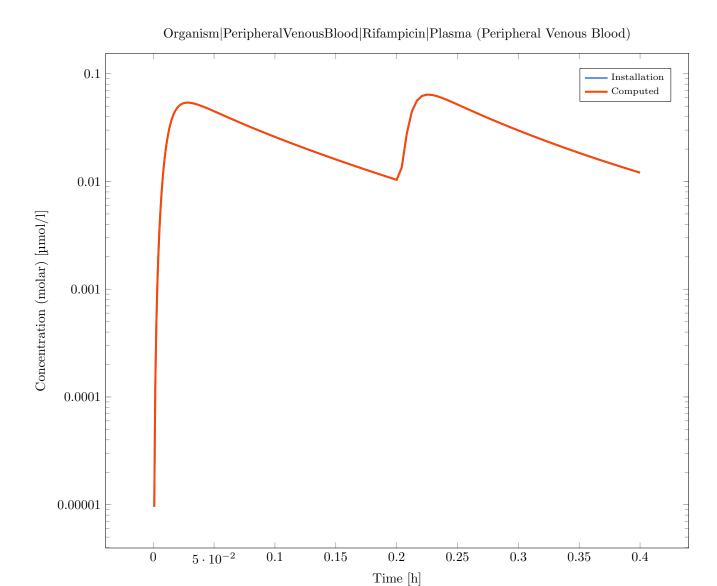
Deviation: 1.75E-4



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

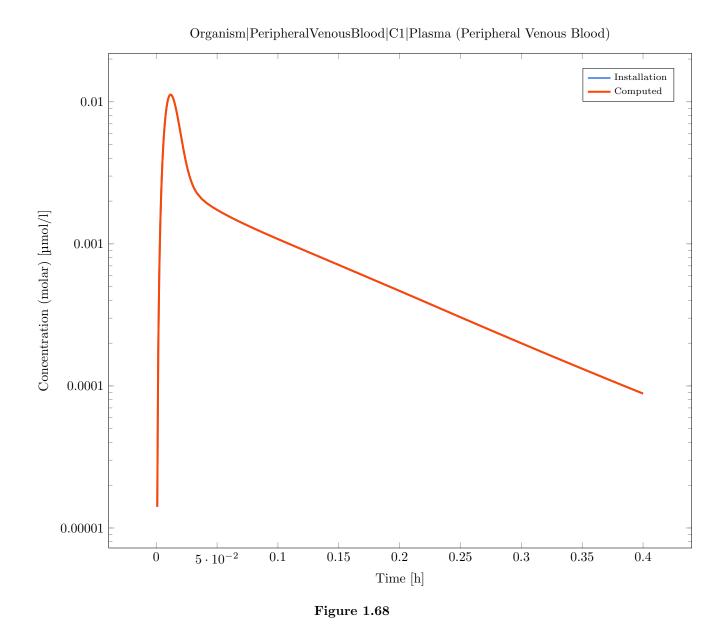
**Figure 1.66** 

Deviation: 3.68E-4



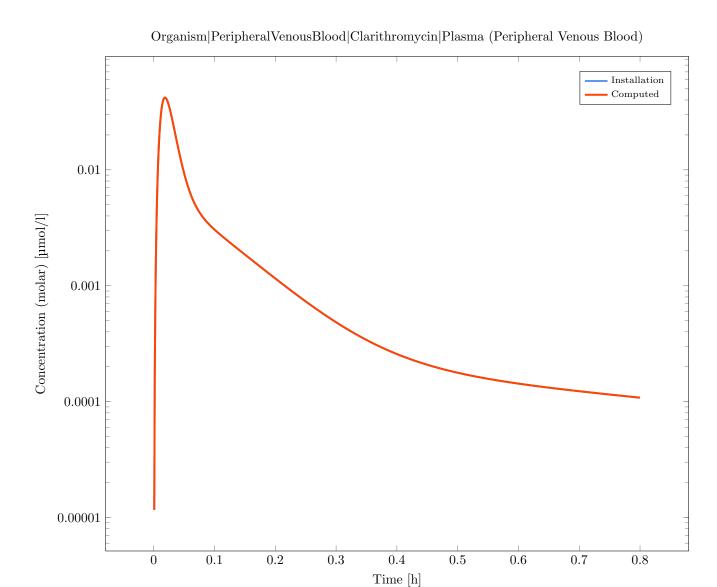
**Figure 1.67** 

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



 $Simulation: \begin{tabular}{ll} DDI\_MultipleCombinations-27\_1st\_Competitive\_Competitive\_Mechanismbased\_Mechan$ 

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



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

Figure 1.69

Deviation: 5.99E-4

## $Organism | Peripheral Venous Blood | Erythromycin | Plasma \; (Peripheral \; Venous \; Blood)$

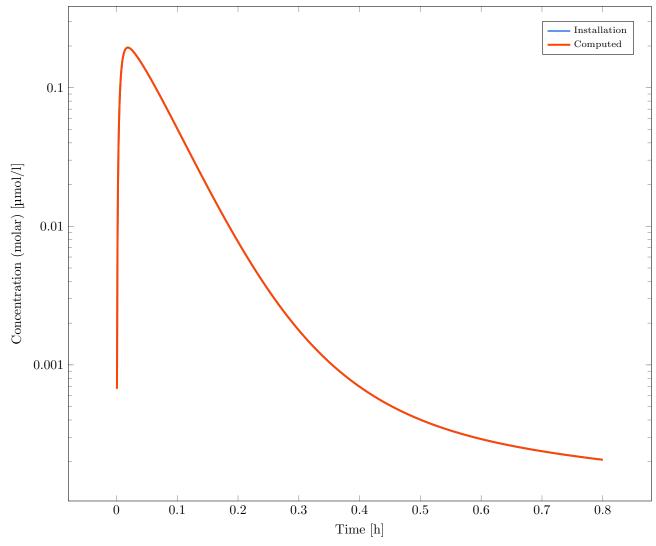
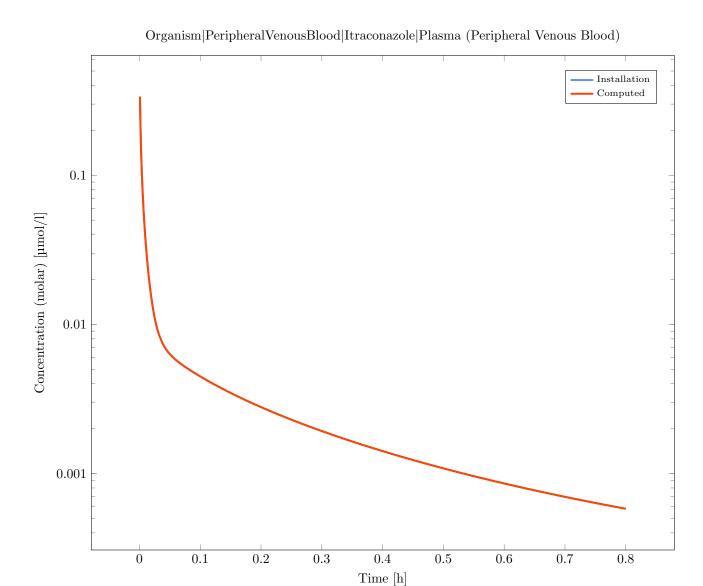


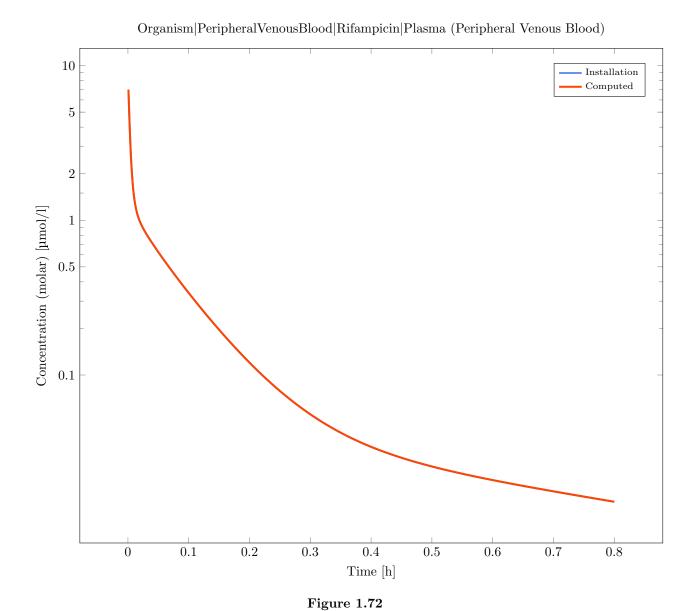
Figure 1.70

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



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

Figure 1.71



Output Path: Organism |Peripheral Venous<br/>Blood |C1 |Plasma (Peripheral Venous Blood)<br/> Deviation: 2.88E-4

# Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood) | Installation | Computed | Com

Figure 1.73

0.4

Time [h]

0.5

0.6

0.7

0.8

0.3

 $Simulation: \ DDI\_Multiple Combinations \textbf{-} 28\_1 st\_Uncompetitive\_Uncompetitive\_Mechanism based\_Mechanism based$ 

Result of the validation: Valid

0

0.1

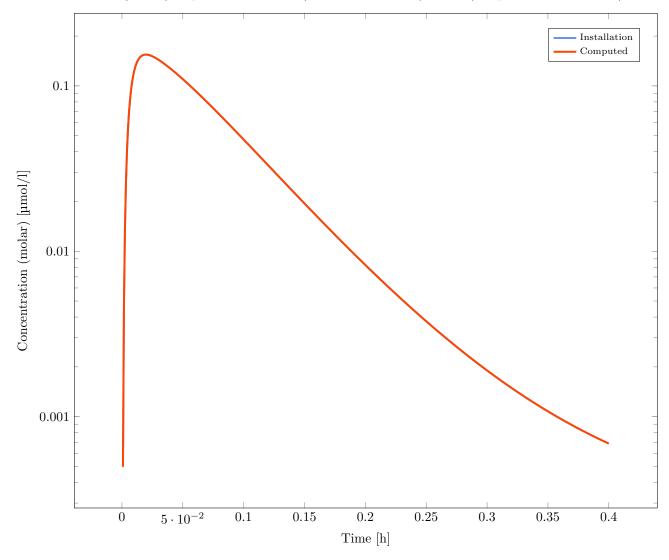
0.2

 $Output\ Path:\ Organism|Peripheral Venous Blood|MechanismBased\_4|Plasma\ (Peripheral\ Venous Blood)$ 

Deviation: 5.99E-4

0.00001

### Organism|PeripheralVenousBlood|MechanismBased\_4|Plasma (Peripheral Venous Blood)



**Figure 1.74** 

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased\_3|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 3.67E-4

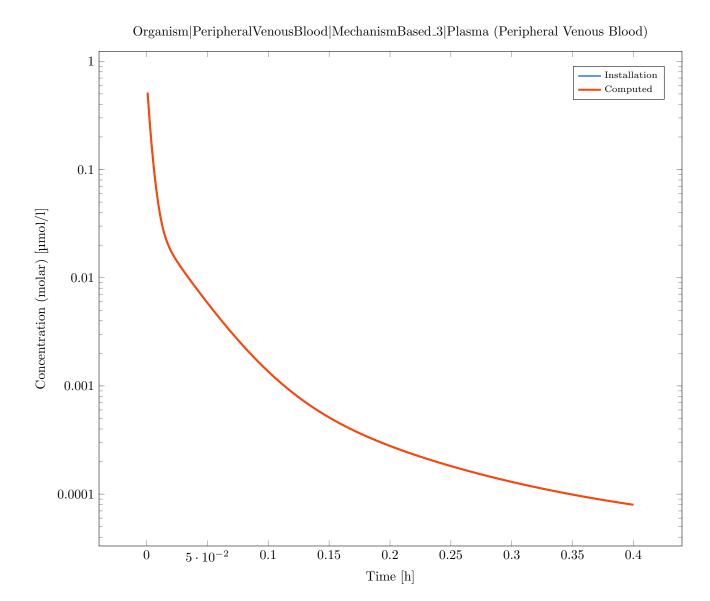
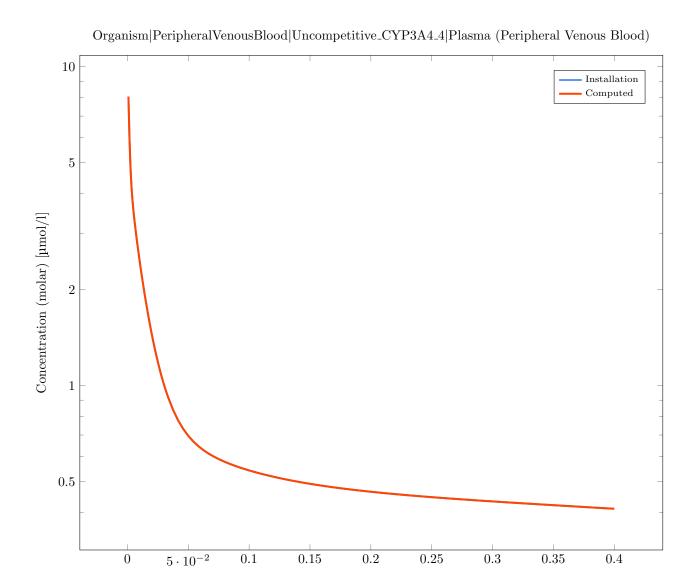


Figure 1.75

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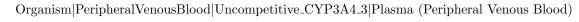


**Figure 1.76** 

Time [h]

 $Output\ Path:\ Organism|Peripheral Venous Blood|Uncompetitive\_CYP3A4\_3|Plasma\ (Peripheral Venous\ Blood)$ 

Deviation: 1.14E-4



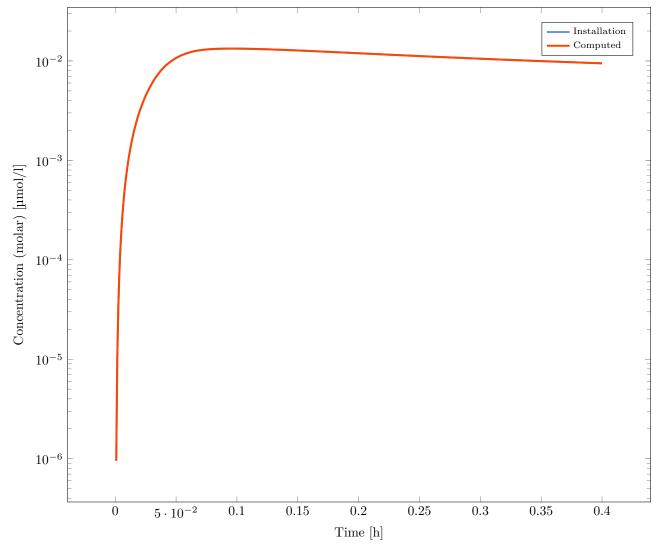
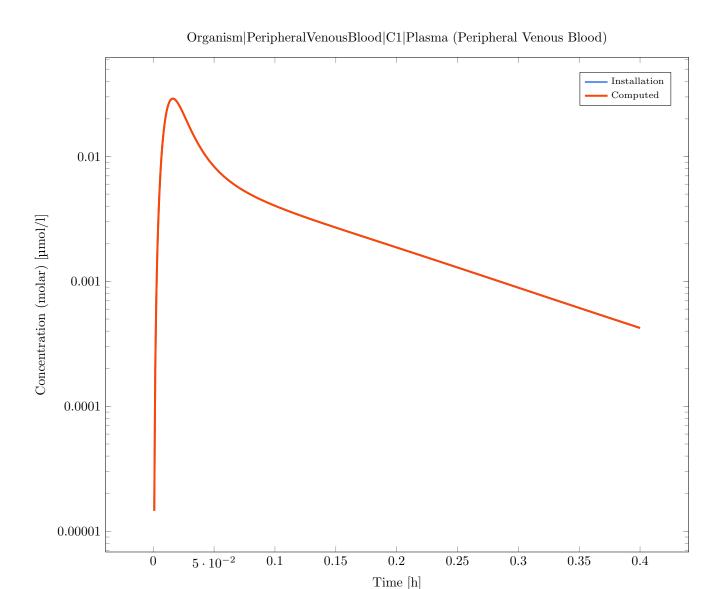


Figure 1.77

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

Deviation: 5.07E-4



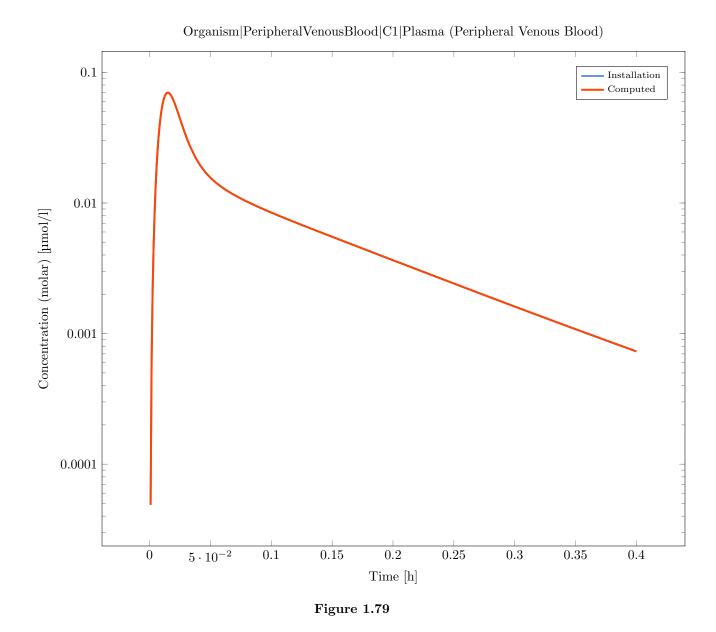
**Figure 1.78** 

 $Simulation: \ DDI\_Multiple Combinations \textbf{-} 29\_1st\_Noncompetitive\_Noncompetitive\_Mechanism based\_Mechanism based$ 

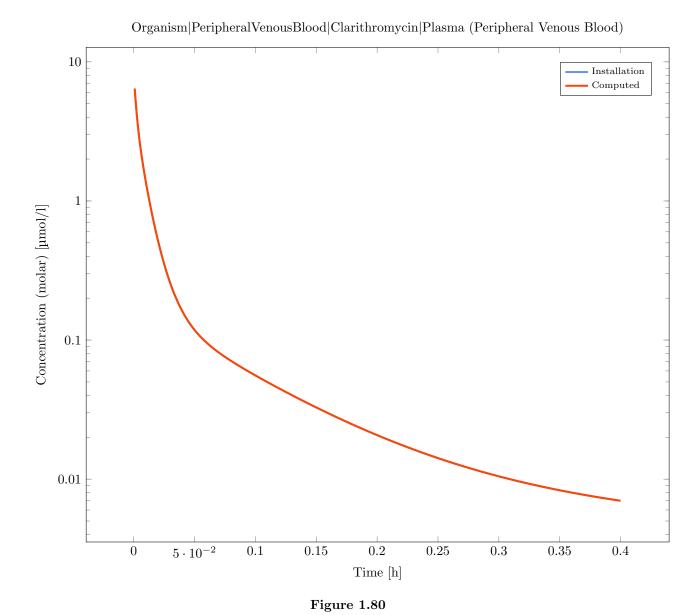
Result of the validation: Valid

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

Deviation: 2.87E-4



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



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

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

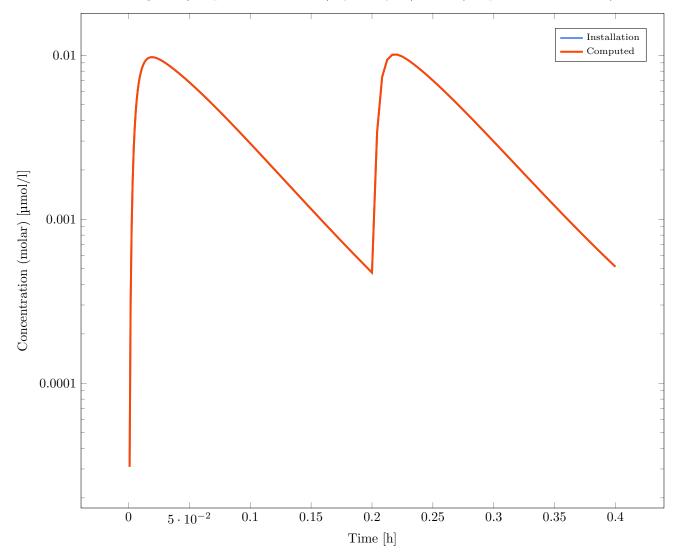
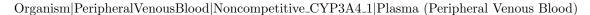
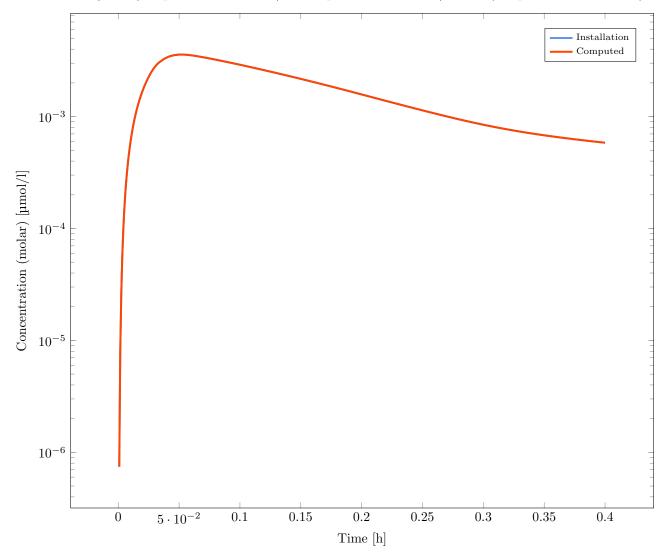


Figure 1.81

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive\_CYP3A4\_1|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 3.19E-4





**Figure 1.82** 

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive\_CYP3A4\_2|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 3.27E-4

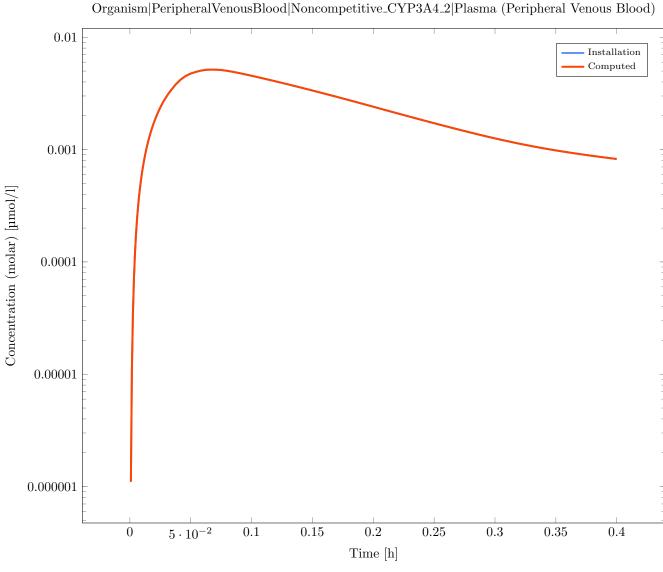


Figure 1.83

 ${\bf Simulation:\ DDI\_Multiple Combinations\hbox{--}30\_1st\_Mixed\_Mechanismbased\_Mechanismbased\_Mechanismbased\_Nesult\ of\ the\ validation:\ Valid$ 

 $Output\ Path:\ Organism|Peripheral Venous Blood|MechanismBased\_4|Plasma\ (Peripheral\ Venous Blood)$ 

Deviation: 5.63E-4



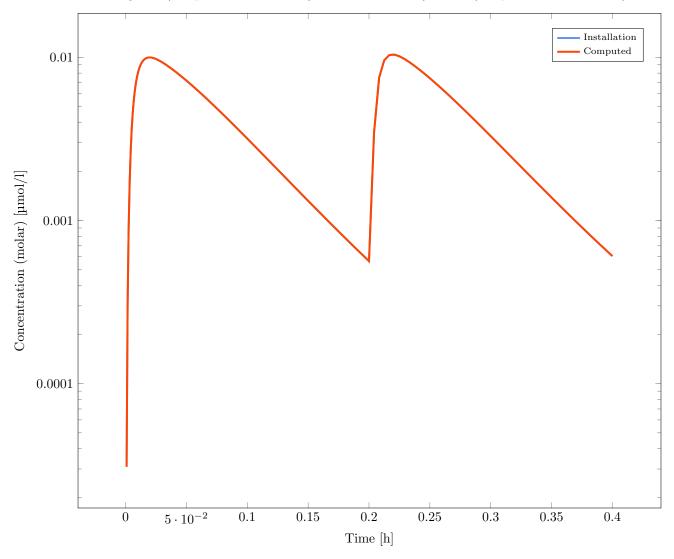


Figure 1.84

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased\_3|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 5.34E-4

