Open Systems Pharmacology Suite - 7.1.0 Installation Validation

Admin

May 29, 2017

Contents

1	Installation Validation Results	2
	1.1 Validation Summary	2
	1.2 Comparison Results	2
	1.2.1 Valid Simulations (114/114)	3

Chapter 1

Installation Validation Results

Overall Validation Result

Valid

1.1 Validation Summary

Run Duration

Start time: 2017-05-29 21:51 End time: 2017-05-29 22:02

Validation performed in 10m:36s:197ms

Input Configuration Folder

 $C: \label{lem:condition} C: \label{lem:condition} Paramacology \label{lem:condition} Inputs \label{lem:condition} Batch Files$

Local Outputs Location

 $C: \\ Validator \\$

Application Versions

PK-Sim Version 7.1.0.63 MoBi Version 7.1.0.66

Computer Name

DESKTOP-NJHIQCO

Operating System

Windows 10 Pro

Architecture

x64

Running on Virtual Machine

Yes

Running on Terminal Session

No

1.2 Comparison Results

Overall Comparison Result

Valid

Installation Folder

Computed Folder

 $C: \\ Validator \\$

1.2.1 Valid Simulations (114/114)

Simulation: Beagle_SingleORAL_Dissolved

Result of the validation: Valid

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

Deviation: 0

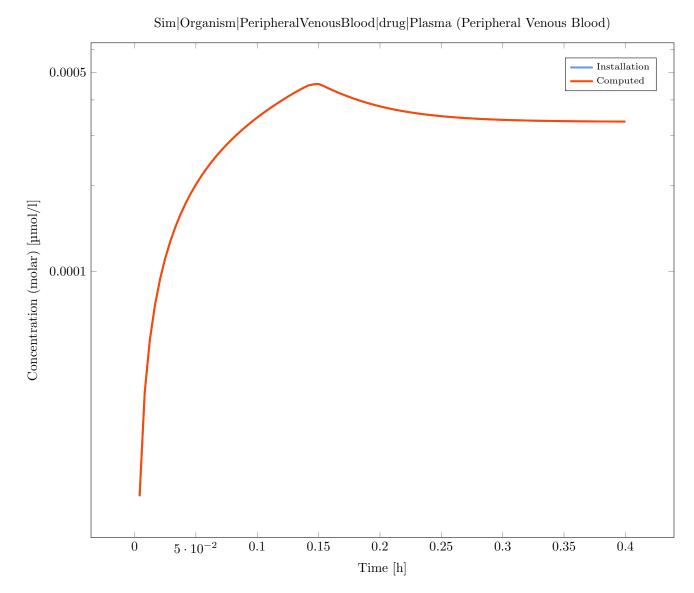


Figure 1.1

 $Simulation: \ Beagle_SingleORAL_Dissolved_MW_200_fu_0.2_LogP_5$

Result of the validation: Valid

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

Deviation: 0



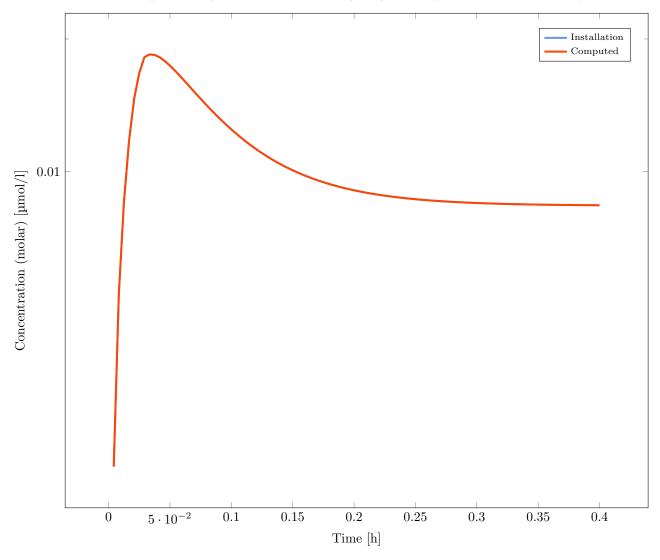


Figure 1.2

 $Simulation: \ Beagle_SingleORAL_Dissolved_MW_800_fu_0.6_LogP_-5$

Result of the validation: Valid

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

Deviation: 0

Sim|Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) 10^{-17} Installation Computed 10^{-18} Concentration (molar) [µmol/1] 10^{-19} 10^{-20} 10^{-21} 0.1 0.15 0.2 0.25 0.3 0.35 0 $5 \cdot 10^{-2}$ 0.4