### Organism|PeripheralVenousBlood|MechanismBased\_3|Plasma (Peripheral Venous Blood)

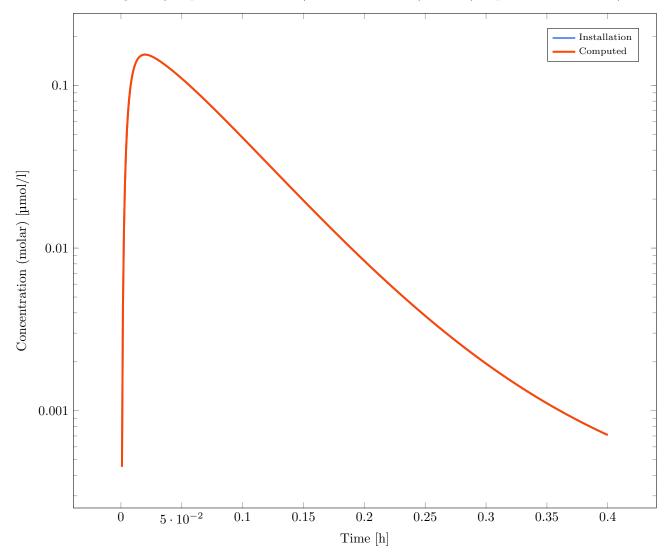
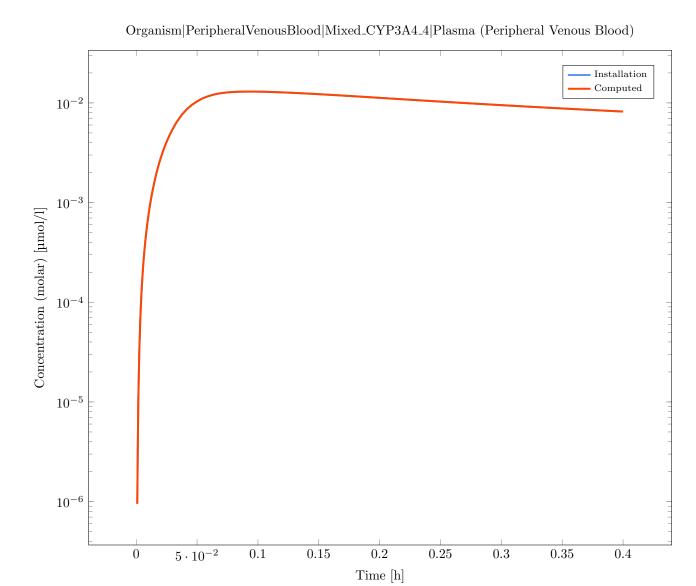


Figure 1.85

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed\_CYP3A4\_4|Plasma\ (Peripheral\ VenousBlood)$ 

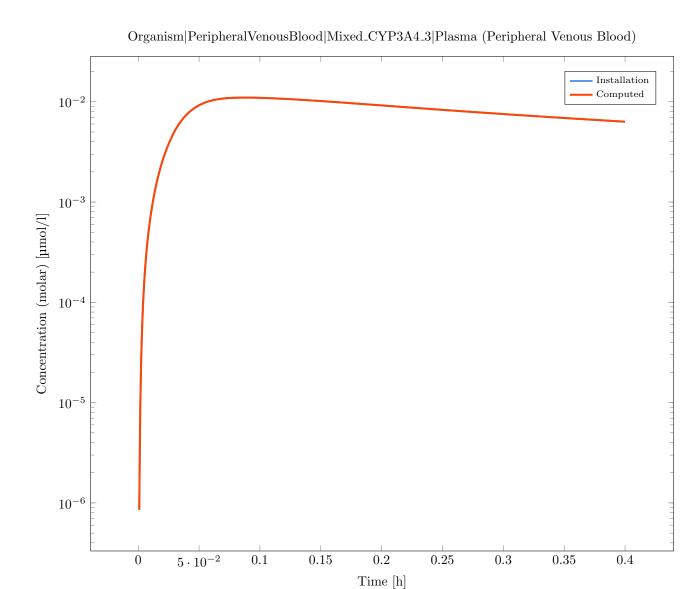
Deviation: 1.10E-4



 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed\_CYP3A4\_3|Plasma\ (Peripheral\ VenousBlood)$ 

**Figure 1.86** 

Deviation: 1.61E-4



**Figure 1.87** 

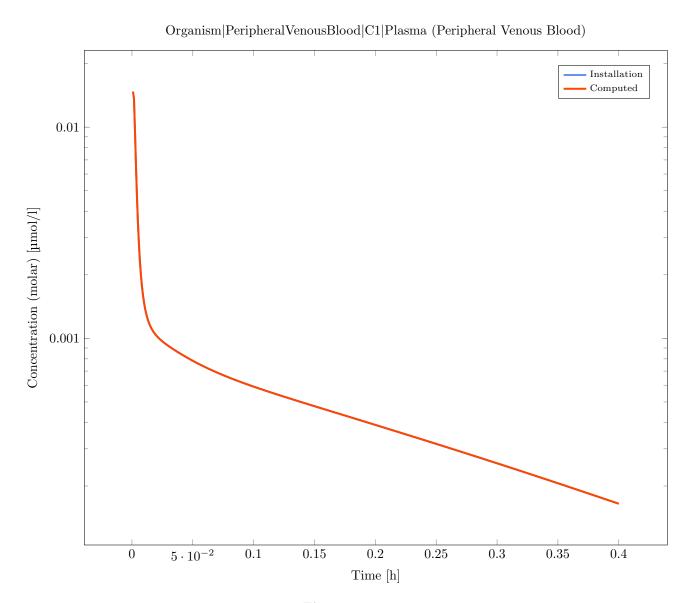
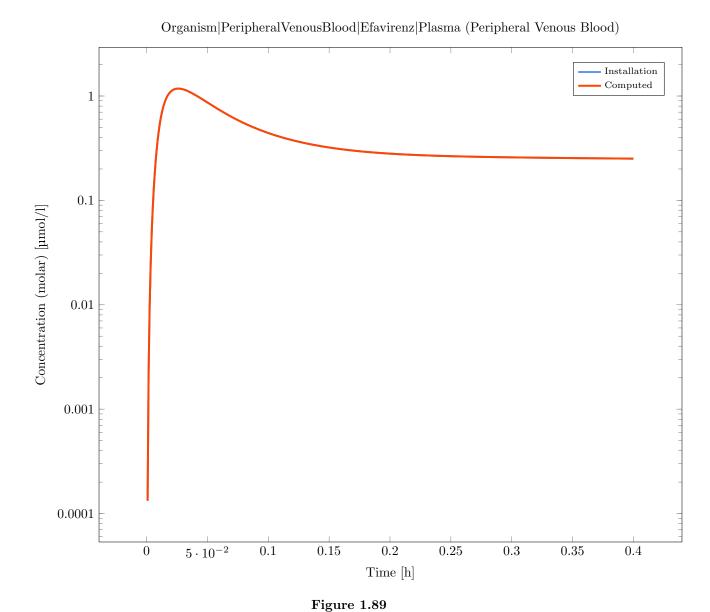


Figure 1.88

 ${\bf Simulation:\ DDI\_Multiple Combinations\hbox{--}31\_1st\_Mechanismbased\_Mechanismbased\_Induction\_Induction} \\ {\bf Result\ of\ the\ validation:\ Valid}$ 

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



 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased\_3|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 6.12E-4

### Organism|PeripheralVenousBlood|MechanismBased\_3|Plasma (Peripheral Venous Blood)

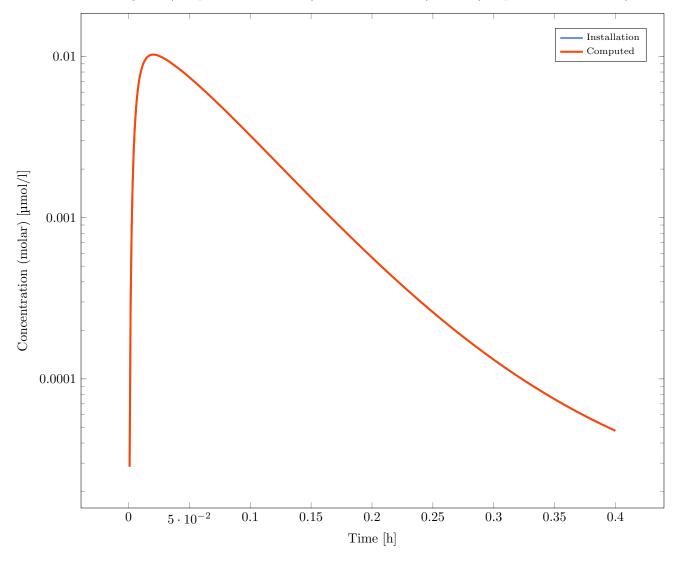


Figure 1.90

 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased\_4|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 6.14E-4

### Organism|PeripheralVenousBlood|MechanismBased\_4|Plasma (Peripheral Venous Blood)

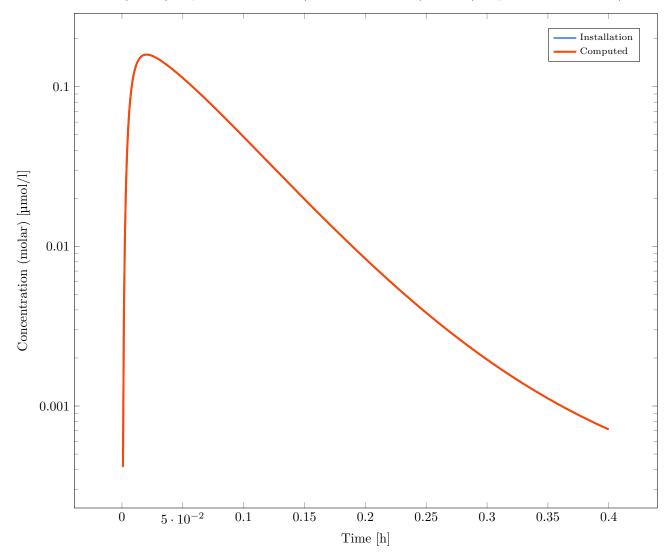


Figure 1.91

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

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

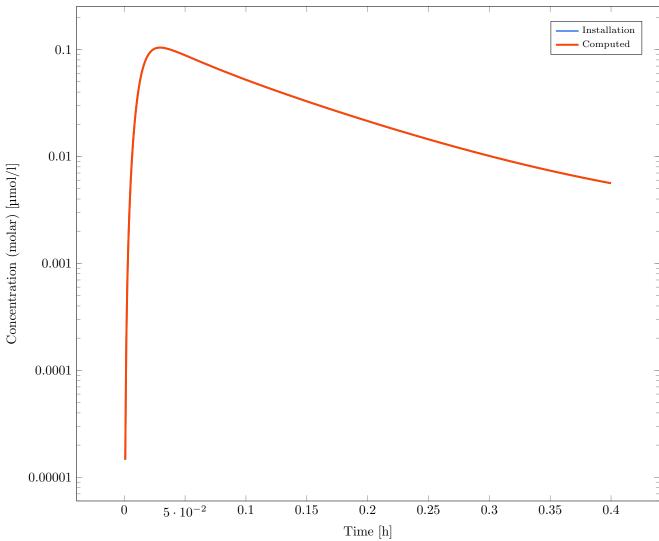


Figure 1.92

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

Deviation: 5.55E-4

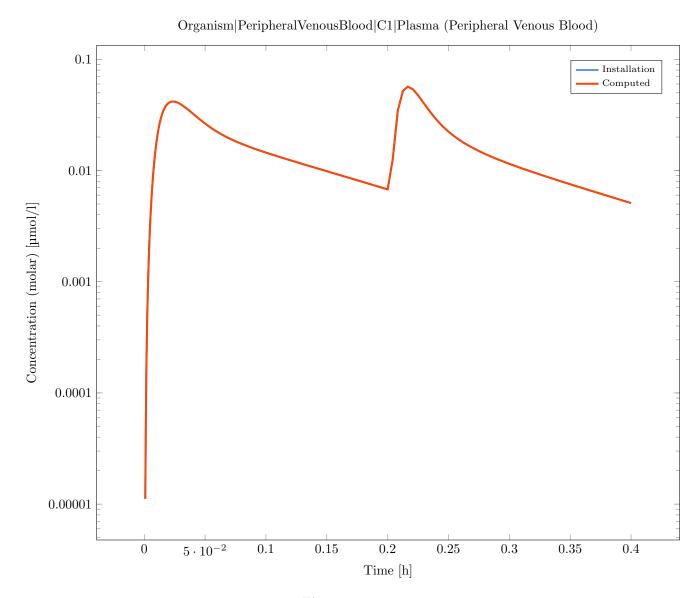


Figure 1.93

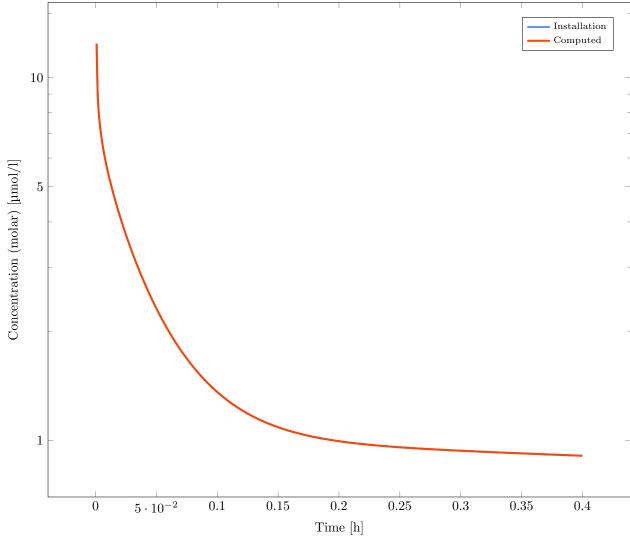
 $Simulation: \ DDI\_MultipleCombinations \textbf{-32\_1st\_All\_DDI\_Types}$ 

Result of the validation: Valid

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

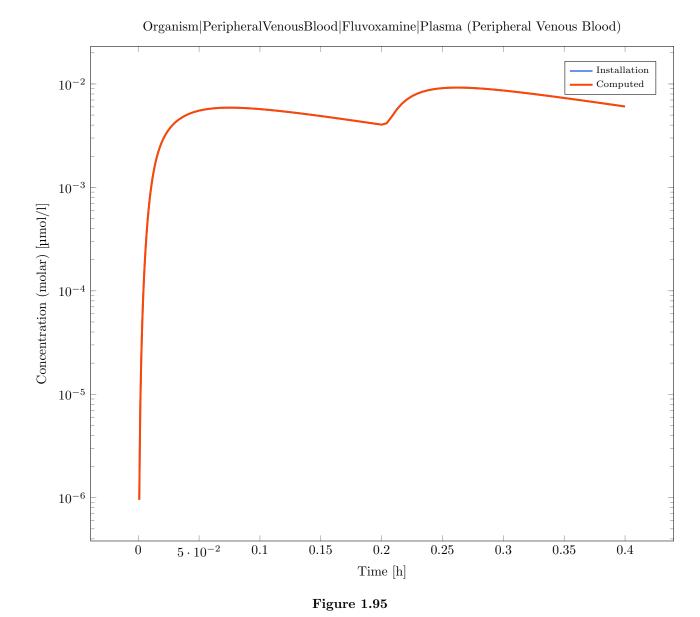
Deviation: 1.92E-4

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



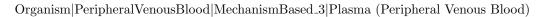
**Figure 1.94** 

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



 $Output\ Path:\ Organism|PeripheralVenousBlood|MechanismBased\_3|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 5.98E-4



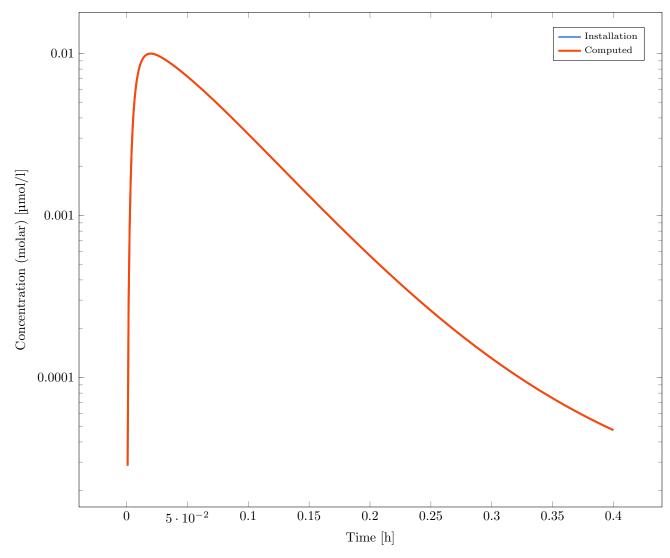


Figure 1.96

 $Output\ Path:\ Organism|PeripheralVenousBlood|Mixed\_CYP3A4\_3|Plasma\ (Peripheral\ VenousBlood)$ 

Deviation: 4.17E-4

# 

Figure 1.97

0.15

0.2

Time [h]

0.25

0.3

0.35

0.4

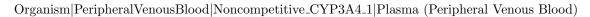
0.1

 $5 \cdot 10^{-2}$ 

 $Output\ Path:\ Organism|Peripheral Venous Blood|Noncompetitive\_CYP3A4\_1|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 4.97E-4

0



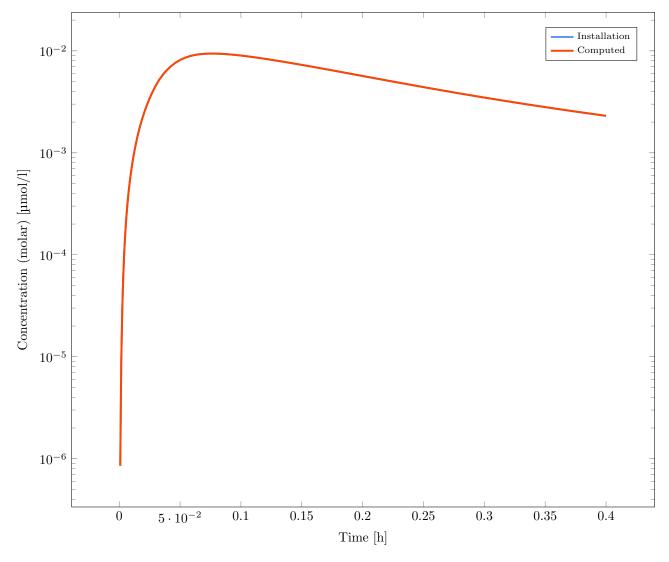


Figure 1.98

 $Output\ Path:\ Organism|PeripheralVenousBlood|Uncompetitive\_CYP3A4\_3|Plasma\ (PeripheralVenous\ Blood)$ 

Deviation: 5.01E-4

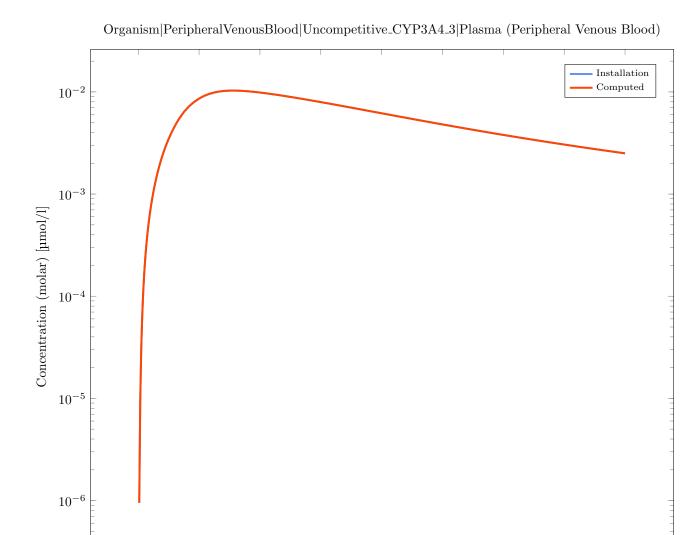


Figure 1.99

0.1

 $5 \cdot 10^{-2}$ 

Output Path: Organism |Peripheral Venous<br/>Blood |C1 |Plasma (Peripheral Venous Blood)<br/> Deviation:  $6.86\hbox{E-}4$ 

0.15

0.2

Time [h]

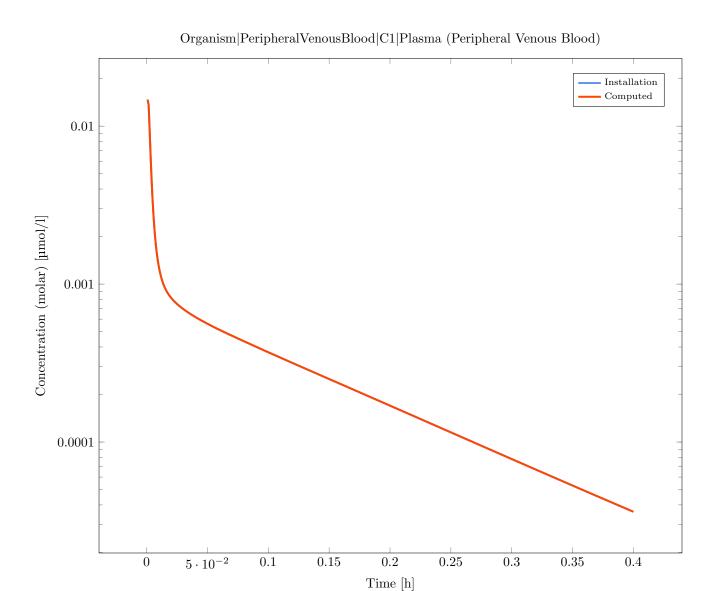
0.25

0.3

0.35

0.4

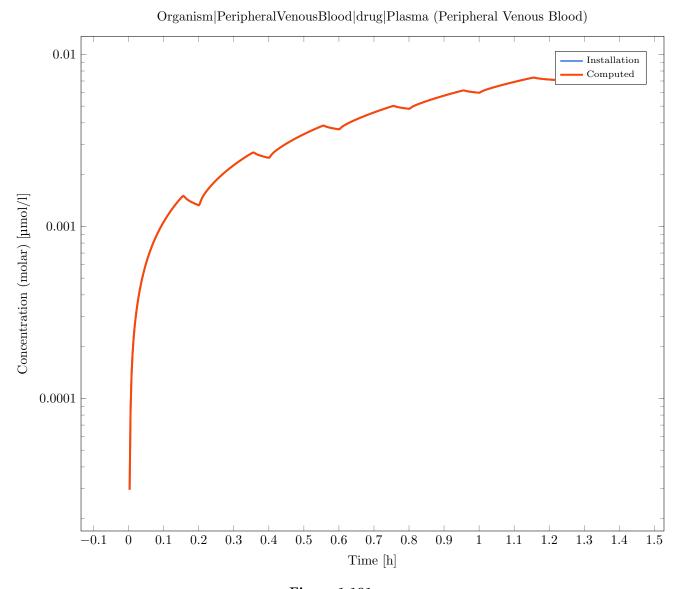
0



**Figure 1.100** 

Simulation: Dog\_MultiORAL\_12\_12\_Dissolved-Dog\_MultiORAL\_12\_12\_Dissolved Result of the validation: Valid

Output Path: Organism |Peripheral Venous<br/>Blood |drug |Plasma (Peripheral Venous Blood) Deviation:<br/> 0



**Figure 1.101** 

 $\begin{tabular}{ll} \bf Simulation: \begin{tabular}{ll} \bf Dog\_MultiORAL\_24\_Dissolved-Dog\_MultiORAL\_24\_$ 

Output Path: Organism |Peripheral Venous<br/>Blood |drug |Plasma (Peripheral Venous Blood) Deviation:<br/> 0

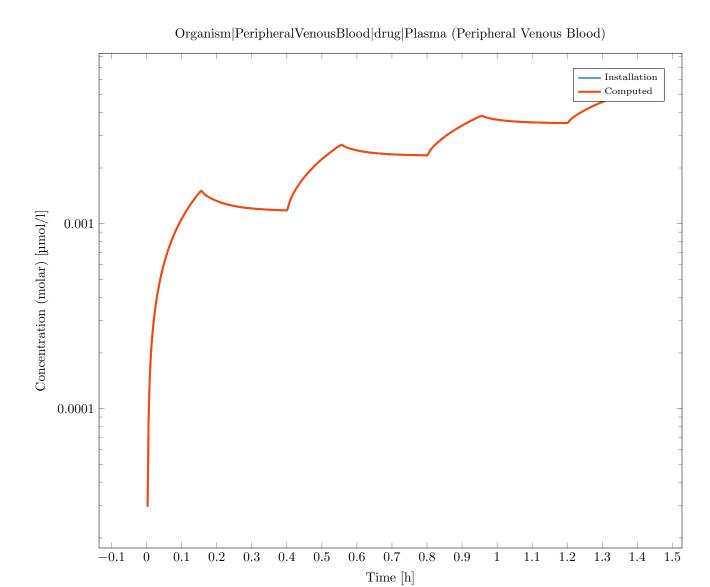


Figure 1.102

 $\begin{tabular}{ll} \bf Simulation: European\_SingleORAL\_Age\_0\_CYP3A4-European\_SingleORAL\_Age\_0\_CYP3$ 

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

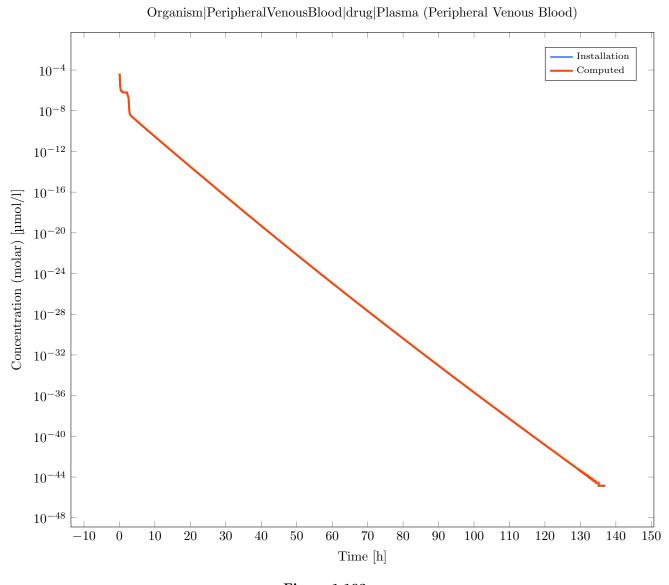
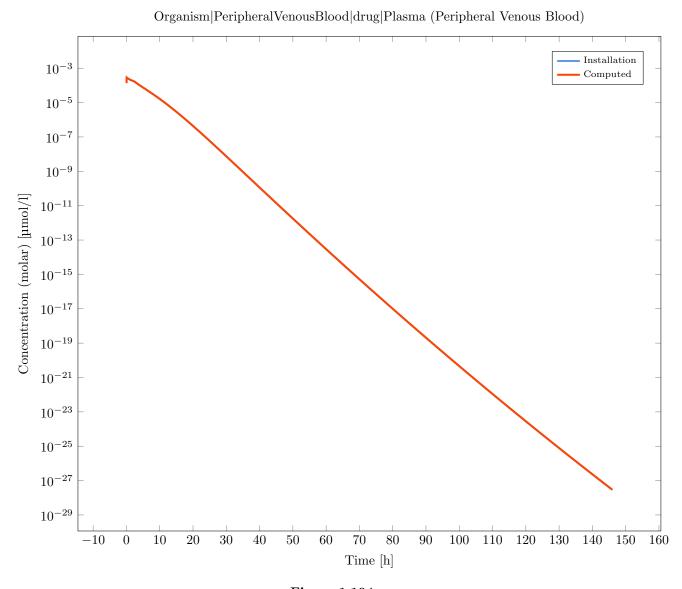


Figure 1.103

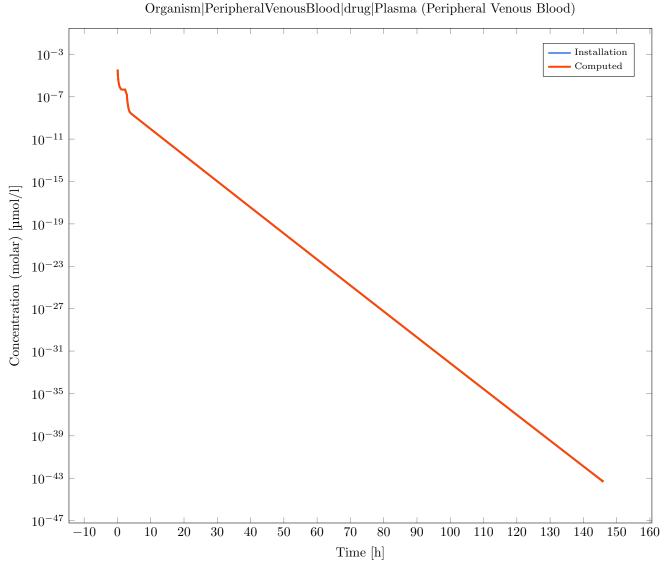
Output Path: Organism |Peripheral Venous<br/>Blood |drug |Plasma (Peripheral Venous Blood)<br/> Deviation:  $8.37 \hbox{E-}7$ 



**Figure 1.104** 

 $\begin{tabular}{ll} \bf Simulation: European\_SingleORAL\_Age\_1\_CYP3A4-European\_SingleORAL\_Age\_1\_CYP3$ 

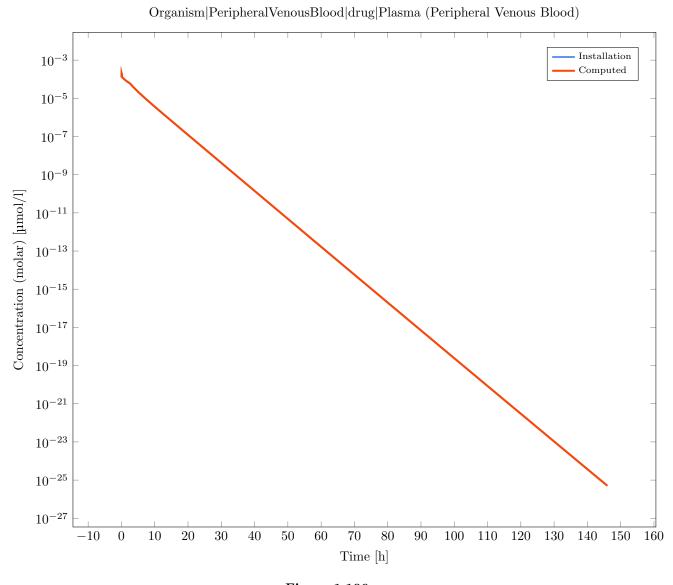
Output Path: Organism |Peripheral Venous<br/>Blood |drug |Plasma (Peripheral Venous Blood)<br/> Deviation:  $1.82 \pm .6$ 



**Figure 1.105** 

 ${\bf Simulation: European\_SingleORAL\_Age\_1\_GFR-European\_SingleORAL\_Age\_1\_GFR} \\ {\bf Result of the \ validation: \ Valid}$ 

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



 ${\bf Figure~1.106}$ 

 ${\bf Simulation: Human\_Competitive Inhibition-Human\_Competitive Inhibition}$ 

Result of the validation: Valid



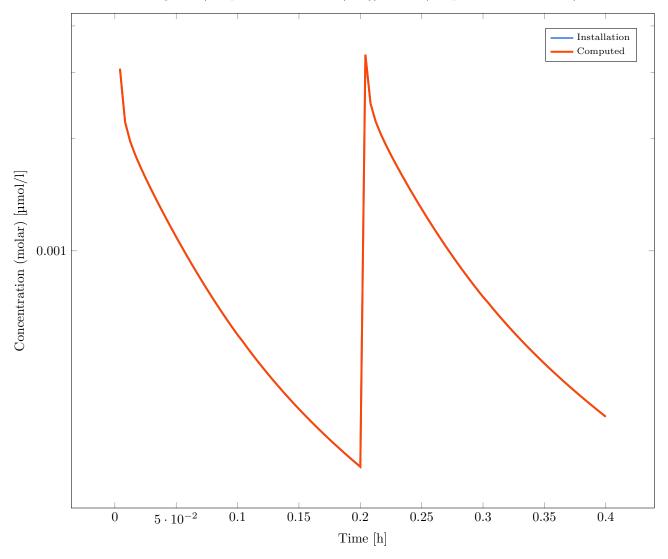
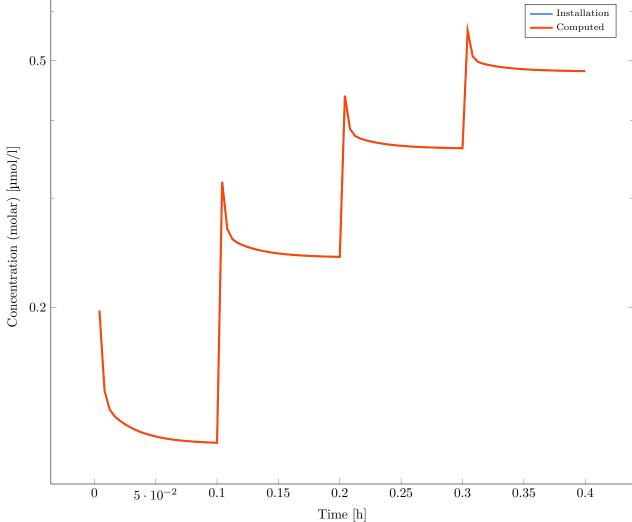


Figure 1.107

Output Path: Organism |PeripheralVenousBlood |<br/>inhibitor |Plasma (Peripheral Venous Blood) | Deviation:<br/> 0

# Organism|PeripheralVenousBlood|inhibitor|Plasma (Peripheral Venous Blood)



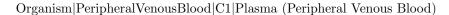
**Figure 1.108** 

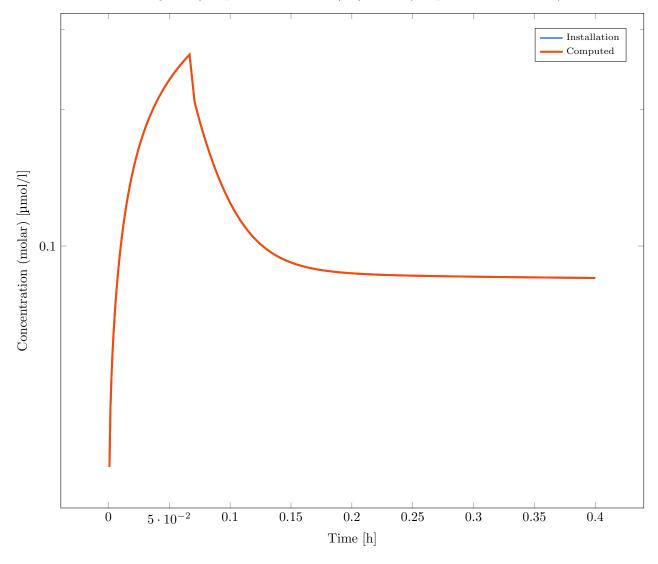
Simulation: Human\_ICRP\_AGP-01\_ICRP\_0y\_Male

Result of the validation: Valid

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

Deviation: 0





**Figure 1.109** 

 $Simulation: \ Human\_ICRP\_AGP-02\_ICRP\_0.05y\_Female$ 

Result of the validation: Valid

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

Deviation: 0

## Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood) 0.5 Installation Computed Concentration (molar) [µmol/l] 0.1 0.1 0.15 0.2 0.25 0.3 0.35

 ${\bf Figure~1.110}$ 

Time [h]

 $Simulation: \ Human\_ICRP\_AGP-03\_ICRP\_0.18y\_Male$ 

 $5\cdot 10^{-2}$ 

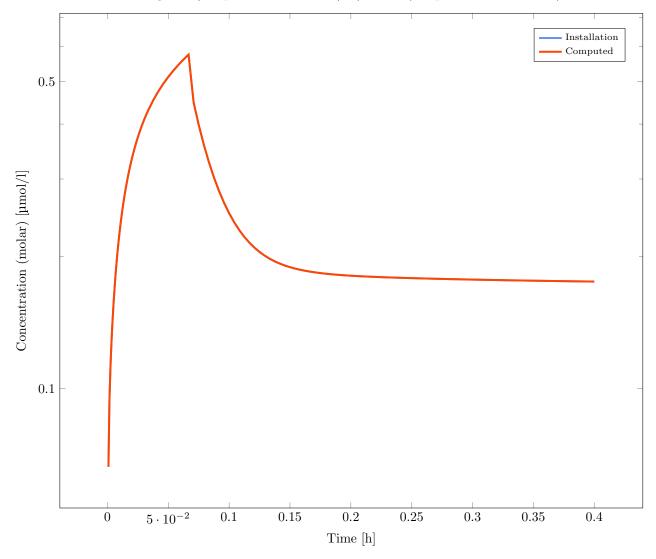
Result of the validation: Valid

0

Output Path: Organism|PeripheralVenousBlood|C1|Plasma (Peripheral Venous Blood) Deviation: 0

0.4





**Figure 1.111** 

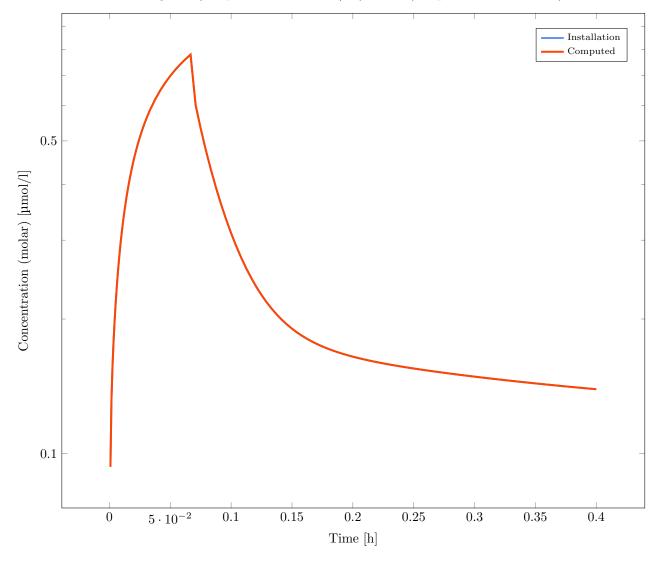
Simulation: Human\_ICRP\_AGP-04\_ICRP\_1y\_Female

Result of the validation: Valid

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

Deviation: 0

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



**Figure 1.112** 

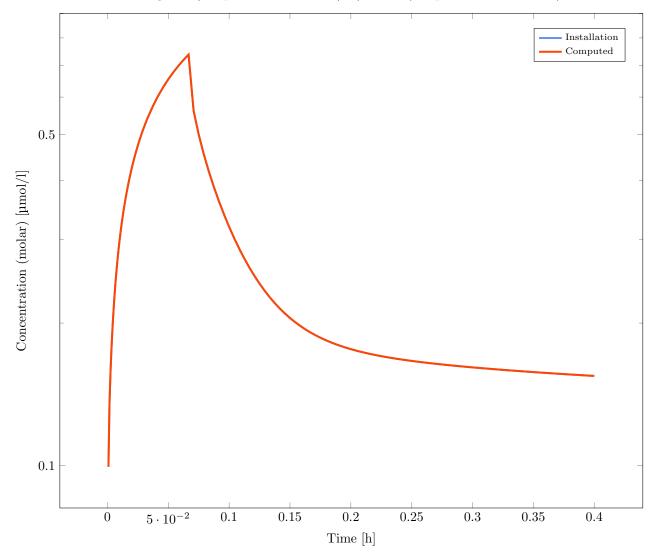
 $Simulation: \ Human\_ICRP\_AGP-05\_ICRP\_12y\_Male$ 

Result of the validation: Valid

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

Deviation: 1.50E-4

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



**Figure 1.113** 

 $Simulation: \ Human\_ICRP\_AGP-06\_ICRP\_30y\_Female$ 

Result of the validation: Valid

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

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

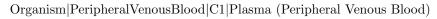


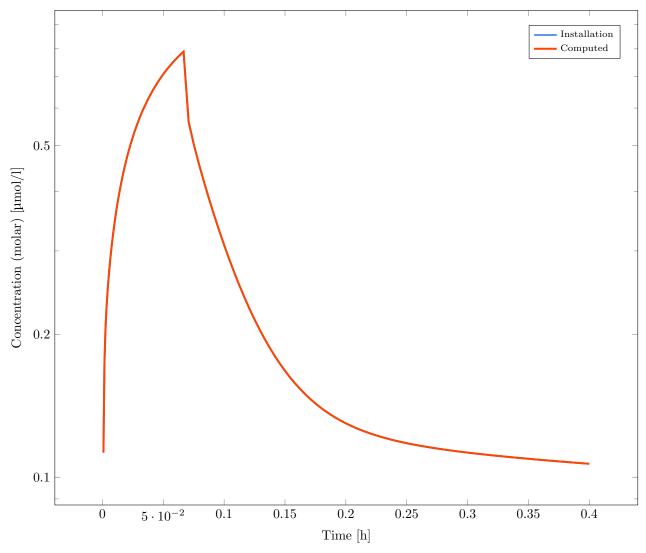
**Figure 1.114** 

 $Simulation: \ Human\_ICRP\_AGP-07\_ICRP\_100y\_Male$ 

Result of the validation: Valid

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



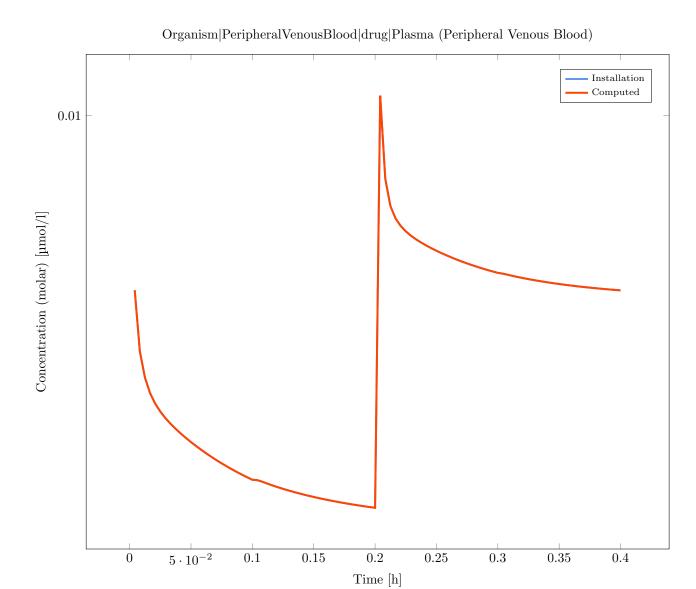


**Figure 1.115** 

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

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

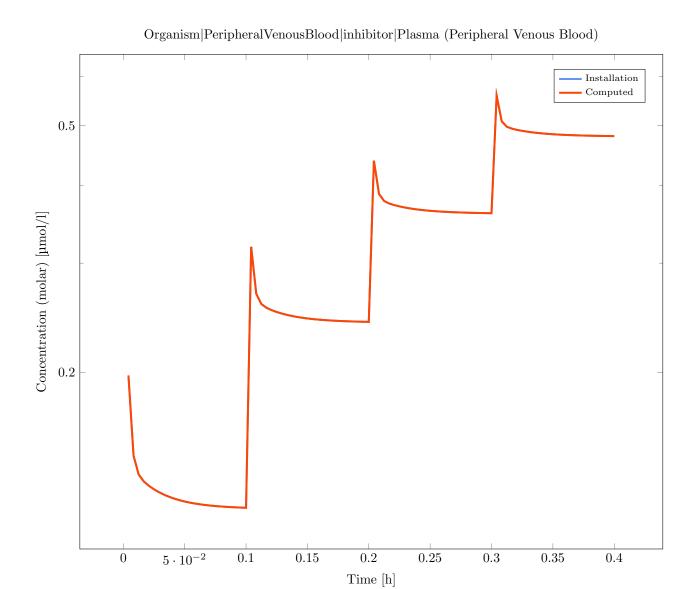
Deviation: 0



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

**Figure 1.116** 

Deviation: 0



**Figure 1.117** 

 $Simulation: \ Human\_MixedInhibition-Human\_MixedInhibition$ 

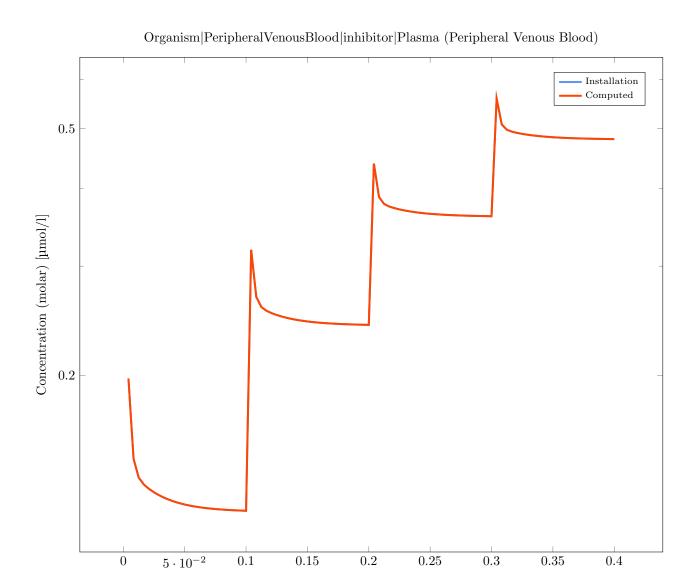
Result of the validation: Valid





**Figure 1.118** 

Output Path: Organism |PeripheralVenousBlood |<br/>inhibitor |Plasma (Peripheral Venous Blood) | Deviation:<br/> 0



**Figure 1.119** 

Time [h]

 $Simulation: \ Human\_MultiIV\_6\_6\_12-Human\_MultiIV\_6\_6\_12$ 

Result of the validation: Valid

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

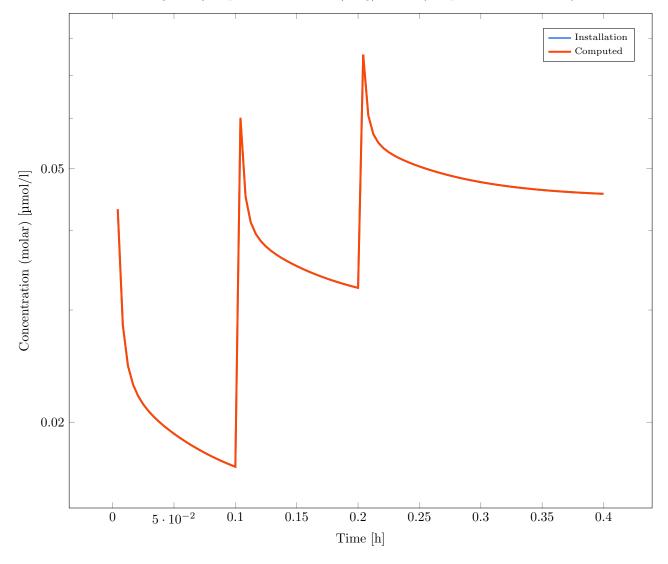


Figure 1.120

 $Simulation: \ Human\_MultiORAL\_6\_12\_12\_Dissolved-Human\_6\_12\_Dissolved-Human\_6\_12\_$ 

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

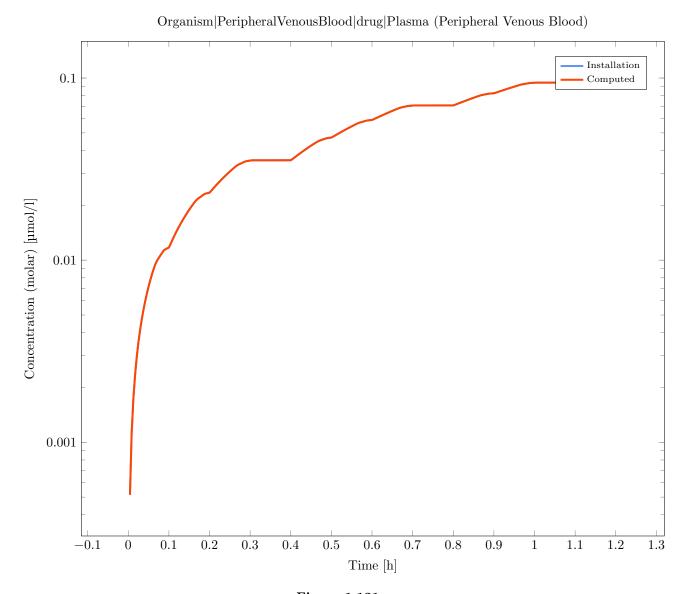


Figure 1.121

 $Simulation: Human\_MultiORAL\_6\_12\_12\_Dissolved-Human\_MultiORAL\_6\_12\_12\_Dissolved\_absorption\_sink\_conditions$ 

Result of the validation: Valid

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

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Figure 1.122

 $Simulation: Human\_MultiORAL\_6\_12\_12\_Dissolved-Human\_MultiORAL\_6\_12\_12\_Dissolved\_EHC\_continuous\_fraction\_0.5$ 

Result of the validation: Valid

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

Deviation: 1.05E-7



Figure 1.123

 $Simulation: Human\_MultiORAL\_6\_12\_12\_Dissolved-Human\_MultiORAL\_6\_12\_12\_Dissolved\_EHC\_continuous\_fraction\_1$ 

Result of the validation: Valid

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

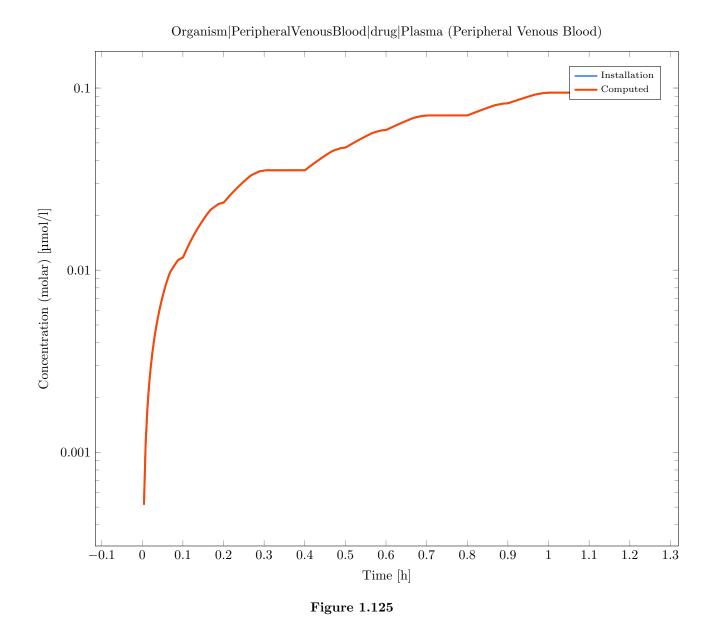
Deviation: 1.05E-7



Figure 1.124

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<br/>Blood |drug |Plasma (Peripheral Venous Blood)<br/> Deviation:  $1.05\mbox{E-}7$ 



 $Simulation: \ Human\_MultiORAL\_6\_12\_12\_Dissolved-Human\_MultiORAL\_6\_12\_12\_Dissolved\_solubility \ Result of the validation: \ Valid$ 

Output Path: Organism |Peripheral Venous<br/>Blood |drug |Plasma (Peripheral Venous Blood)<br/> Deviation: 9.74E-8

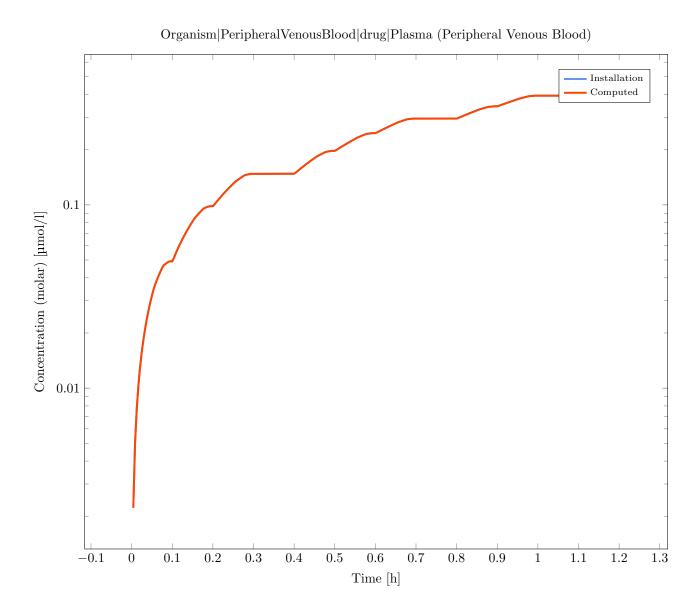


Figure 1.126

 ${\bf Simulation: \ Human\_Multiple IV\_Binding-Human\_Multiple IV\_Binding}$ 

Result of the validation: Valid



Figure 1.127

 ${\bf Simulation: \ Human\_Multiple IV\_Efflux Basolateral-Human\_Multiple IV\_Efflux Basolateral-Result \ of the \ validation: \ Valid$ 