Figure 1.3

Time [h]

 $Simulation: \ Dog_MultiORAL_12_12_Dissolved$

Result of the validation: Valid

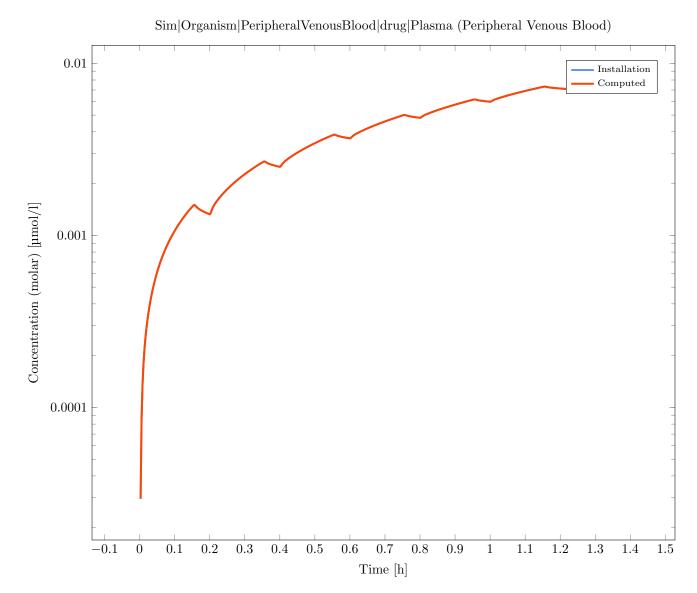


Figure 1.4

Simulation: Dog_MultiORAL_24_Dissolved

Result of the validation: Valid

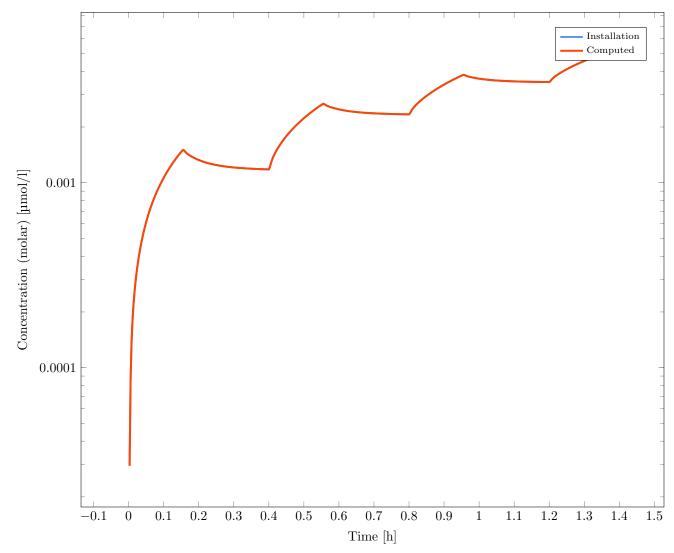


Figure 1.5

Simulation: European_SingleORAL_Age_0_CYP3A4

Result of the validation: Valid

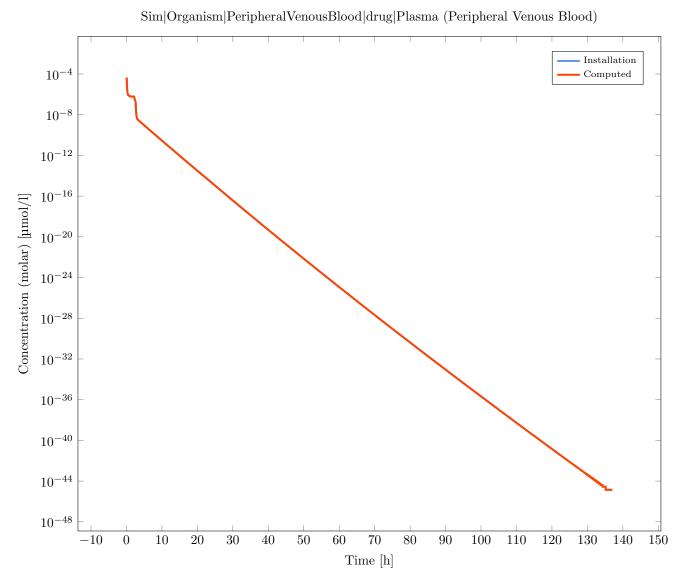


Figure 1.6