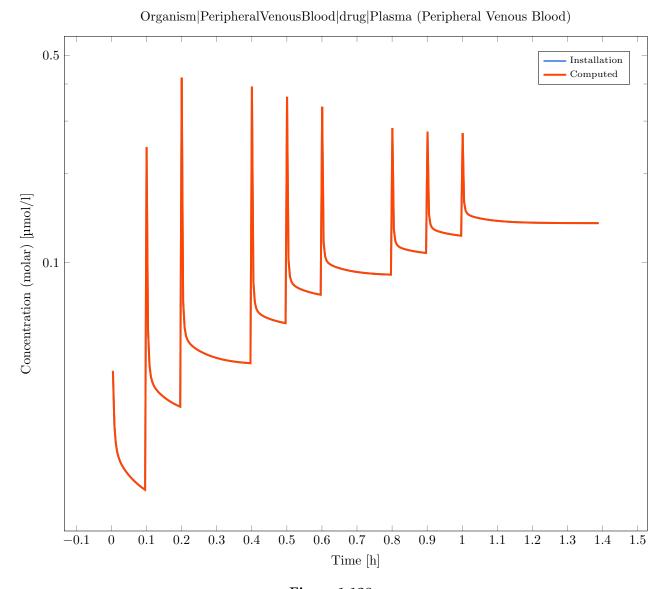


Figure 1.128

 $Simulation: \ Human\_MultipleIV\_Efflux-Human\_MultipleIV\_Efflux$ 

Result of the validation: Valid

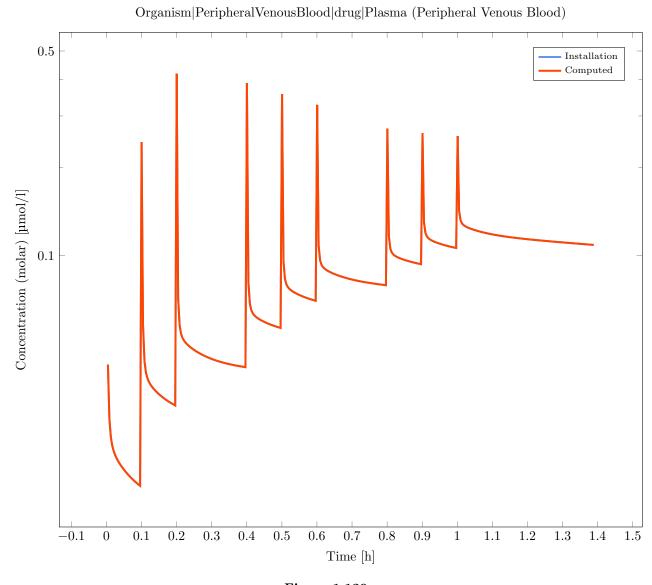


Figure 1.129

 ${\bf Simulation: \ Human\_Multiple IV\_Influx Basolateral-Human\_Multiple IV\_Influx Basolateral-Result \ of the \ validation: \ Valid$ 

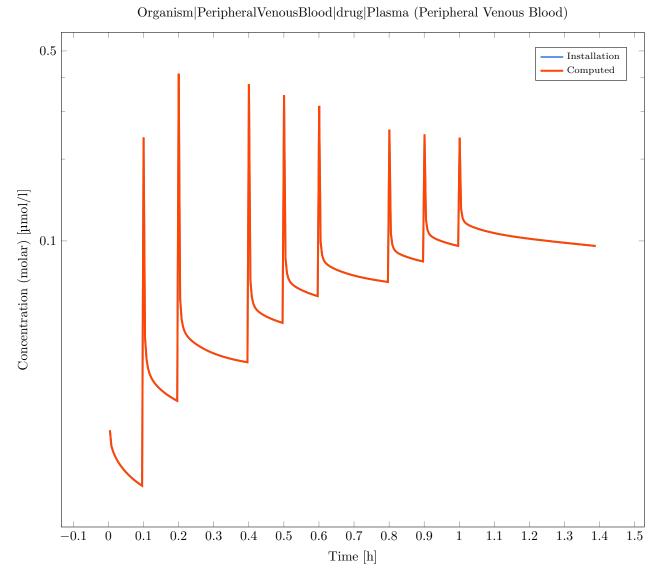


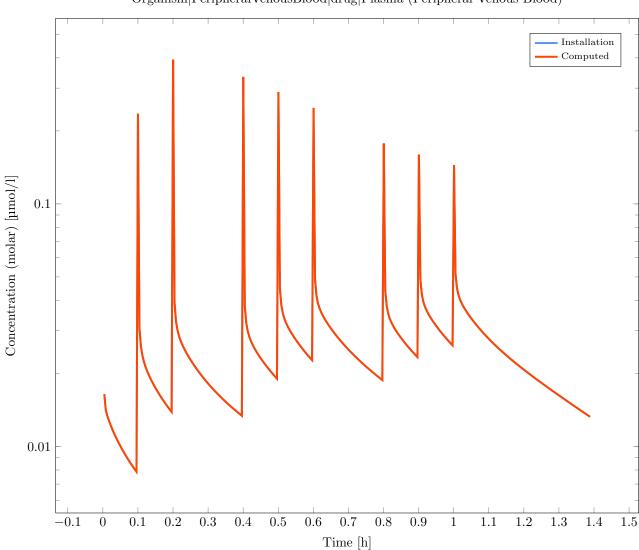
Figure 1.130

 $Simulation: \ Human\_MultipleIV\_Influx-Human\_MultipleIV\_ActiveInflux$ 

Result of the validation: Valid

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

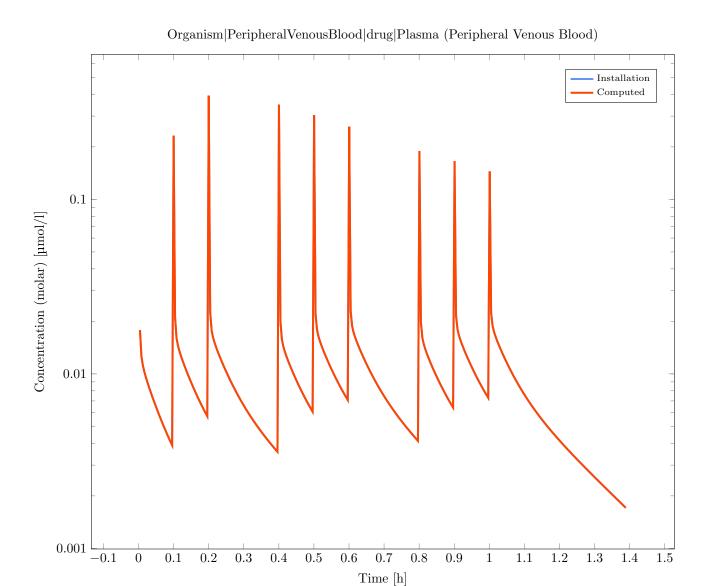
Deviation: 3.51E-5



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

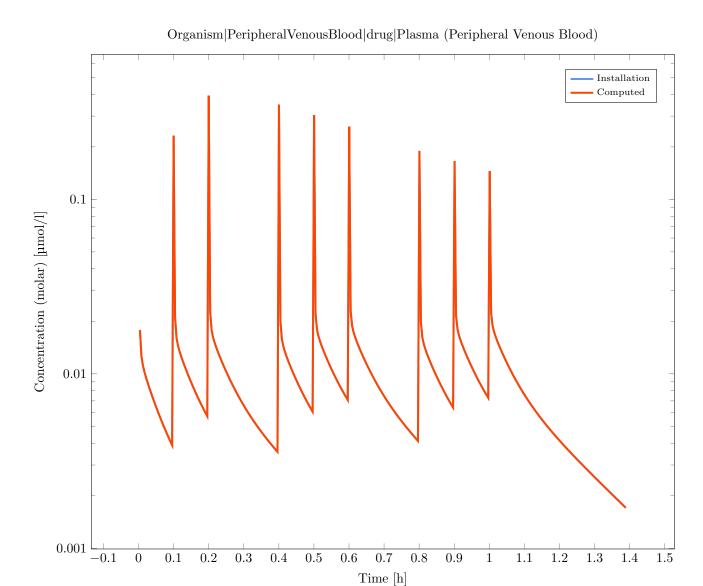
**Figure 1.131** 

 ${\bf Simulation: \ Human\_Multiple IV\_Metabolizm Binding-Human\_Multiple IV\_Metabolizm Binding \ Result \ of \ the \ validation: \ Valid }$ 



 ${\bf Figure~1.132}$ 

 ${\bf Simulation: \ Human\_Multiple IV\_Metabolizm-Human\_Multiple IV\_Metabolizm.} \\ {\bf Result \ of \ the \ validation: \ Valid}$ 



**Figure 1.133** 

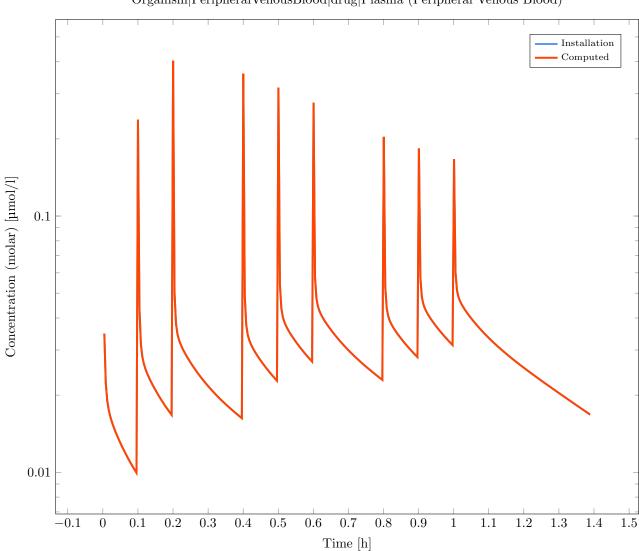
 ${\bf Simulation: \ Human\_Multiple IV\_PGPB a solateral-Human\_Multiple IV\_PGPB a solater$ 



**Figure 1.134** 

 $Simulation: \ Human\_MultipleIV\_PGP-Human\_MultipleIV\_PGP$ 

Result of the validation: Valid

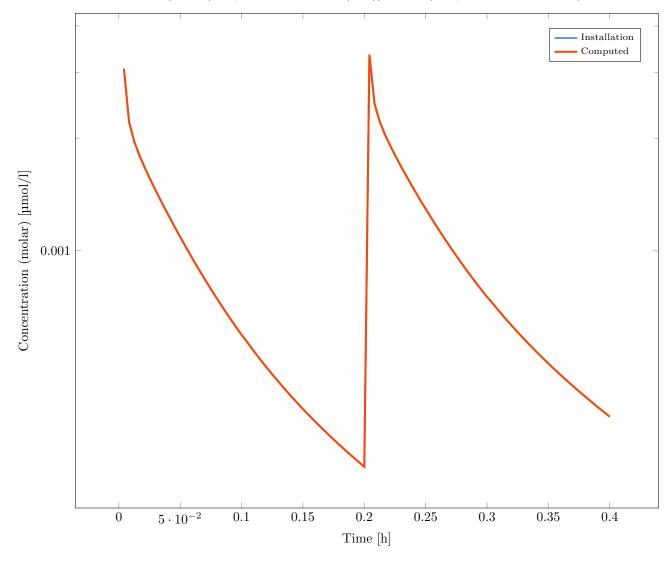


 $Organism|Peripheral Venous Blood|drug|Plasma\ (Peripheral Venous\ Blood)$ 

Figure 1.135

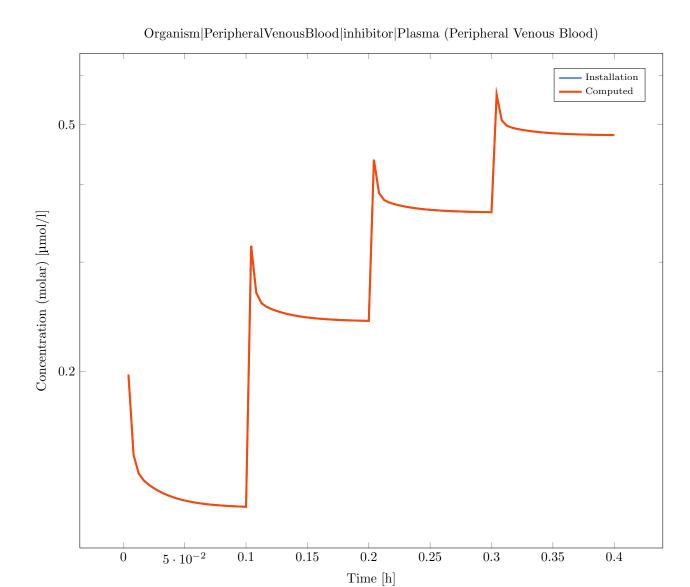
 ${\bf Simulation: \ Human\_NonCompetitive Inhibition-Human\_NonCompetitive Inhibition} \\ {\bf Result \ of \ the \ validation: \ Valid}$ 

### $Organism|Peripheral Venous Blood|drug|Plasma\ (Peripheral Venous\ Blood)$



 $Figure \ 1.136$ 

Output Path: Organism |PeripheralVenousBlood |<br/>inhibitor |Plasma (Peripheral Venous Blood) | Deviation:<br/> 0



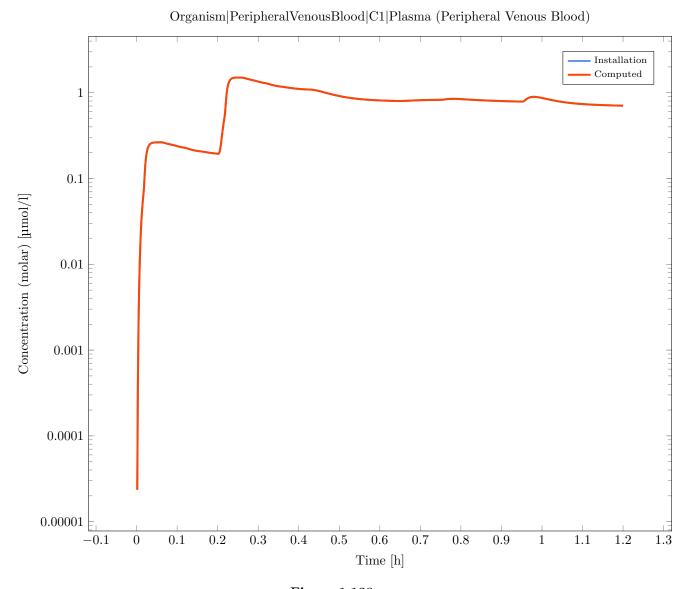
**Figure 1.137** 

 $Simulation: \ Human\_Oral\_BiDaily\_Table Formulation-S1\_suspension$ 

Result of the validation: Valid

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

Deviation: 5.83E-5



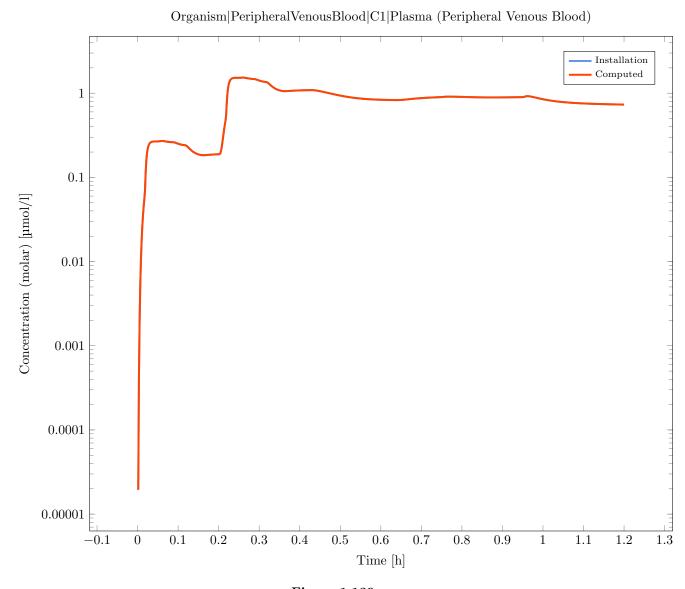
 ${\bf Figure~1.138}$ 

 $Simulation: Human\_Oral\_BiDaily\_Table Formulation-S2\_NoSuspension$ 

Result of the validation: Valid

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

Deviation: 0



 ${\bf Figure~1.139}$ 

Simulation: Human\_pH\_SolubilityTable-S1\_Table

Result of the validation: Valid

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

Deviation: 1.12E-5

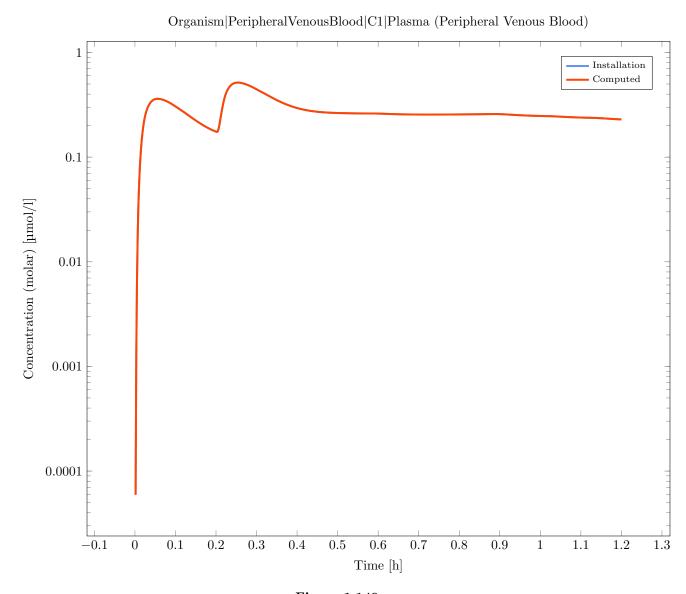


Figure 1.140

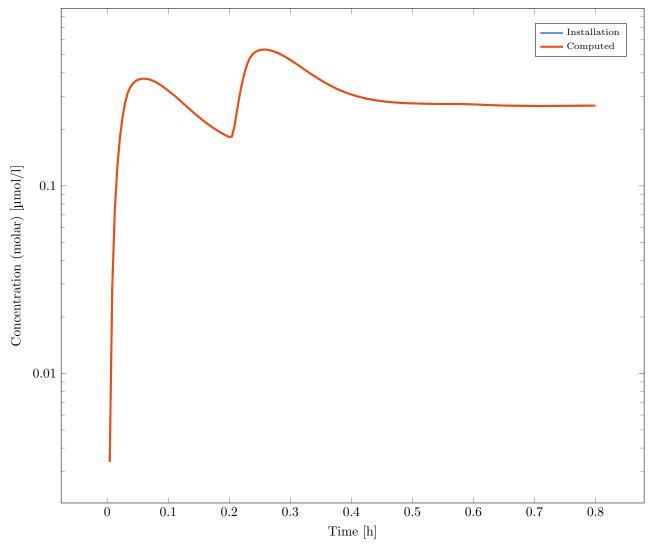
Simulation: Human\_pH\_SolubilityTable-S2\_Measurement

Result of the validation: Valid

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

Deviation: 0

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



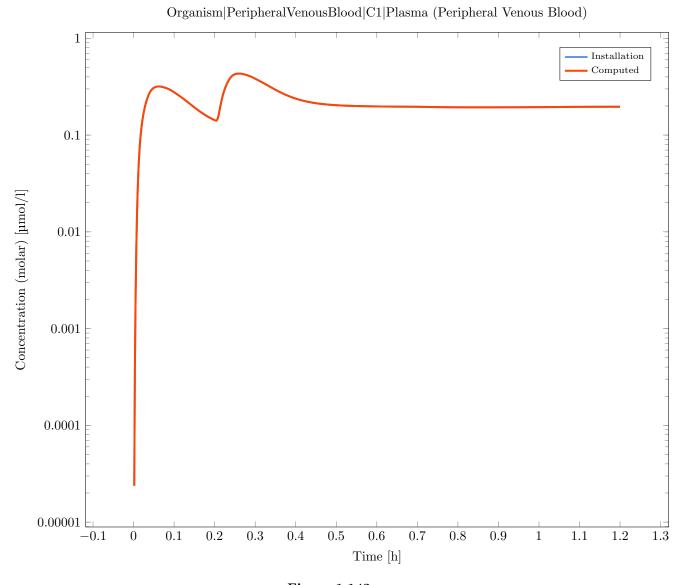
**Figure 1.141** 

 $Simulation: \ Human\_pH\_SolubilityTable\_SolubilityChanged$ 

Result of the validation: Valid

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

Deviation: 3.58E-6



 ${\bf Figure~1.142}$ 

 ${\bf Simulation: \ Human\_pH\_SolubilityTable\_S4\_Table\_SolubilityTableChanged \ Result\ of\ the\ validation:\ Valid}$ 

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

Deviation: 8.65E-8

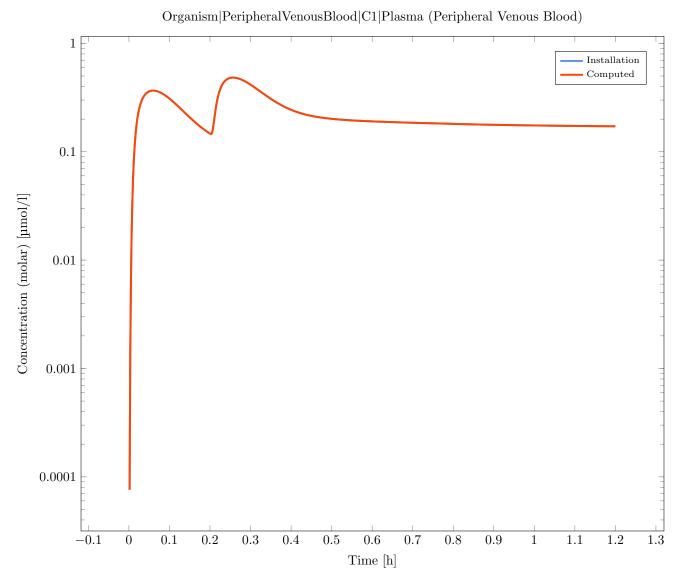
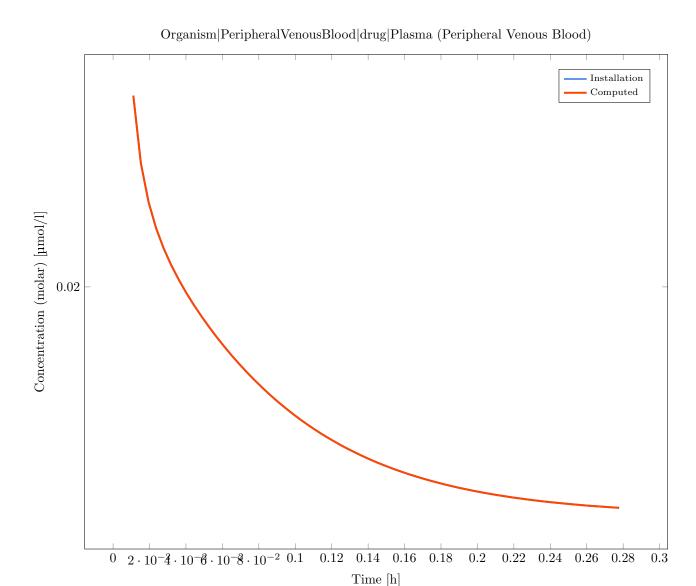


Figure 1.143

 ${\bf Simulation: \ Human\_Single IV\_Configuration-Human\_Single IV\_Configuration}. \\ {\bf Result \ of \ the \ validation: \ Valid}$ 

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

Deviation: 0



**Figure 1.144** 

 $Simulation: \ Human\_Single IV-Human\_Single IV$ 

Result of the validation: Valid

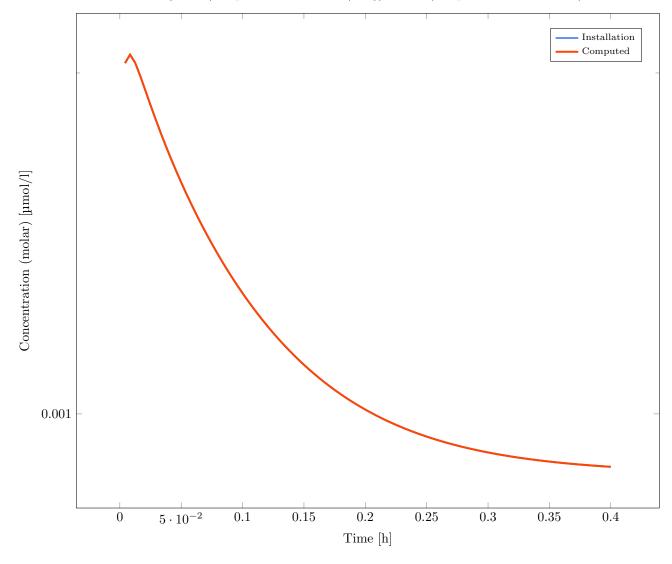
### Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood)



**Figure 1.145** 

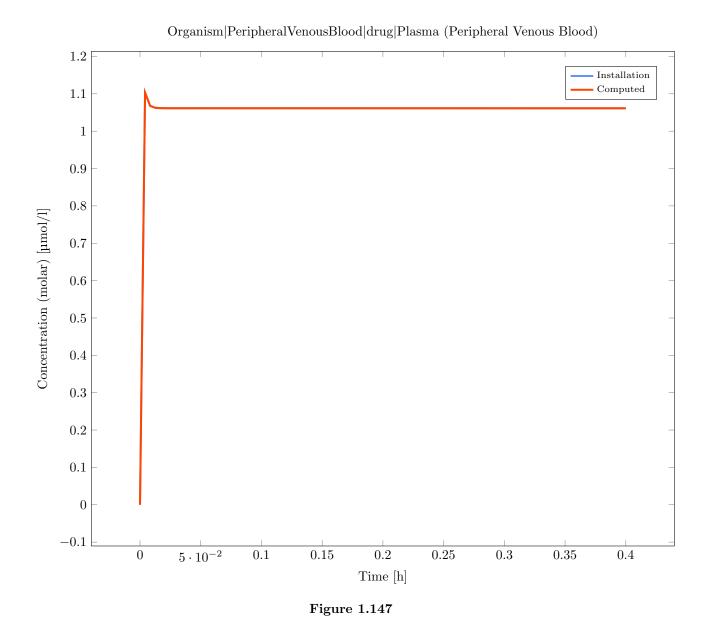
Simulation: Human\_SingleIV-Human\_SingleIV\_MW\_200\_fu\_0.2\_LogP\_5 Result of the validation: Valid

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

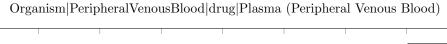


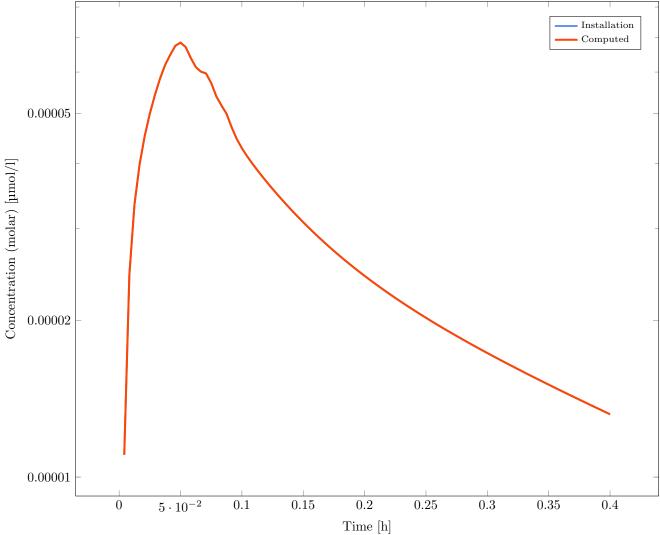
**Figure 1.146** 

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 1.148** 

 $Simulation: Human\_SingleORAL\_Dissolved\_PlasmaClearance-Human\_Singl$ 

Result of the validation: Valid

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



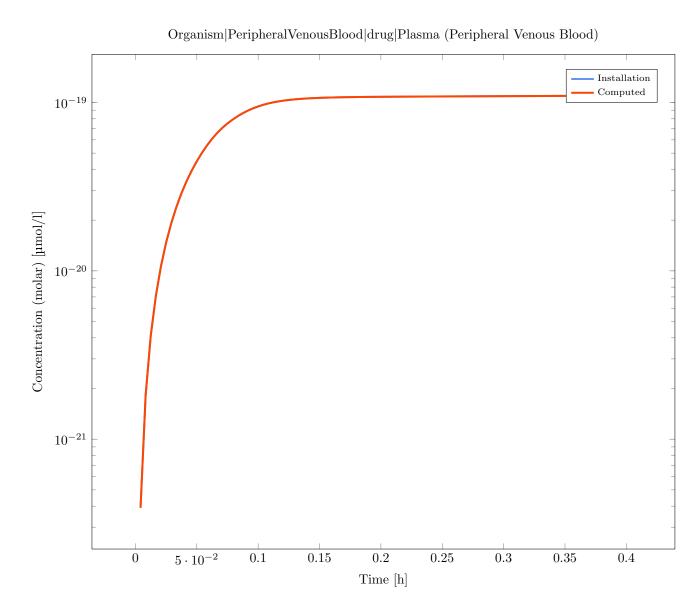
**Figure 1.149** 

 $Simulation: Human\_SingleORAL\_Dissolved\_PlasmaClearance-Human\_Singl$ 

Result of the validation: Valid

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

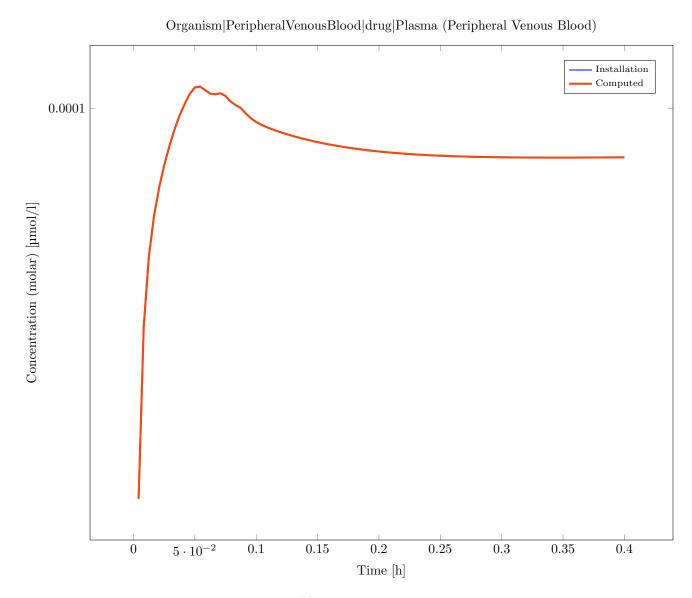
Deviation: 0



**Figure 1.150** 

Simulation: Human\_SingleORAL\_Dissolved-Human\_SingleORAL\_Dissolved Result of the validation: Valid

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



**Figure 1.151** 

Simulation: Human\_SingleORAL\_Dissolved-Human\_SingleORAL\_Dissolved\_MW\_200\_fu\_0.2\_LogP\_5 Result of the validation: Valid

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

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

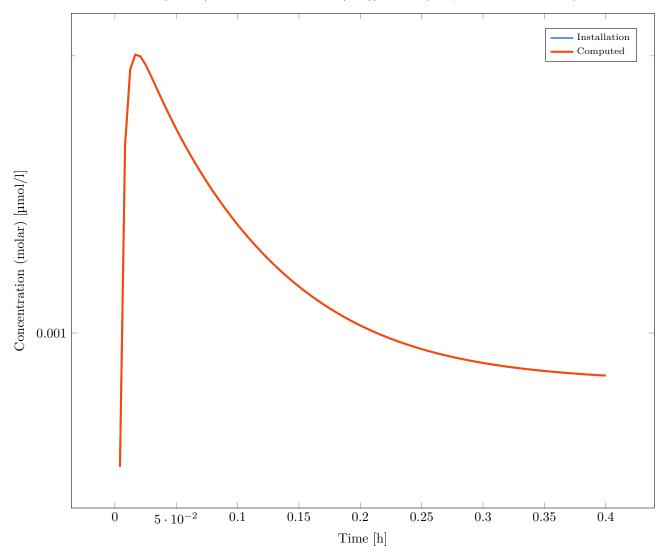
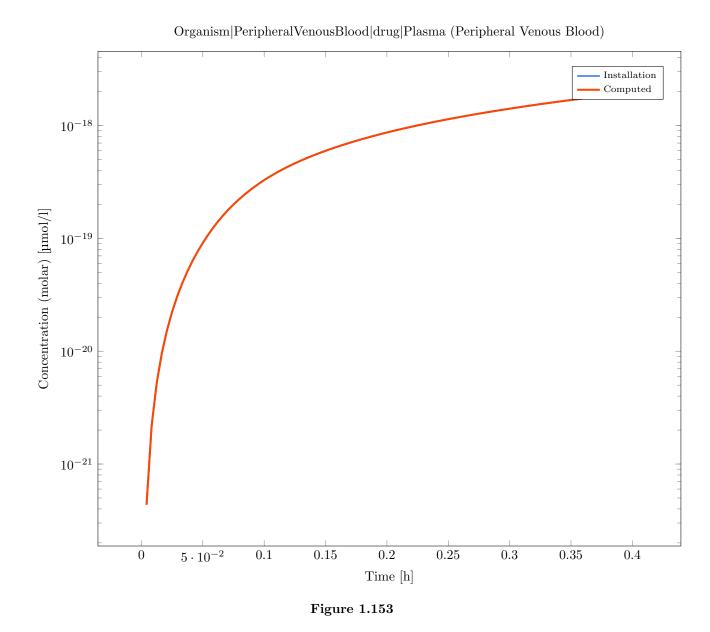


Figure 1.152

 $Simulation: Human\_SingleORAL\_Dissolved-Human\_SingleORAL\_Dissolved\_MW\_800\_fu\_0.6\_LogP\_-5\\ Result of the validation: Valid$ 



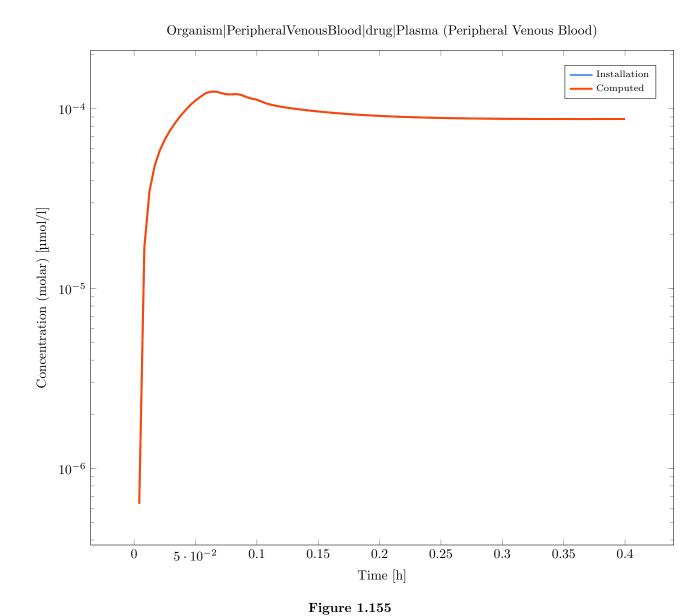
 ${\bf Simulation: \ Human\_SingleORAL\_Lint80\_AsSuspention-Human\_SingleORAL\_Lint80\_AsSuspention.} \\ {\bf Result \ of \ the \ validation: \ Valid}$ 



**Figure 1.154** 

 $Simulation: \ Human\_SingleORAL\_Lint80-Human\_SingleORAL\_Lint80$ 

Result of the validation: Valid



 $Simulation: Human\_SingleORAL\_MonoParticles\_AsSuspention-Human\_SingleORAL\_MonoParticles\_AsSuspention\\$ 

Result of the validation: Valid

# Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed 10<sup>-5.3</sup> 10<sup>-6</sup>

**Figure 1.156** 

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

 $Simulation: \ Human\_SingleORAL\_PolyParticlesLogNormal\_AsSuspention-Human\_SingleORAL\_PolyParticlesLogNormal\_AsSuspention$ 

Result of the validation: Valid

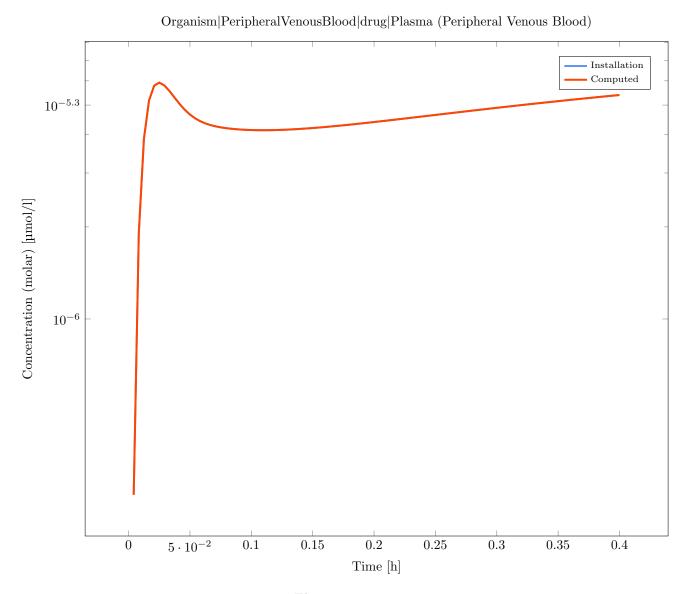
0

 $5\cdot 10^{-2}$ 

0.1

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

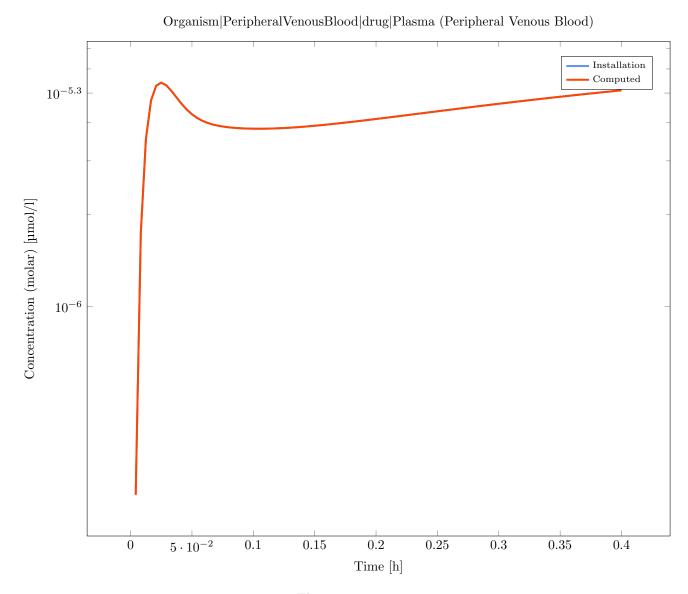
Deviation: 8.76E-8



**Figure 1.157** 

 $Simulation: Human\_SingleORAL\_PolyParticlesNormal\_AsSuspention-Human\_SingleORAL\_PolyParticlesNormal\_AsSuspention\\$ 

Result of the validation: Valid

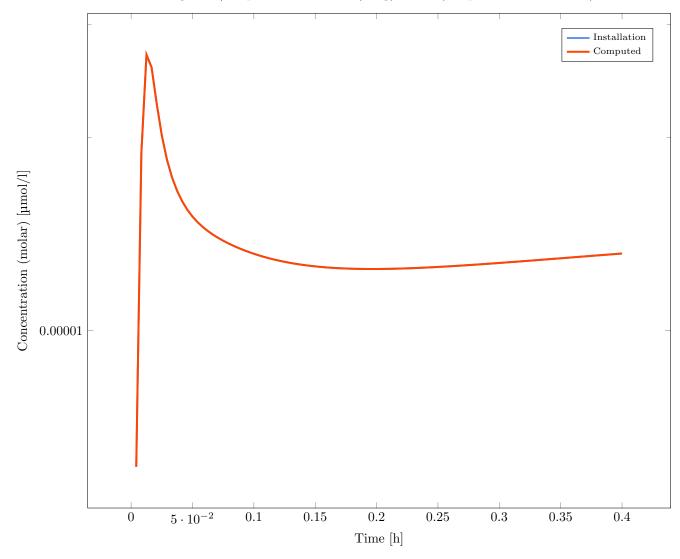


**Figure 1.158** 

 $Simulation: Human\_SingleORAL\_PolyParticlesNormal\_AsSuspention-Human\_SingleORAL\_PolyParticlesNormal\_AsSuspention\_dissolved\_radius$ 

Result of the validation: Valid

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



**Figure 1.159** 

 $Simulation: Human\_SingleORAL\_PolyParticlesNormal\_AsSuspention-Human\_SingleORAL\_PolyParticlesNormal\_AsSuspention\_treat\_precipated\_drug\_as\_soluble$ 

Result of the validation: Valid

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

Deviation: 0

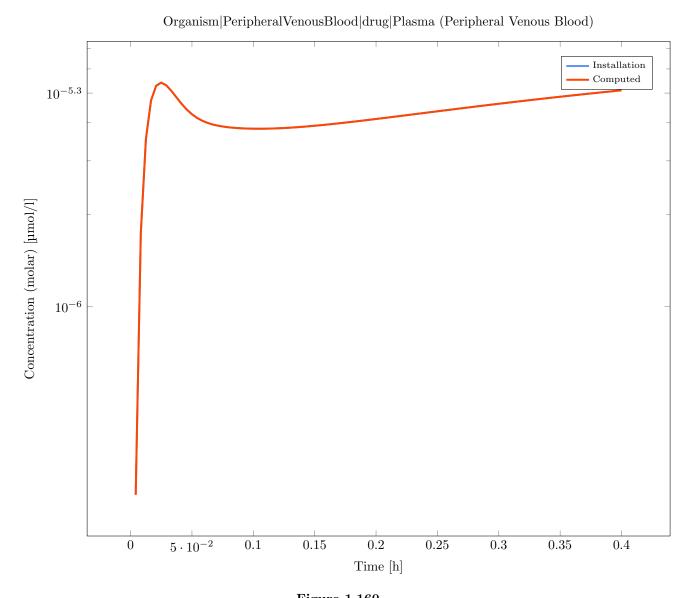


Figure 1.160

 ${\bf Simulation: Human\_SingleORAL\_Weibull\_AsSuspention-Human\_SingleORAL\_Weibull\_AsSuspention}. \\ {\bf Result\ of\ the\ validation:\ Valid}$ 

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

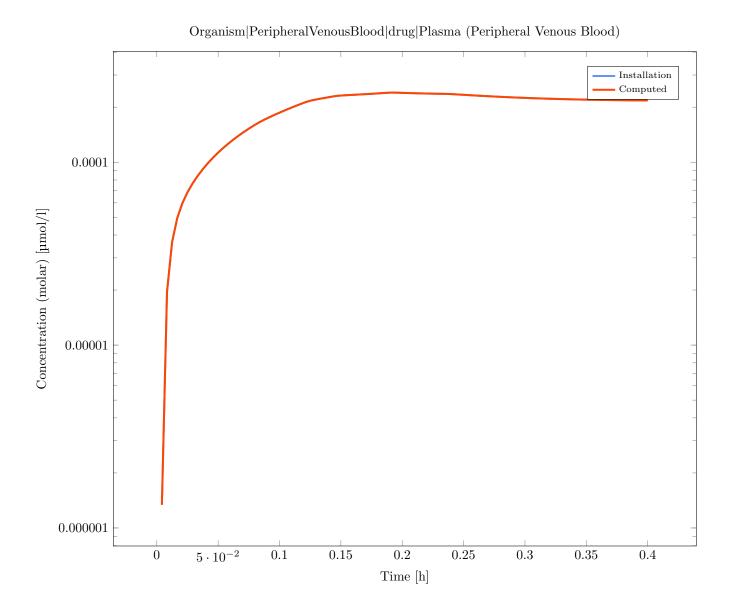


Figure 1.161

 $Simulation: Human\_SingleORAL\_Weibull\_AsSuspention-Human\_SingleORAL\_Weibull\_AsSuspention\_MW\_200\_fu\_0.2\_LogP\_5\\ Result of the validation: Valid$ 

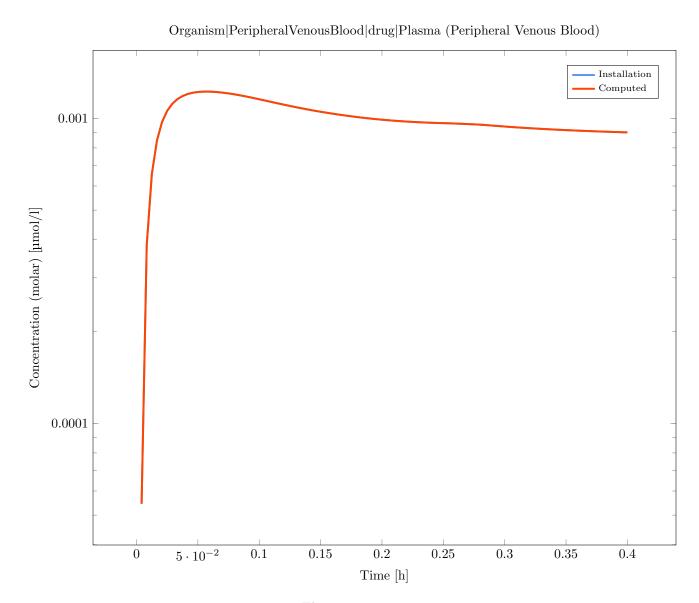
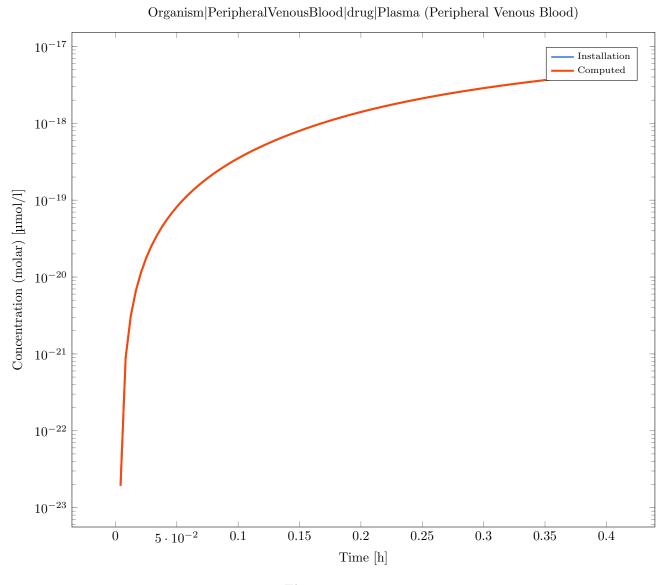


Figure 1.162

 $Simulation: Human\_SingleORAL\_Weibull\_AsSuspention-Human\_SingleORAL\_Weibull\_AsSuspention\_MW\_800\_fu\_0.6\_LogP\_-5\\ Result of the validation: Valid$ 

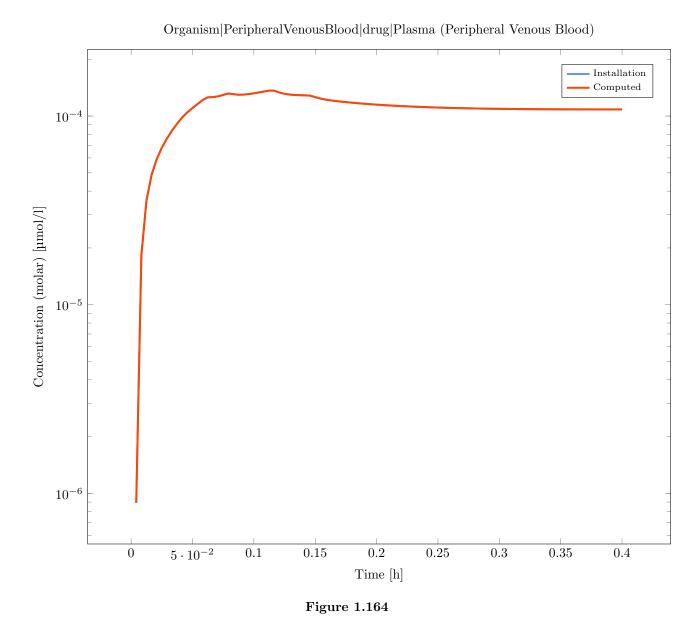
Output Path: Organism |PeripheralVenousBlood |<br/>drug |Plasma (Peripheral Venous Blood) Deviation:  ${\bf 0}$ 



**Figure 1.163** 

 ${\bf Simulation: \ Human\_SingleORAL\_Weibull-Human\_SingleORAL\_Weibull} \\ {\bf Result \ of \ the \ validation: \ Valid}$ 

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

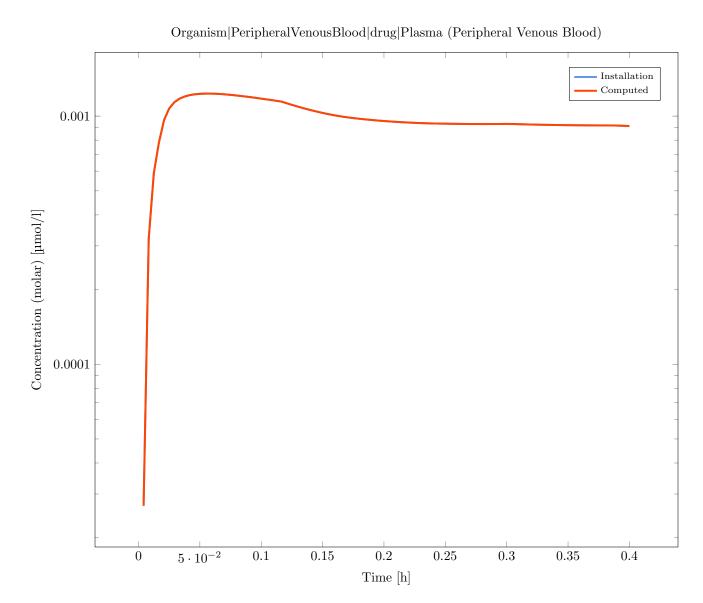
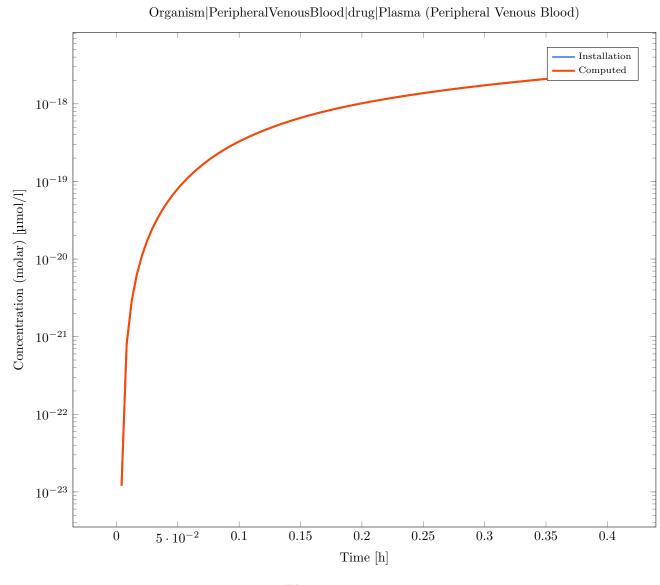