 $Simulation: \ European_SingleORAL_Age_0_GFR$

Result of the validation: Valid

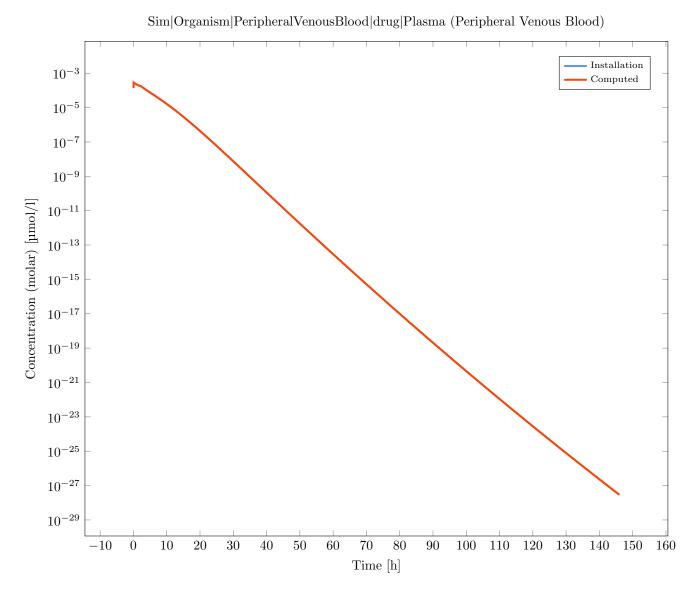


Figure 1.7

 $Simulation: European_SingleORAL_Age_1_CYP3A4$

Result of the validation: Valid

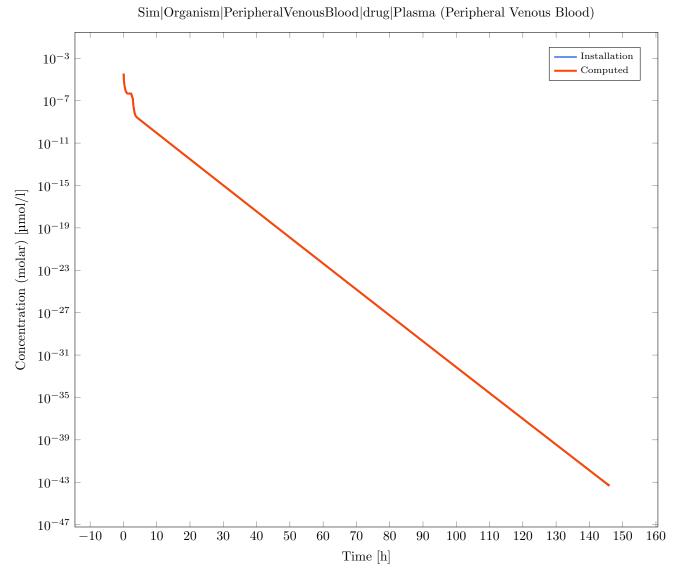


Figure 1.8

 $Simulation: \ European_SingleORAL_Age_1_GFR$

Result of the validation: Valid

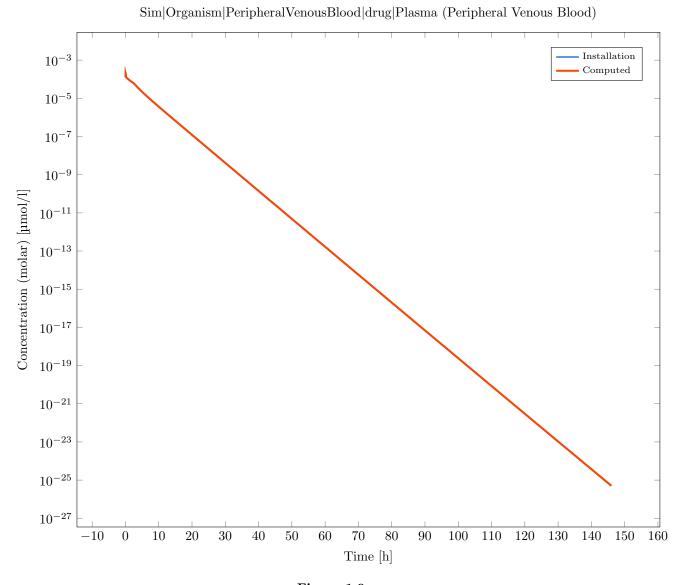
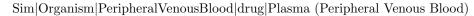