Figure 1.165

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)<br/> Deviation:  ${\bf 0}$ 



**Figure 1.166** 

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

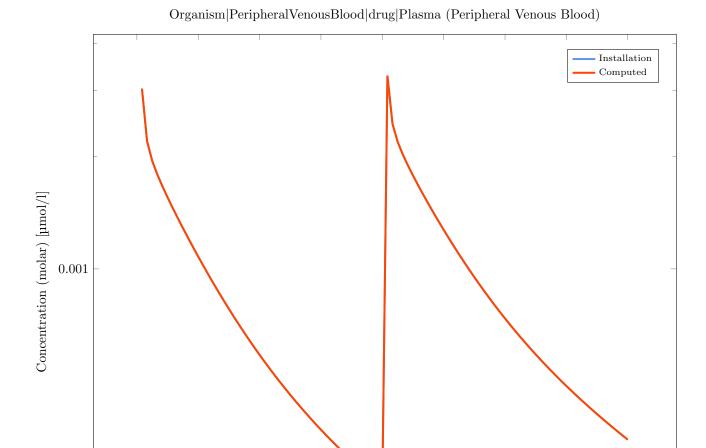


Figure 1.167

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

0.1

Output Path: Organism |PeripheralVenousBlood |<br/>inhibitor |Plasma (Peripheral Venous Blood) | Deviation:<br/> 0

0

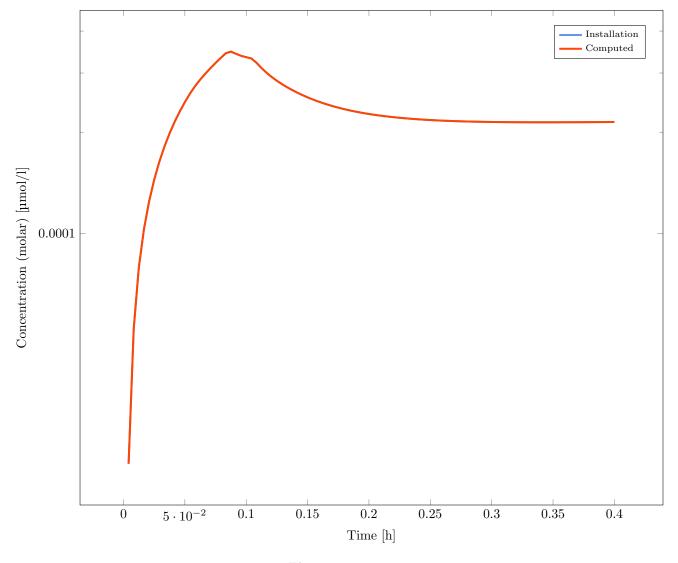
 $5 \cdot 10^{-2}$ 



**Figure 1.168** 

Simulation: Minipig\_SingleORAL\_Dissolved-Minipig\_SingleORAL\_Dissolved Result of the validation: Valid





**Figure 1.169** 

 $Simulation: Minipig\_SingleORAL\_Dissolved\_MW\_200\_fu\_0.2\_LogP\_5$ 

Result of the validation: Valid

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

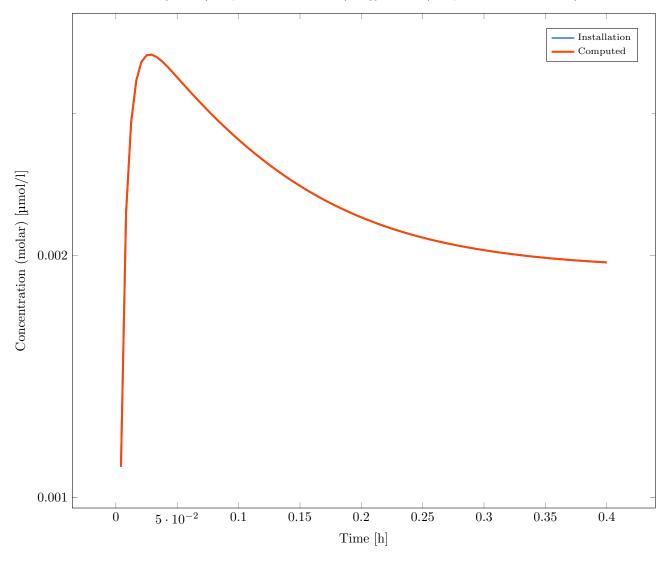


Figure 1.170

 $Simulation: \ Minipig\_SingleORAL\_Dissolved\_Minipig\_SingleORAL\_Dissolved\_MW\_800\_fu\_0.6\_LogP\_-5$  Result of the validation: Valid

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



Figure 1.171

 ${\bf Simulation: \ Monkey\_SingleORAL\_Dissolved-Monkey\_SingleORAL\_Dissolved \ Result \ of \ the \ validation: \ Valid}$ 

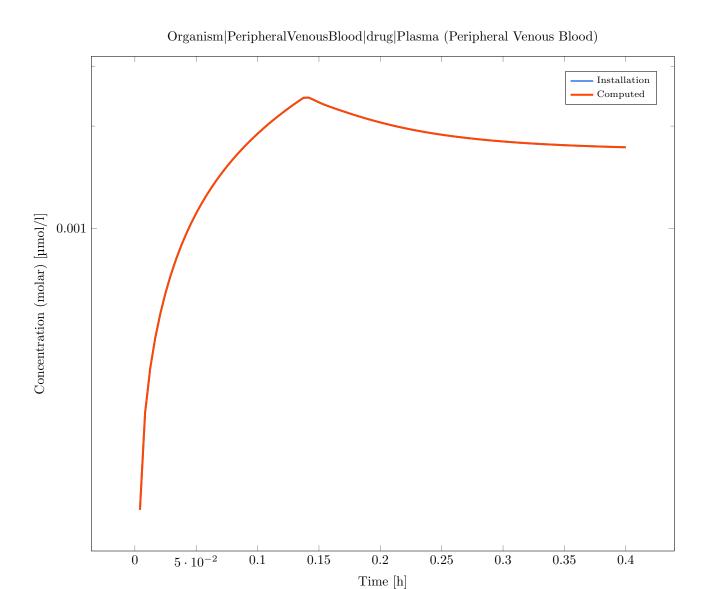
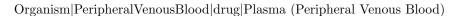


Figure 1.172

Simulation: Monkey\_SingleORAL\_Dissolved-Monkey\_SingleORAL\_Dissolved\_MW\_200\_fu\_0.2\_LogP\_5 Result of the validation: Valid

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



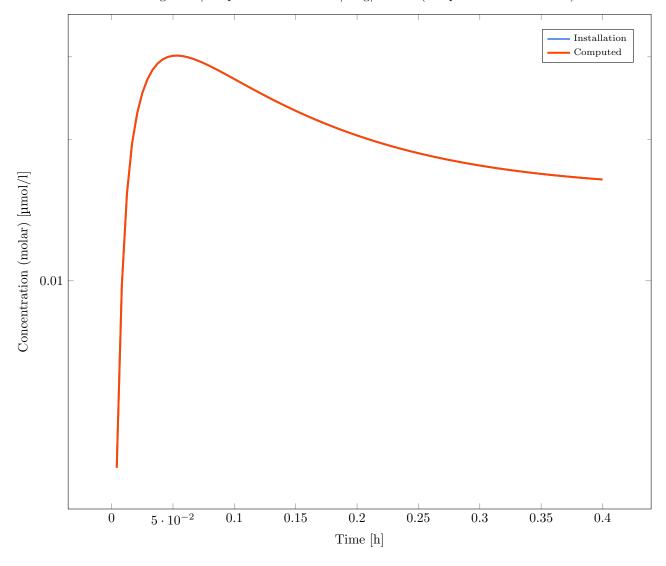


Figure 1.173

Simulation: Monkey\_SingleORAL\_Dissolved-Monkey\_SingleORAL\_Dissolved\_MW\_800\_fu\_0.6\_LogP\_--5 Result of the validation: Valid

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

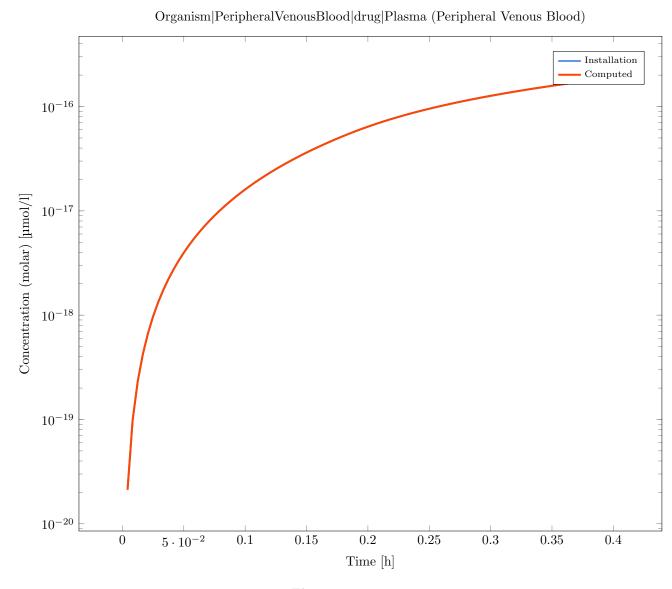
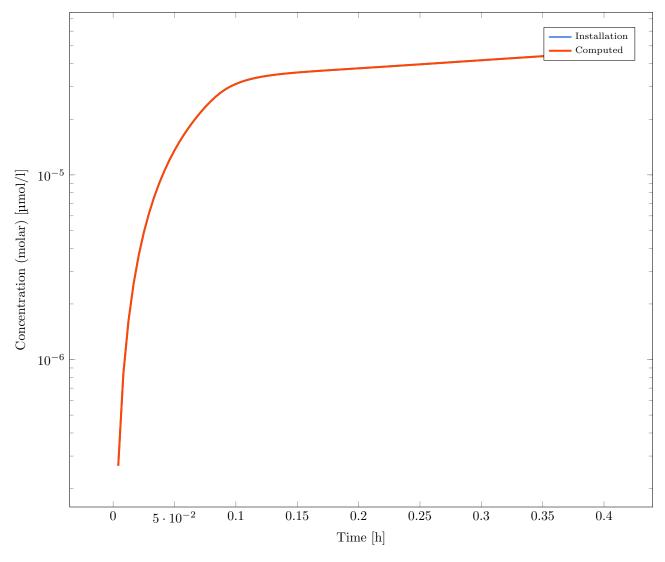


Figure 1.174

Simulation: Mouse\_SingleORAL\_Dissolved-Mouse\_SingleORAL\_Dissolved Result of the validation: Valid

## $Organism|Peripheral Venous Blood|drug|Plasma\ (Peripheral Venous\ Blood)$



**Figure 1.175** 

Simulation: Mouse\_SingleORAL\_Dissolved-Mouse\_SingleORAL\_Dissolved\_MW\_200\_fu\_0.2\_LogP\_5 Result of the validation: Valid

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

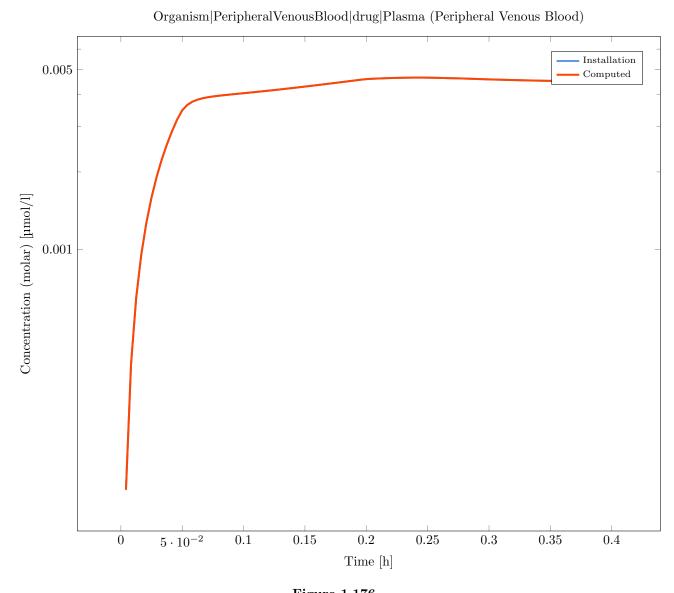
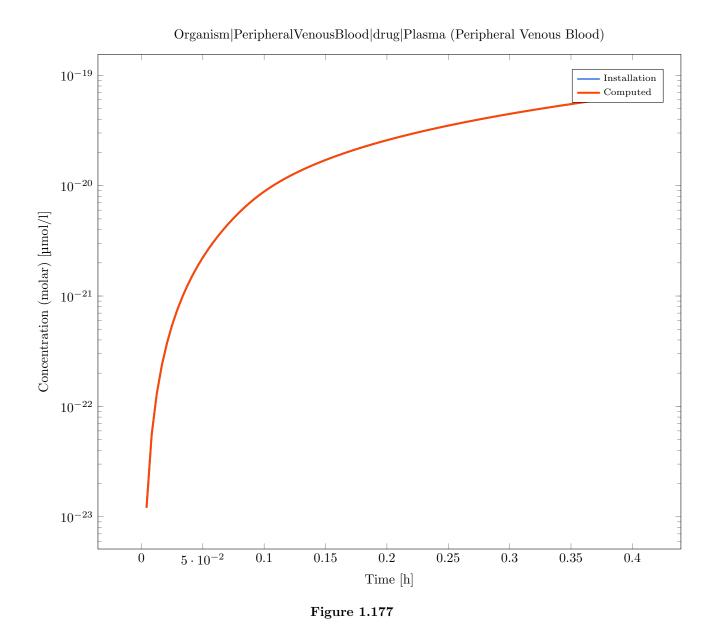
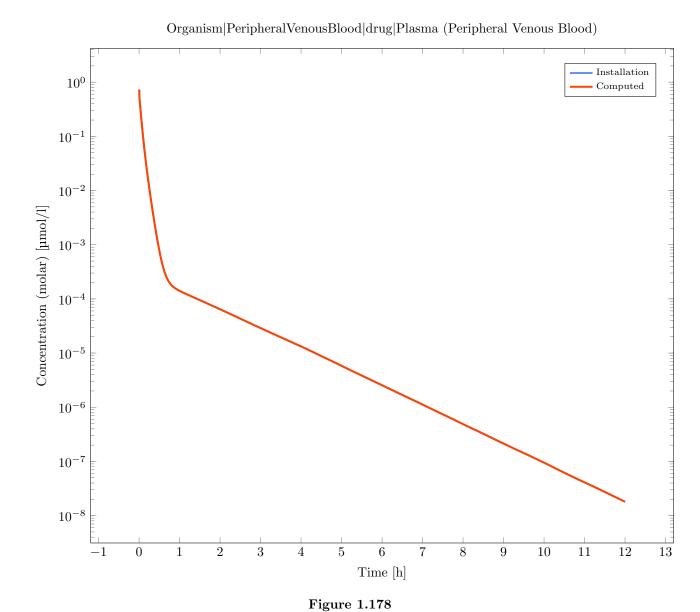


Figure 1.176

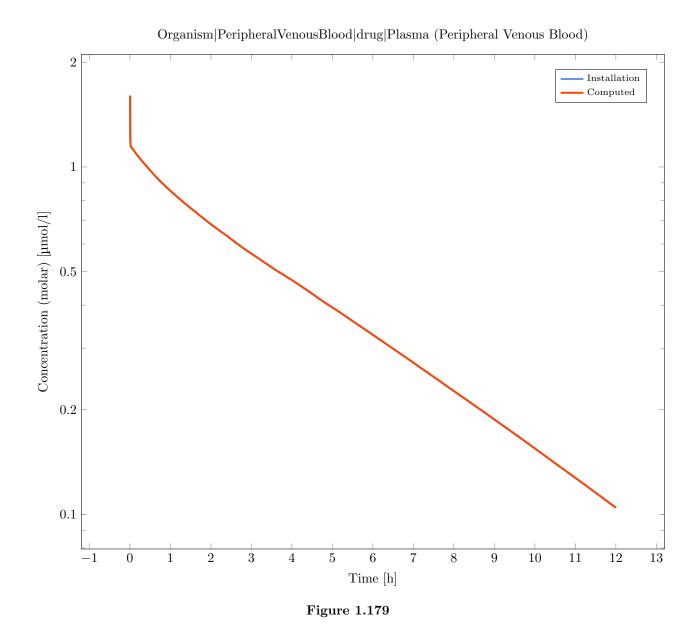
Simulation: Mouse\_SingleORAL\_Dissolved-Mouse\_SingleORAL\_Dissolved\_MW\_800\_fu\_0.6\_LogP\_--5 Result of the validation: Valid



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



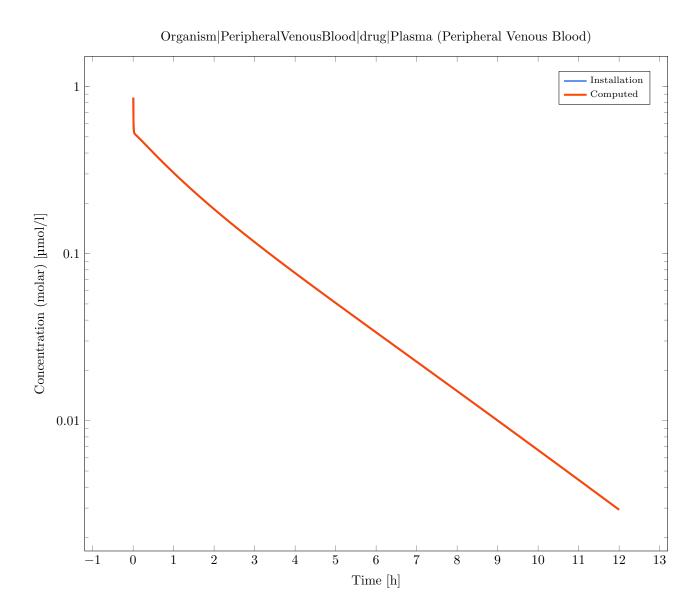
Output Path: Organism |Peripheral Venous<br/>Blood |drug |Plasma (Peripheral Venous Blood)<br/> Deviation: 3.66E-5



 $\label{lem:single_index} \textbf{Simulation: Preterm\_SingleIV\_Age\_15\_GA\_32\_CYP3A4-Preterm\_SingleIV\_Age\_15\_CYP3A4-Pr$ 



 $Simulation: \ \, Preterm\_SingleIV\_Age\_15\_GA\_32\_GFR-Preterm\_SingleIV\_Age\_15\_GA\_32\_GFR \\ Result of the validation: \ \, Valid$ 



**Figure 1.181** 

 ${\bf Simulation: Rabbit\_SingleORAL\_Dissolved-Rabbit\_SingleORAL\_Dissolved} \\ {\bf Result \ of \ the \ validation: \ Valid}$ 

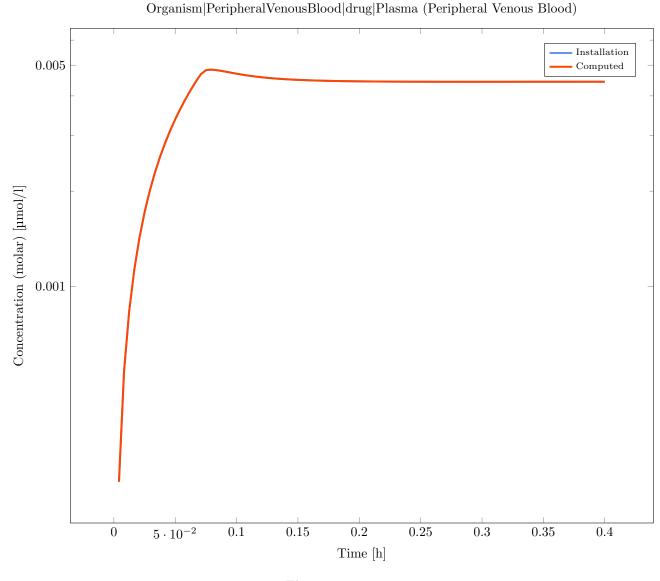
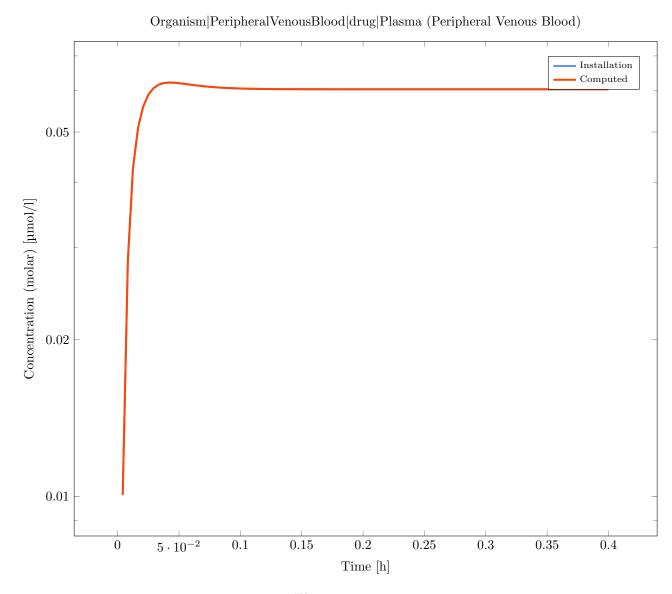


Figure 1.182

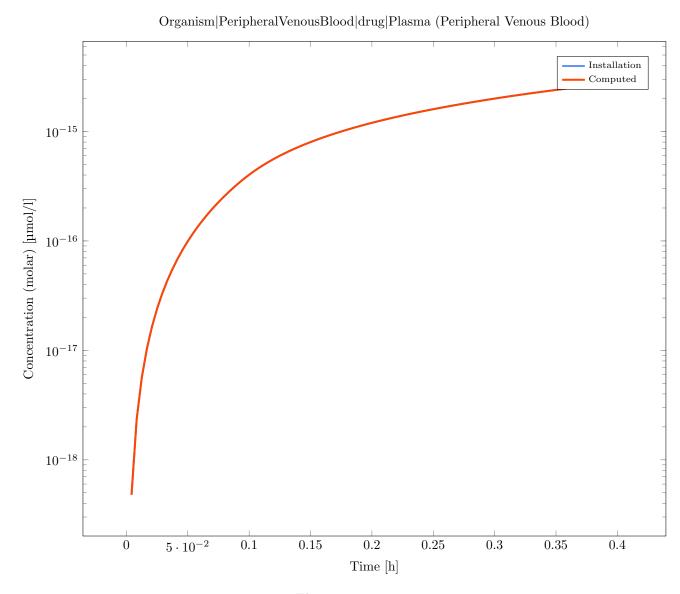
 $Simulation: Rabbit\_SingleORAL\_Dissolved\_Rabbit\_SingleORAL\_Dissolved\_MW\_200\_fu\_0.2\_LogP\_5$  Result of the validation: Valid

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



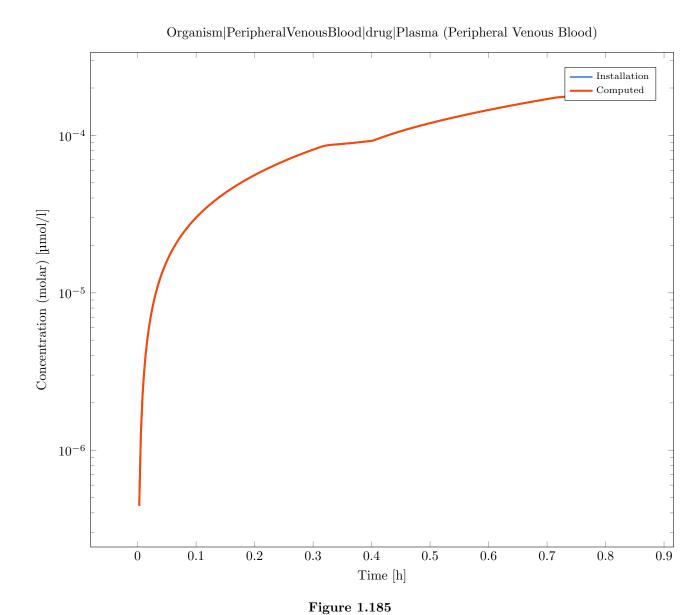
**Figure 1.183** 

 $\label{local_simpleORAL_Dissolved_Rabbit_SingleORAL_Dissolved_MW_800_fu_0.6_LogP_--5 \\ Result of the validation: Valid$ 



**Figure 1.184** 

Simulation: Rat\_MultiORAL\_6\_6\_12\_Dissolved-Rat\_MultiORAL\_6\_6\_12\_Dissolved Result of the validation: Valid



 $Simulation: Rat\_MultiORAL\_6\_6\_6\_6\_Dissolved-Rat\_MultiORAL\_6\_6\_6\_6\_Dissolved \\ Result of the validation: Valid$ 