Figure 1.9

Simulation: Human_CompetitiveInhibition

Result of the validation: Valid



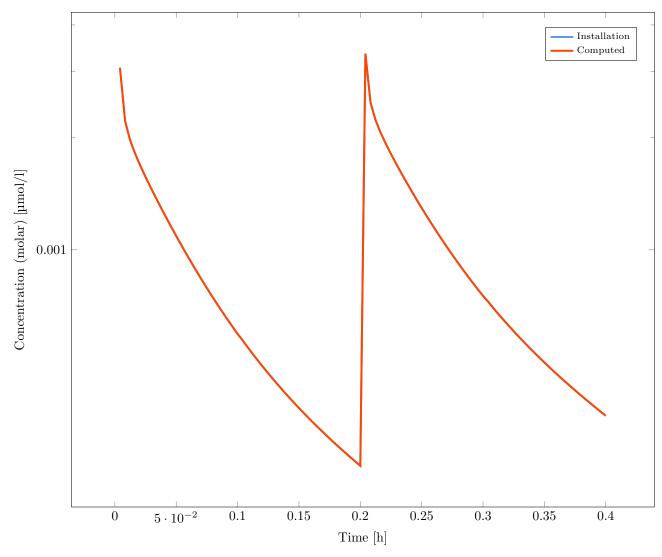


Figure 1.10

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

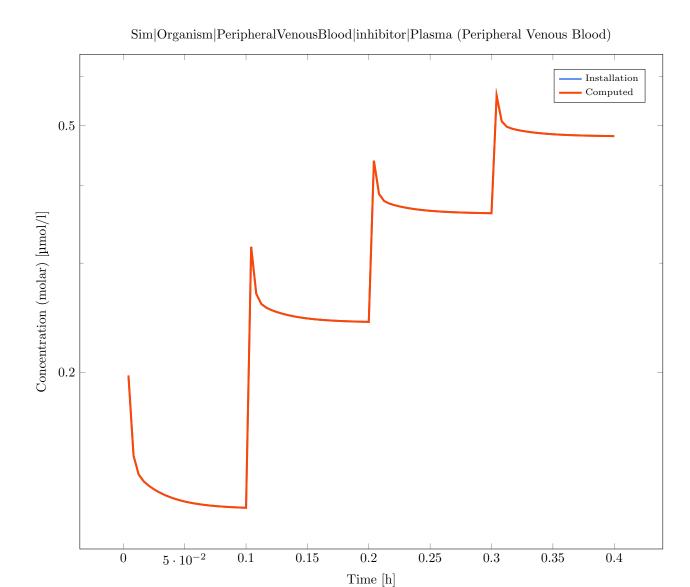


Figure 1.11

Simulation: Human_IrreversibleInhibition

Result of the validation: Valid

0

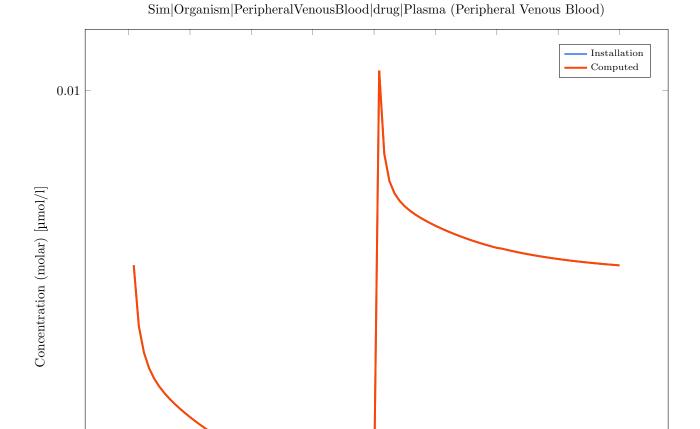


Figure 1.12

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

0.1

 $5 \cdot 10^{-2}$

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

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

Figure 1.13

Time [h]

Simulation: Human_MixedInhibition

 $5 \cdot 10^{-2}$

0.1

Result of the validation: Valid

0

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

0.4

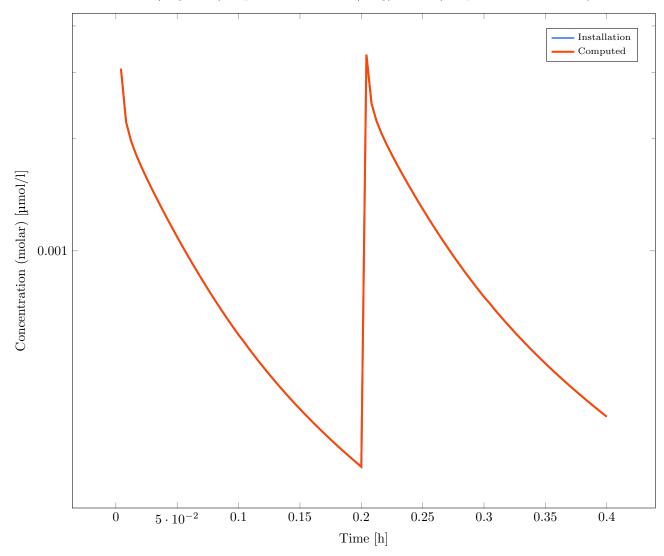


Figure 1.14

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

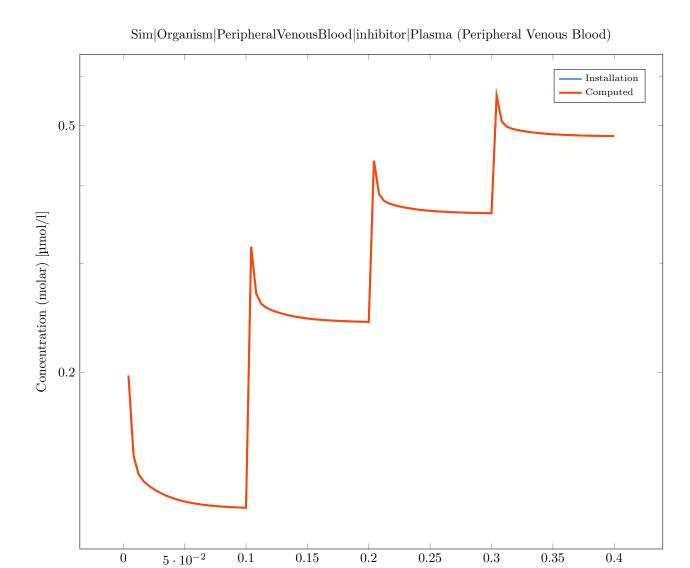


Figure 1.15

Time [h]