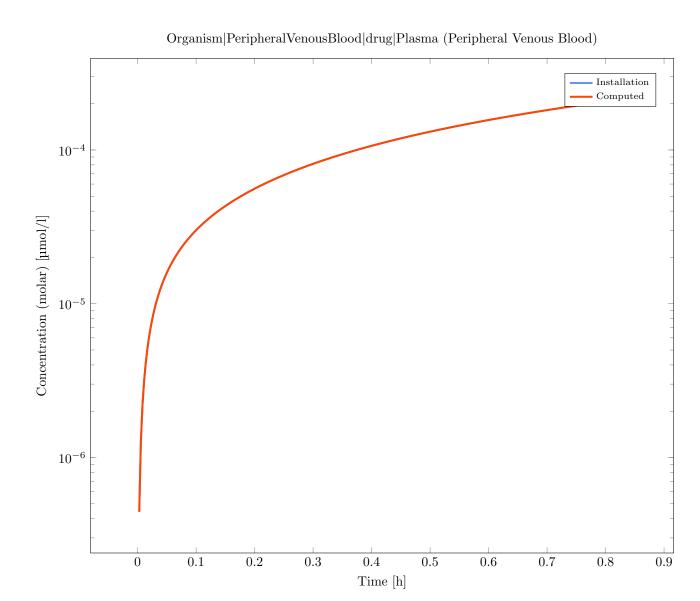


Figure 1.186

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

## Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed $10^{-4}$ Concentration (molar) $[\mu]$ $10^{-5}$ $10^{-6}$ 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9

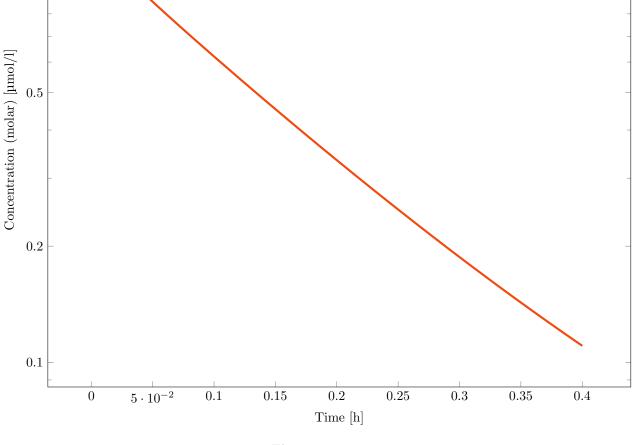
Figure 1.187

Time [h]

 $Simulation: Single IV\_2 Pores\_Human-Single IV\_2 Pores\_Human$ 

Result of the validation: Valid

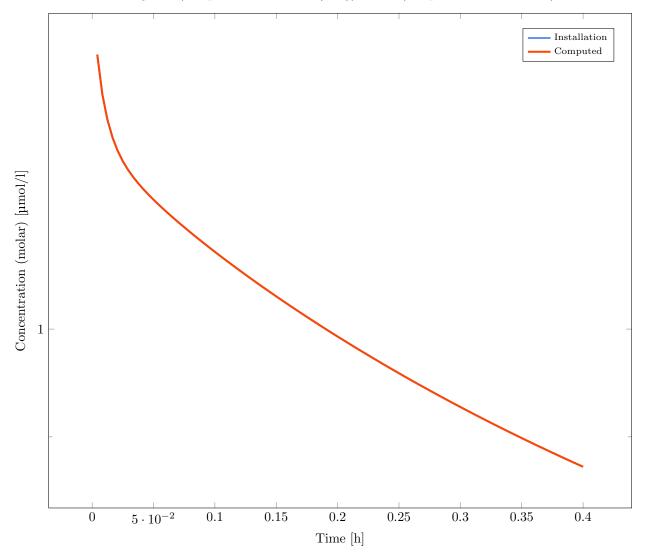
## Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) — Installation — Computed



**Figure 1.188** 

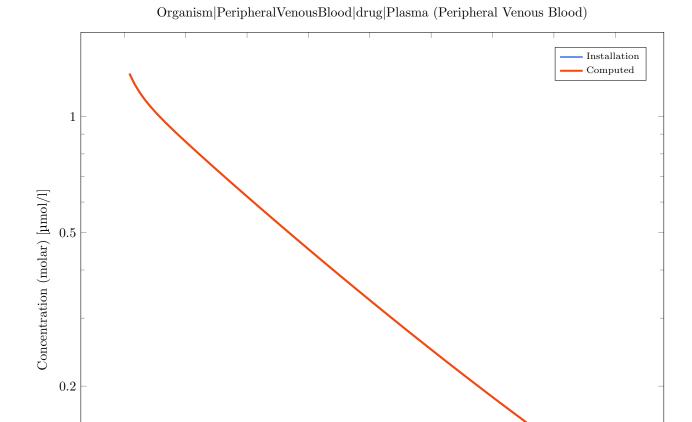
Simulation: SingleIV\_2Pores\_Human-SingleIV\_2Pores\_Human\_SimulationC Result of the validation: Valid

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



**Figure 1.189** 

Simulation: SingleIV\_2Pores\_Human-SingleIV\_2Pores\_Human\_SimulationD Result of the validation: Valid



**Figure 1.190** 

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

Simulation: SingleIV\_2Pores\_Human-SingleIV\_2Pores\_Human\_SimulationF Result of the validation: Valid

0.1

Output Path: Organism |Peripheral Venous<br/>Blood |drug |Plasma (Peripheral Venous Blood) Deviation:<br/> 0

0.1

0

 $5\cdot 10^{-2}$ 

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



Figure 1.191

 $Simulation: Single IV\_2 Pores\_Monkey-Single IV\_2 Pores\_Monkey$ 

Result of the validation: Valid

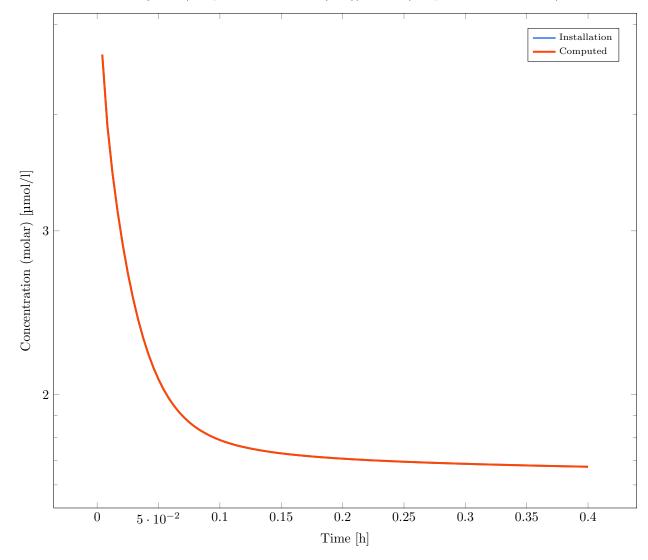
# Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) | Total lation | Computed | C

Figure 1.192

Time [h]

Simulation: SingleIV\_2Pores\_Monkey-SingleIV\_2Pores\_Monkey\_SimulationG Result of the validation: Valid

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



**Figure 1.193** 

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)

**Figure 1.194** 

0.2

Time [h]

0.25

0.3

0.35

0.4

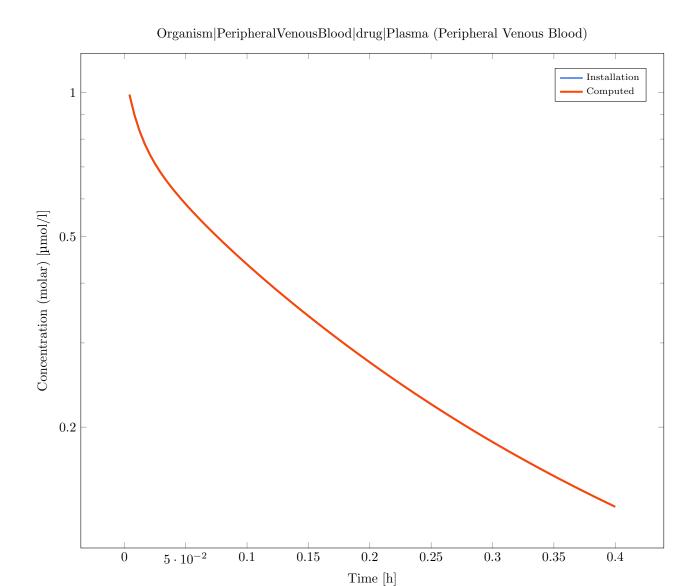
0.15

 ${\bf Simulation: \ Single IV\_2 Pores\_Mouse-Single IV\_2 Pores\_Mouse}$ 

0.1

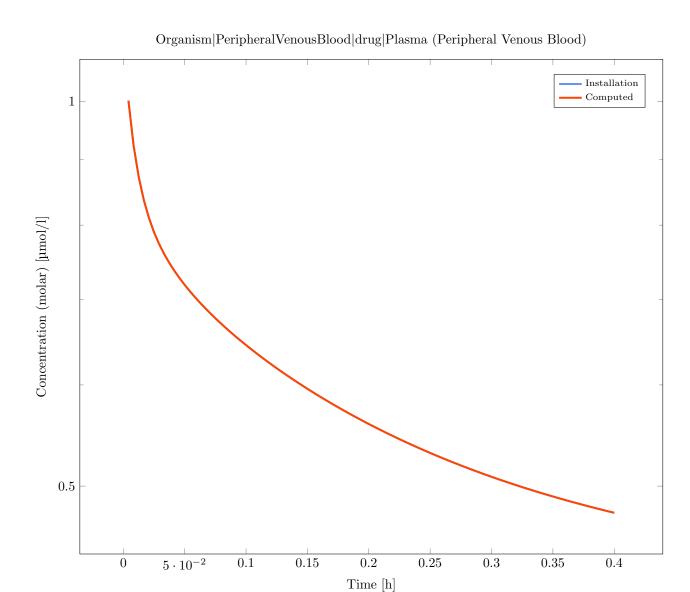
 $5\cdot 10^{-2}$ 

Result of the validation: Valid



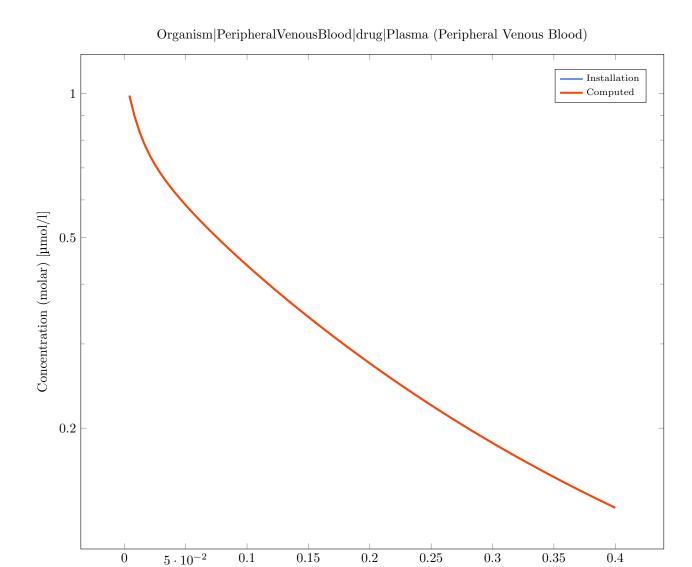
**Figure 1.195** 

Simulation: SingleIV\_2Pores\_Mouse-SingleIV\_2Pores\_Mouse\_SimulationA Result of the validation: Valid



**Figure 1.196** 

Simulation: SingleIV\_2Pores\_Mouse-SingleIV\_2Pores\_Mouse\_SimulationB Result of the validation: Valid



**Figure 1.197** 

Time [h]

Simulation: SingleIV\_2Pores\_Mouse-SingleIV\_2Pores\_Mouse\_SimulationE Result of the validation: Valid

## 

**Figure 1.198** 

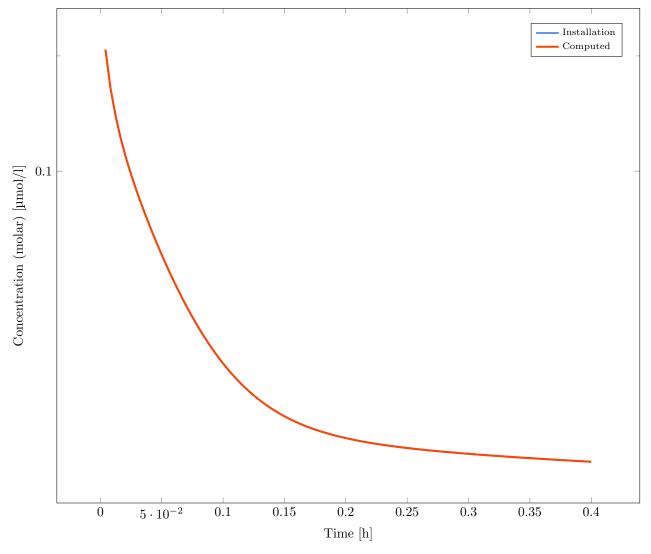
 $Simulation: Single IV\_C1\_4 Comp\_standard\_stand$ 

Time [h]

Result of the validation: Valid

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

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



**Figure 1.199** 

 $Simulation: Single IV\_C2\_4 Comp\_PT\_standard\_st$ 

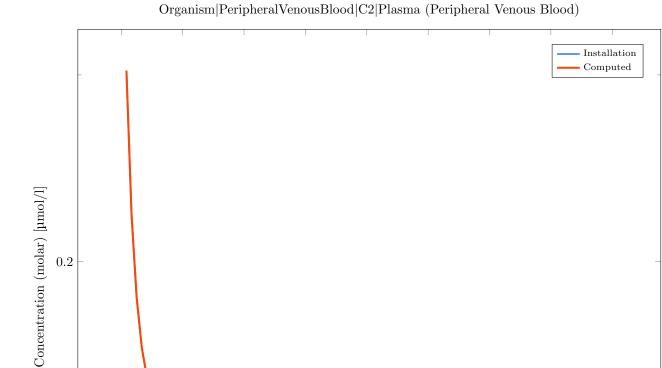


Figure 1.200

 $Simulation: Single IV\_C2\_4 Comp\_RR\_standard\_st$ 

0.2

Time [h]

0.25

0.35

0.4

0.3

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

0.15

0.1

0

 $5\cdot 10^{-2}$ 

## Organism|PeripheralVenousBlood|C2|Plasma (Peripheral Venous Blood) 1.4 1.2 1.2 0.6 0.4 0.2

Figure 1.201

0.2

Time [h]

0.25

0.3

0.35

0.4

 $Simulation: Single IV\_C2\_4 Comp\_standard\_schmitt\_standard-Single IV\_C2\_4 Comp\_standard\_schmitt\_standard\\$ 

Result of the validation: Valid

0

 $5\cdot 10^{-2}$ 

0

Output Path: Organism |PeripheralVenousBlood |C2 |Plasma (Peripheral Venous Blood)<br/> Deviation:  ${\bf 0}$ 

0.15

0.1

## Installation Computed 1 Concentration (molar) [µmol/l] 0.5

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

Figure 1.202

0.2

Time [h]

0.25

0.3

0.35

0.4

 $Simulation: Single IV\_C3\_4 Comp\_RR\_schmitt\_standard-Single IV\_C3\_schmitt\_standard-Single IV\_C3\_schmitt\_schmitt\_standard-Single IV\_C3\_schmitt_schmittschmitt\_schmittschmittschmittschmittschmittschmittschmittschmittschmittschmittschmittschmittschmittschmittschmittsch$ Result of the validation: Valid

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

0.15

0.1

0

 $5\cdot 10^{-2}$ 

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



Figure 1.203

 $Simulation: Single IV\_C3\_4 Comp\_standard\_schmittnorm lized\_standard-Single IV\_C3\_4 Comp\_standard\_schmittnorm lized\_standard$ 

Result of the validation: Valid

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

Deviation: 0

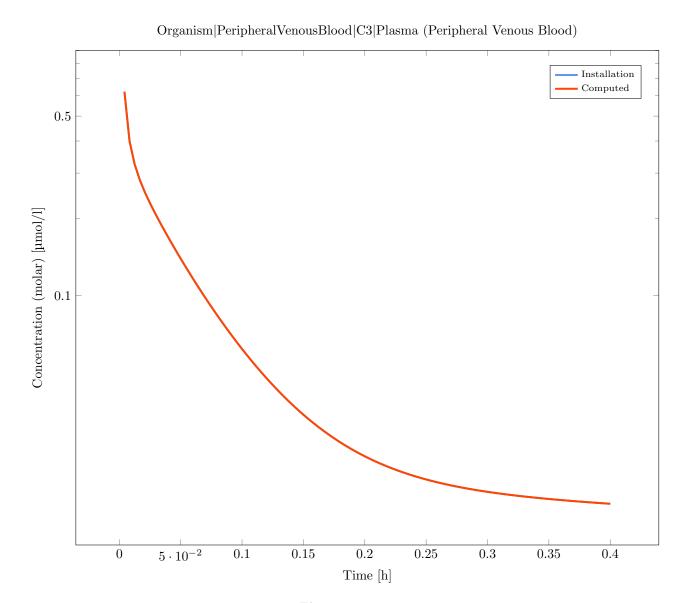


Figure 1.204

 $Simulation: Single IV\_C4\_2 Pores\_RR\_standard\_s$ 

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

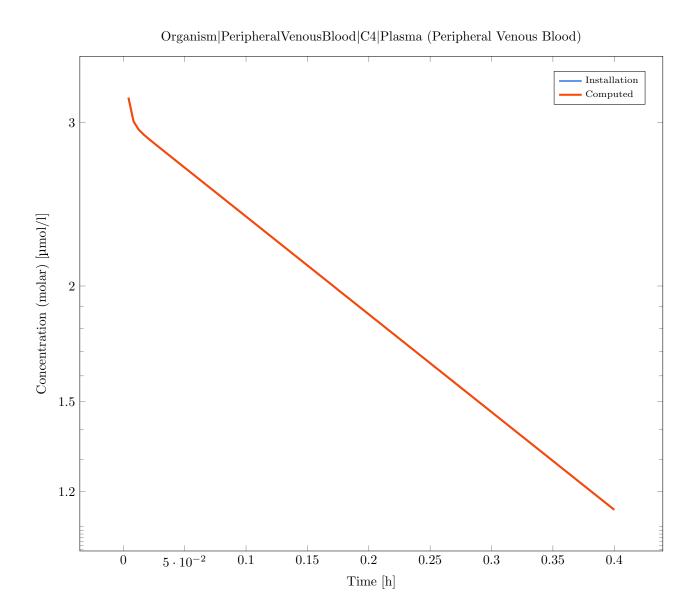


Figure 1.205

 $Simulation: Single IV\_C4\_4 Comp\_Ber\_standard\_s$ 

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



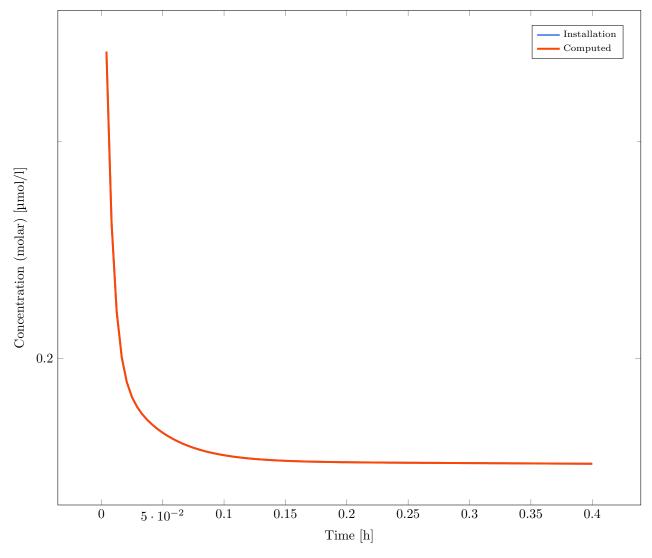


Figure 1.206

 $Simulation: Single IV\_C5\_2 Pores\_Ber\_standard\_$ 

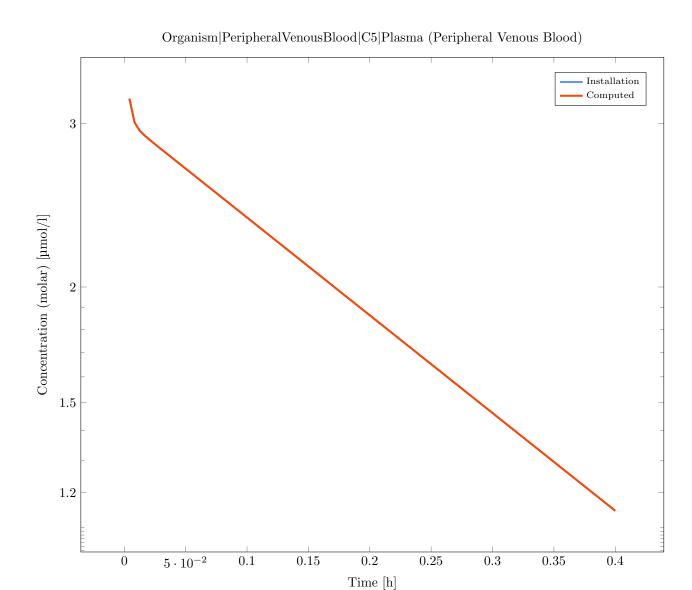


Figure 1.207

 $Simulation: Single IV\_C5\_2 Pores\_PT\_standard\_s$ 

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



Figure 1.208

 $Simulation: SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_C5\_2Pores\_RR\_schmitt\_standard-SingleIV\_SingleI$ 

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

## Organism|PeripheralVenousBlood|C5|Plasma (Peripheral Venous Blood)

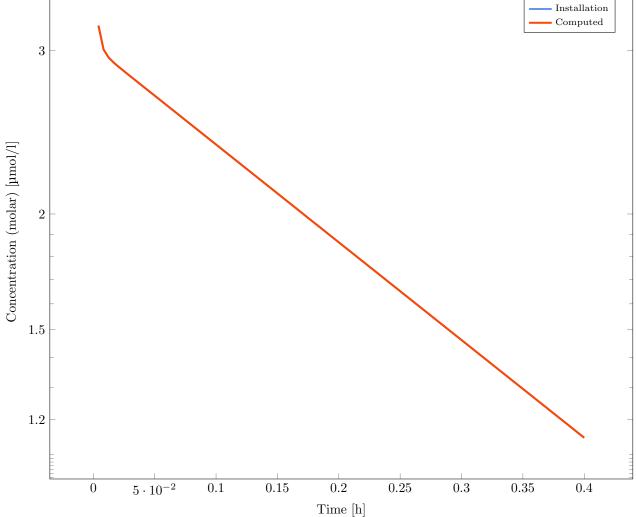


Figure 1.209

 $Simulation: Single IV\_C6\_2 Pores\_standard\_stan$ standard

Result of the validation: Valid

Output Path: Organism|PeripheralVenousBlood|C6|Plasma (Peripheral Venous Blood)

Deviation: 0

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

Figure 1.210

0.2

Time [h]

0.25

0.3

0.35

0.4

 $Simulation: Single IV\_C7\_2 Pores\_standard\_schmitt\_standard\_Single IV\_C7\_2 Pores\_standard\_schmitt\_schmitt_schmitt_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schmitts\_schm$ 

Result of the validation: Valid

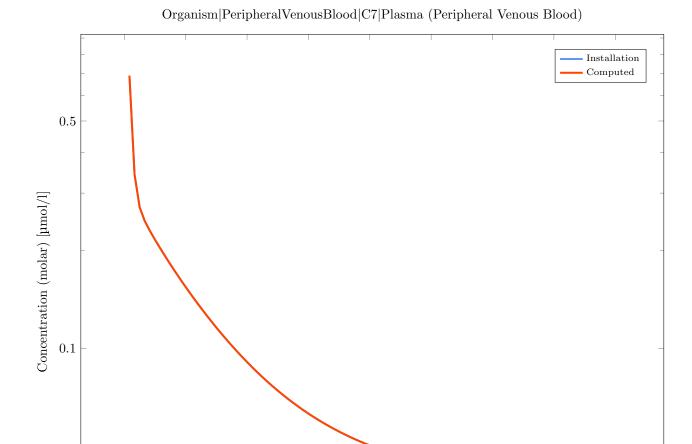
0

 $5\cdot 10^{-2}$ 

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

0.15

0.1



**Figure 1.211** 

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)<br/> Deviation:  ${\bf 0}$ 

0.15

0.1



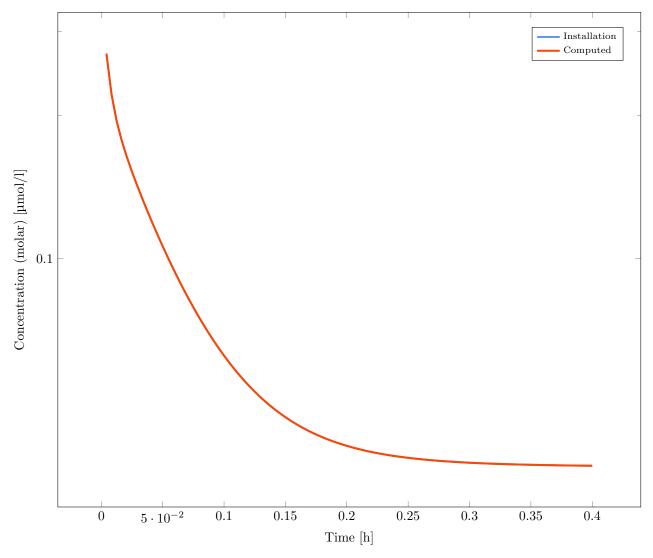


Figure 1.212

 $Simulation: Single IV\_C8\_2 Pores\_standard\_schmittnormalized\_standard\_Single IV\_C8\_2 Pores\_standard\_schmittnormalized\_schmittnormalized\_schmittnor$ 

Result of the validation: Valid

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

Deviation: 0

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

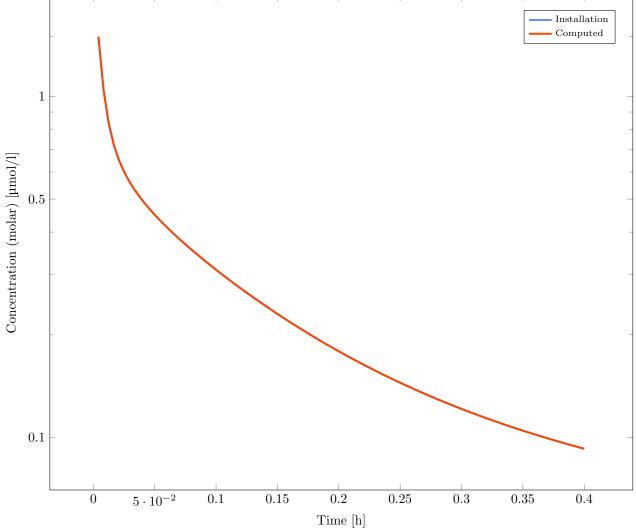


Figure 1.213

 $Simulation: Single IV\_C9\_2 Pores\_schmitt\_standard\_standard\_Single IV\_C9\_2 Pores\_schmitt\_standard\_sta$ 

Result of the validation: Valid

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

# Installation (molar) Installation Computed

Organism|PeripheralVenousBlood|C9|Plasma (Peripheral Venous Blood)

Figure 1.214

0.15

0.1

 $Simulation: Single ORAL\_C10\_4 Comp\_PT\_standard\_standard\_Single ORAL\_C10\_4 Comp\_PT\_standard\_$ 

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 |C10 |Plasma (Peripheral Venous Blood)<br/> Deviation: 0



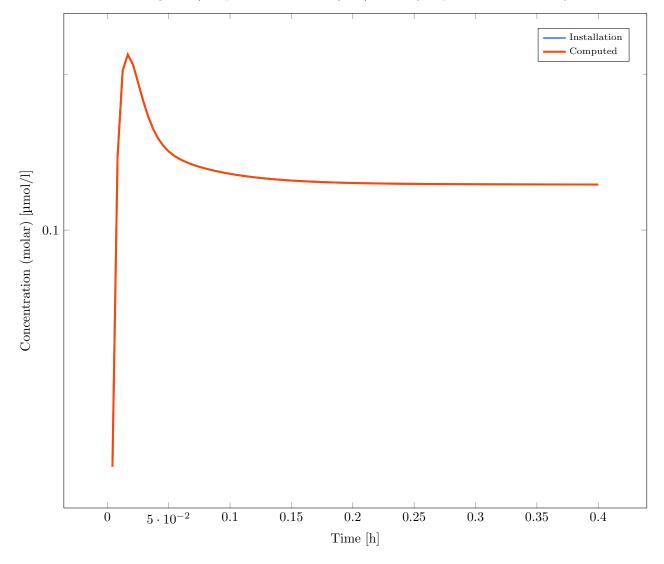


Figure 1.215

 $Simulation: Single ORAL\_C11\_4 Comp\_schmitt\_standard\_standard\_Single ORAL\_C11\_4 Comp\_schmitt\_standard$ 

Result of the validation: Valid

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

Deviation: 0



Figure 1.216

 $Simulation: Single ORAL\_C11\_4 Comp\_standard\_st$ 

Result of the validation: Valid

### Organism|PeripheralVenousBlood|C11|Plasma (Peripheral Venous Blood)

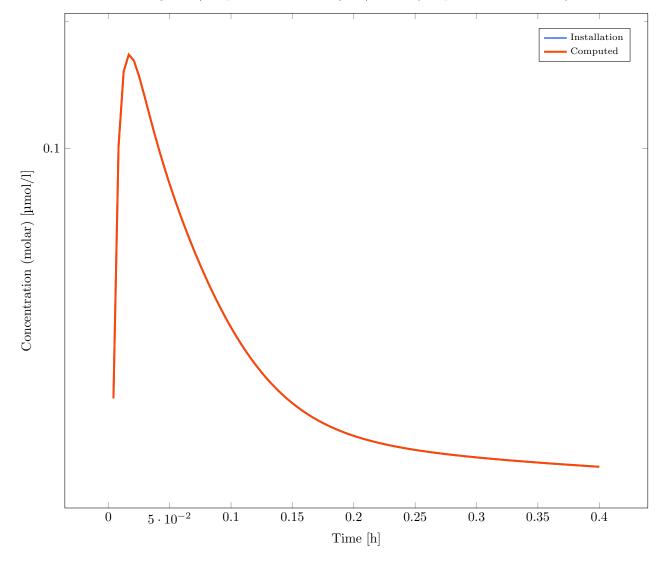


Figure 1.217

 $Simulation: Single ORAL\_C12\_4 Comp\_standard\_schmitt\_standard-Single ORAL\_C12\_4 Comp\_standard\_schmitt\_standard\\$ 

Result of the validation: Valid

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

Deviation: 0

## Organism|PeripheralVenousBlood|C12|Plasma (Peripheral Venous Blood)

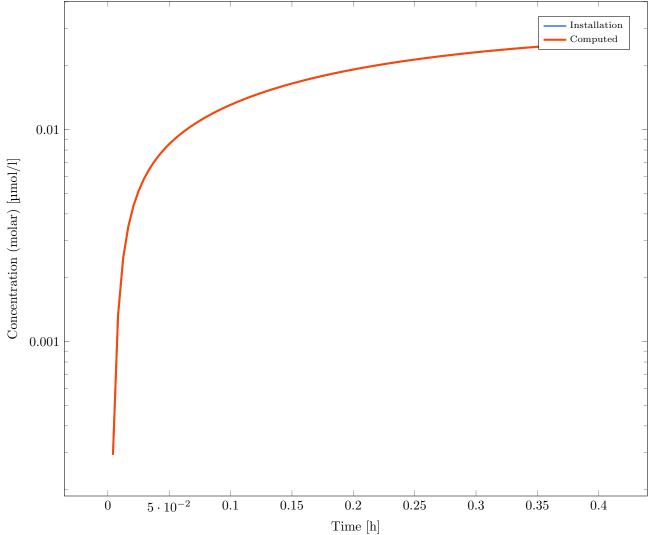


Figure 1.218

 $Simulation: Single ORAL\_C13\_2 Pores\_schmitt\_standard\_st$ 

Result of the validation: Valid

Output Path: Organism |PeripheralVenousBlood | C13 |Plasma (Peripheral Venous Blood)<br/> Deviation: 0



Figure 1.219

 $Simulation: Single ORAL\_C13\_4 Comp\_standard\_schmittnormalized\_schmittnormalized\_sc$ 

Result of the validation: Valid

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





Figure 1.220

 $Simulation: Single ORAL\_C14\_2 Pores\_PT\_standard\_standard\_Single ORAL\_C14\_2 Pores\_PT\_standard\_standar$ standard

Result of the validation: Valid

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

Deviation: 0

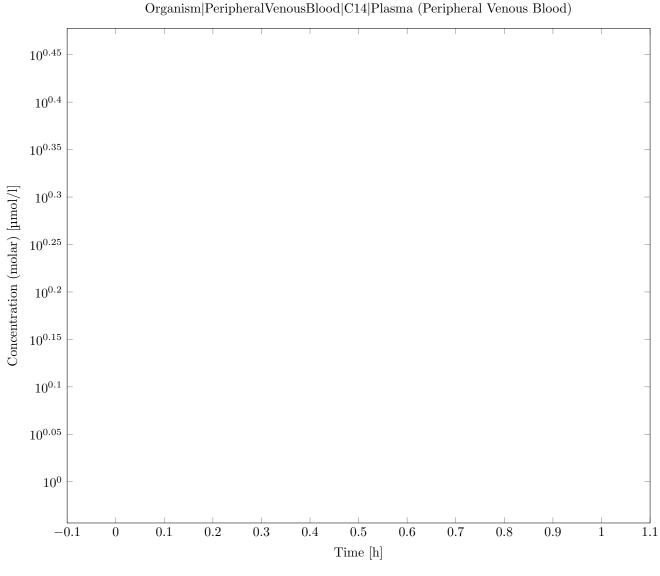
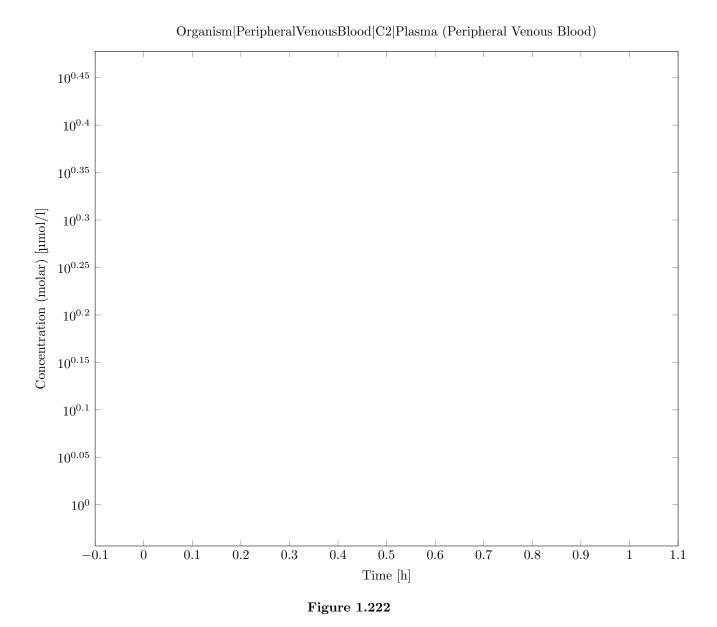


Figure 1.221

 $Simulation: Single ORAL\_C2\_2 Pores\_standard\_st$ 

Result of the validation: Valid

Output Path: Organism |Peripheral Venous<br/>Blood |C2 |Plasma (Peripheral Venous Blood) Deviation:<br/> 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<br/>Blood |C3 |Plasma (Peripheral Venous Blood) Deviation:<br/> 0



Figure 1.223

 $Simulation: Single ORAL\_C4\_2 Pores\_standard\_schmittnormalized\_standard\_Single ORAL\_C4\_2 Pores\_standard\_schmittnormalized\_standard$ 

Result of the validation: Valid

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

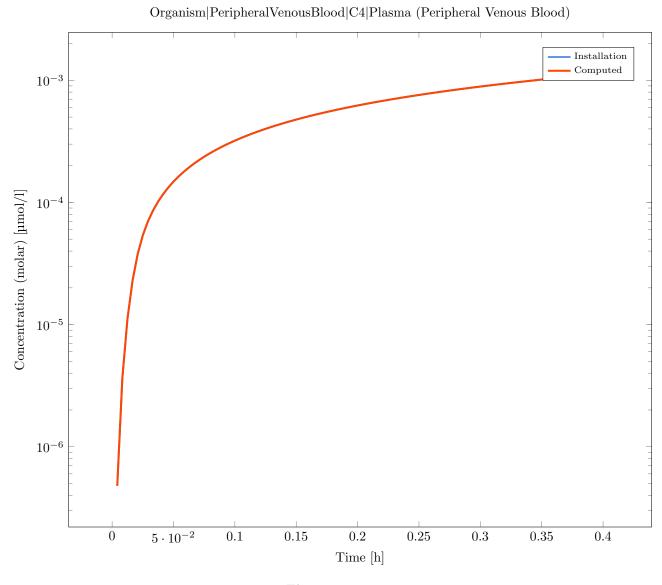
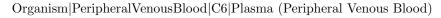


Figure 1.224

 $Simulation: Single ORAL\_C6\_4 Comp\_Ber\_standard\_standard\_Single ORAL\_C6\_4 Comp\_Ber\_standard\_$ 

Result of the validation: Valid

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



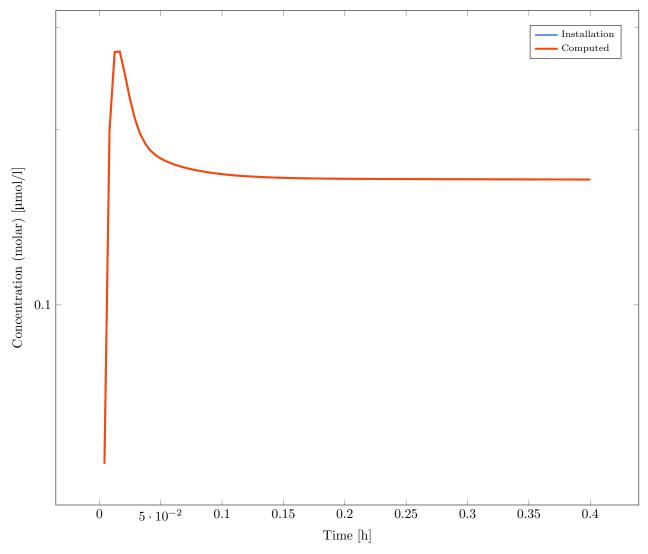


Figure 1.225

 $Simulation: Single ORAL\_C6\_4 Comp\_RR\_standard\_standard\_Single ORAL\_C6\_4 Comp\_RR\_standard\_st$ 

Result of the validation: Valid

 $Output\ Path:\ Organism|Peripheral Venous Blood|C6|Plasma\ (Peripheral\ Venous\ Blood)$ 

Deviation: 0

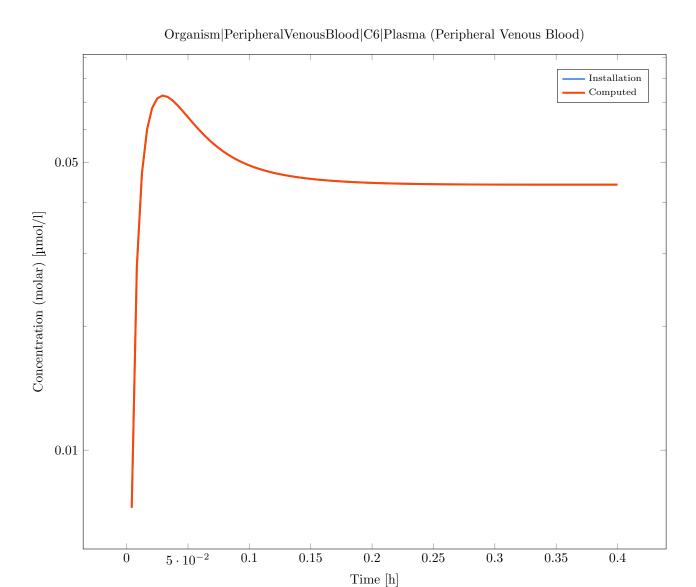


Figure 1.226

 $Simulation: Single ORAL\_C7\_2 Pores\_Ber\_standard\_standard\_Single ORAL\_C7\_2 Pores\_Ber\_standard\_standar$ 

Result of the validation: Valid

Output Path: Organism |Peripheral Venous<br/>Blood |C7 |Plasma (Peripheral Venous Blood)<br/> Deviation: 0

### Organism|PeripheralVenousBlood|C7|Plasma (Peripheral Venous Blood)

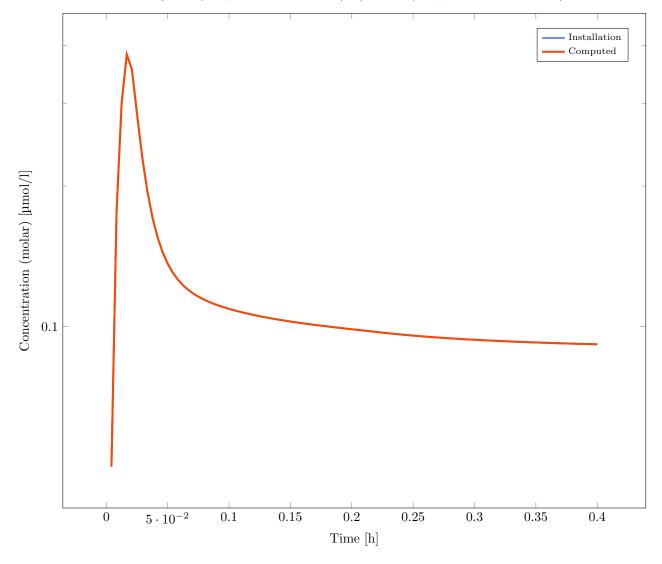


Figure 1.227

 $Simulation: Single ORAL\_C7\_4 Comp\_RR\_schmitt\_standard-Single ORAL\_C7\_5 Comp\_RR\_schmitt\_standard-Single ORAL\_C7\_5$ 

Result of the validation: Valid

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

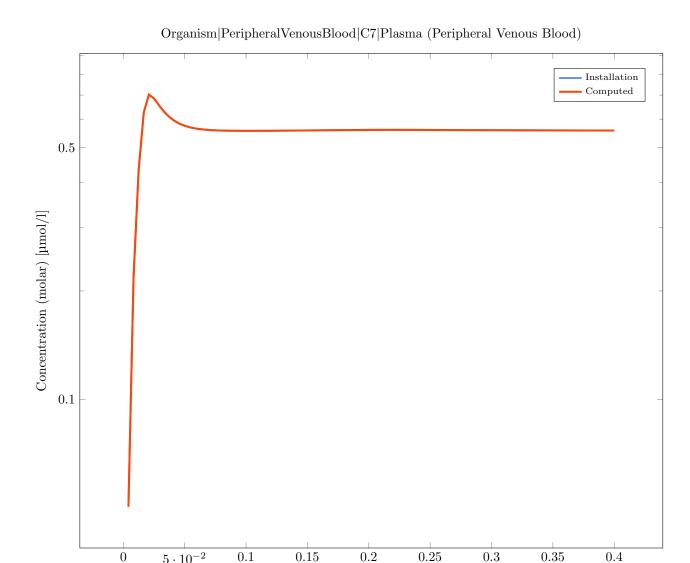


Figure 1.228

Time [h]

 $Simulation: Single ORAL\_C8\_2 Pores\_RR\_standard\_standard\_Single ORAL\_C8\_2 Pores\_RR\_standard\_$ standard

Result of the validation: Valid

0

 $5\cdot 10^{-2}$ 

0.1

Output Path: Organism|PeripheralVenousBlood|C8|Plasma (Peripheral Venous Blood) Deviation: 0

0.4

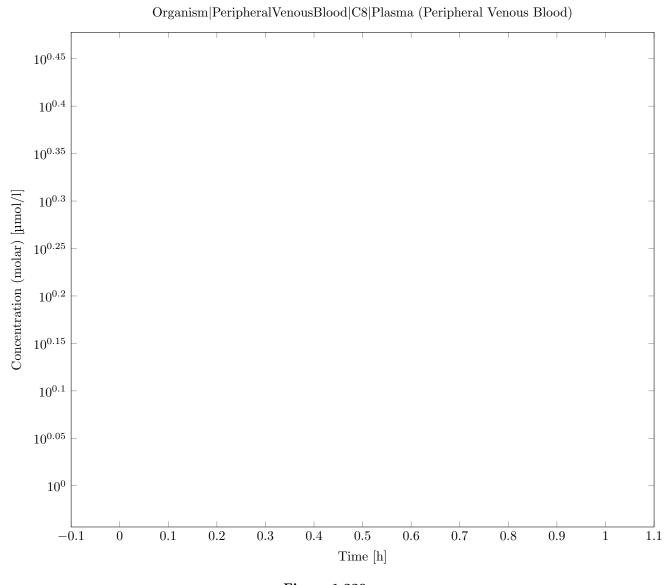
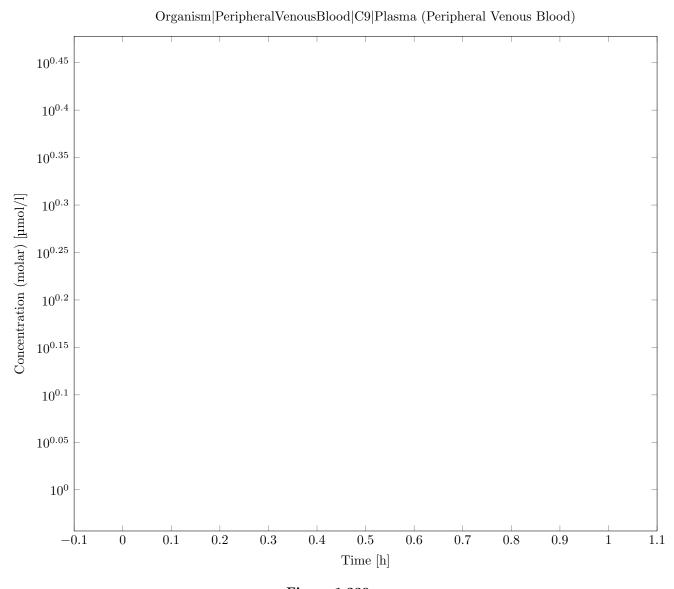


Figure 1.229

 $Simulation: Single ORAL\_C9\_2 Pores\_RR\_schmitt\_standard-Single ORAL\_S Pores\_Schmitt\_standard-Single ORAL\_S Pores\_Schmitt\_standard-Single ORAL\_S Pores\_Schmitt\_standard-Single ORAL\_S Pores\_Schmitt\_standard-Single ORAL\_S Pores\_Schmitt\_standard-Single ORAL\_S Pores\_S Pore$ 

Result of the validation: Valid

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



 ${\bf Figure~1.230}$ 

Simulation: Test 18.1\_I1\_C1\_A1\_Config1-Test 18.1\_I1\_C1\_A1\_Config1 Result of the validation: Valid



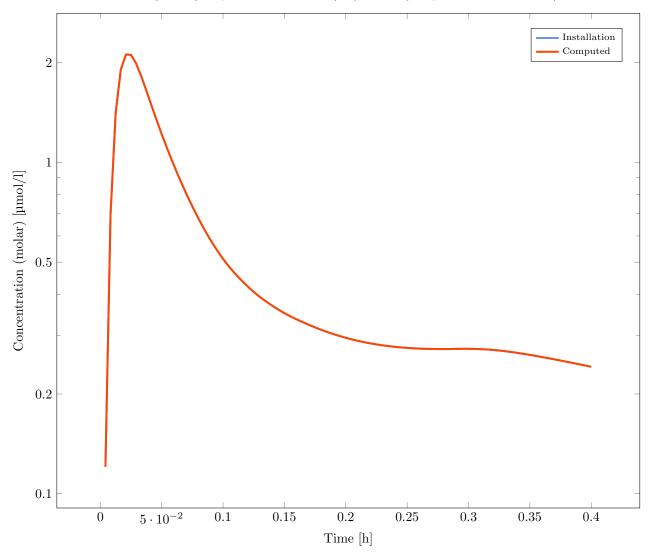


Figure 1.231

Simulation: Test 18.1\_I2\_C1\_A1\_Config2-Test 18.1\_I2\_C1\_A1\_Config2 Result of the validation: Valid

result of the validation. Valid

Output Path: Organism |Peripheral Venous<br/>Blood |C1 |Plasma (Peripheral Venous Blood) Deviation:<br/> 0

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



Figure 1.232

Simulation: Test 18.1\_I2\_C3\_A1\_Config2-Test 18.1\_I2\_C3\_A1\_Config2 Result of the validation: Valid

result of the validation. Valid

Output Path: Organism |Peripheral Venous<br/>Blood |C3 |Plasma (Peripheral Venous Blood) Deviation:<br/> 0

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

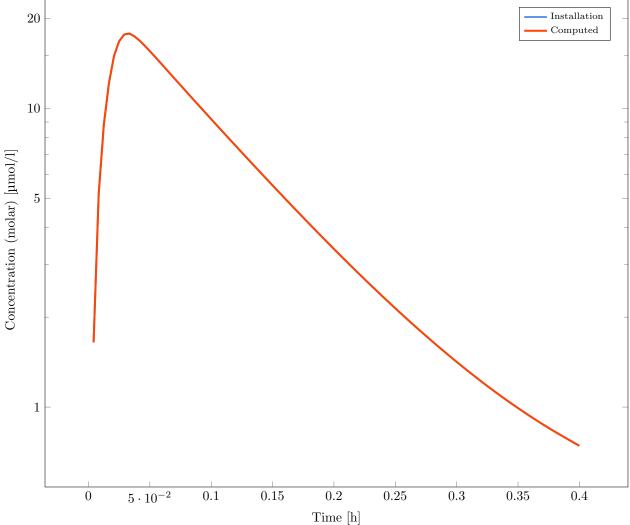


Figure 1.233

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<br/>Blood |C3 |Plasma (Peripheral Venous Blood)<br/> Deviation:  ${\bf 0}$ 

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

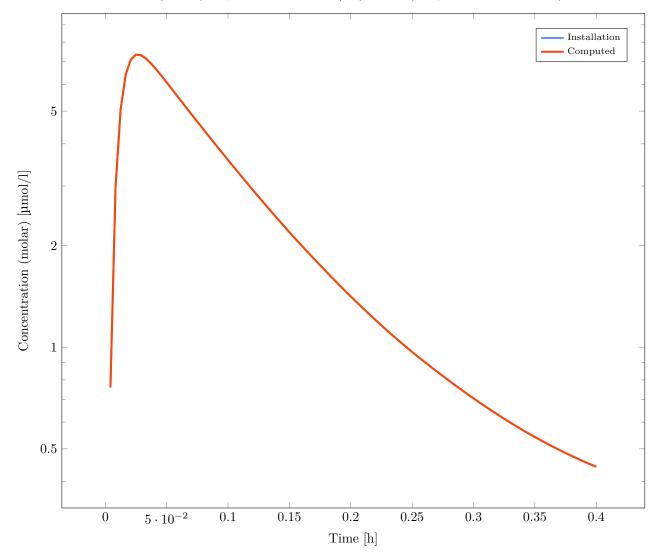


Figure 1.234