 $Simulation: \ Human_MultiIV_6_6_12$

Result of the validation: Valid

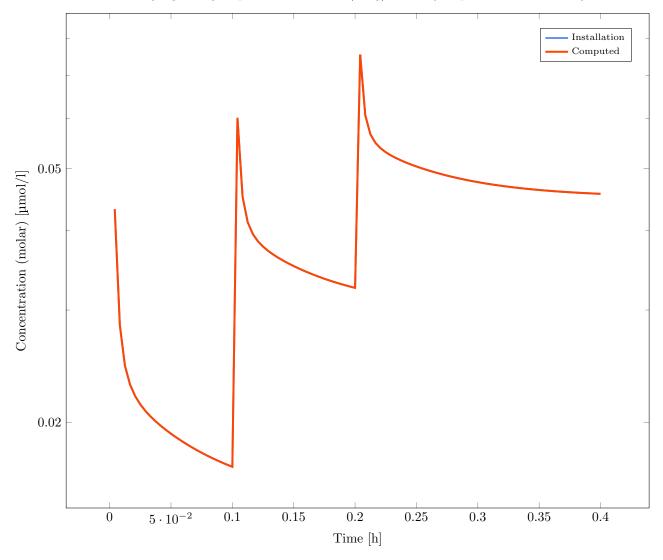


Figure 1.16

Simulation: Human_MultiORAL_6_12_12_Dissolved

Result of the validation: Valid

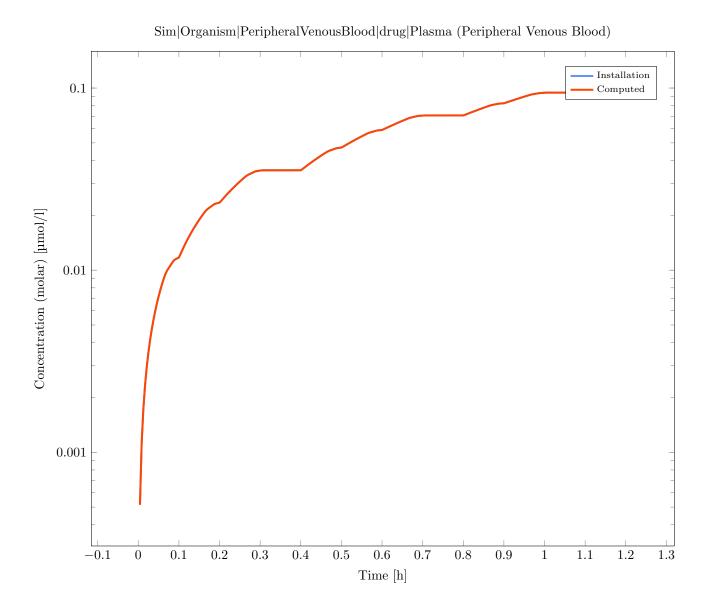


Figure 1.17

 ${\bf Simulation: \ Human_MultiORAL_6_12_12_Dissolved_absorption_sink_conditions \ Result \ of \ the \ validation: \ Valid}$

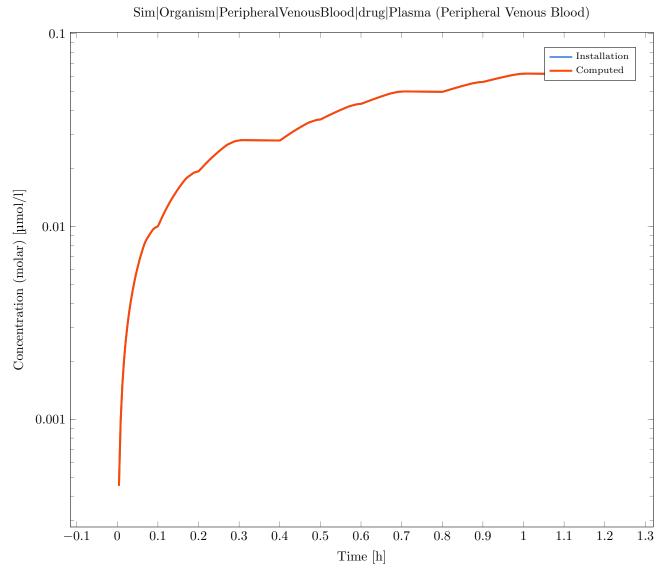


Figure 1.18

 $Simulation: \ Human_MultiORAL_6_12_12_Dissolved_EHC_continuous_fraction_0.5 \\ Result of the validation: \ Valid$

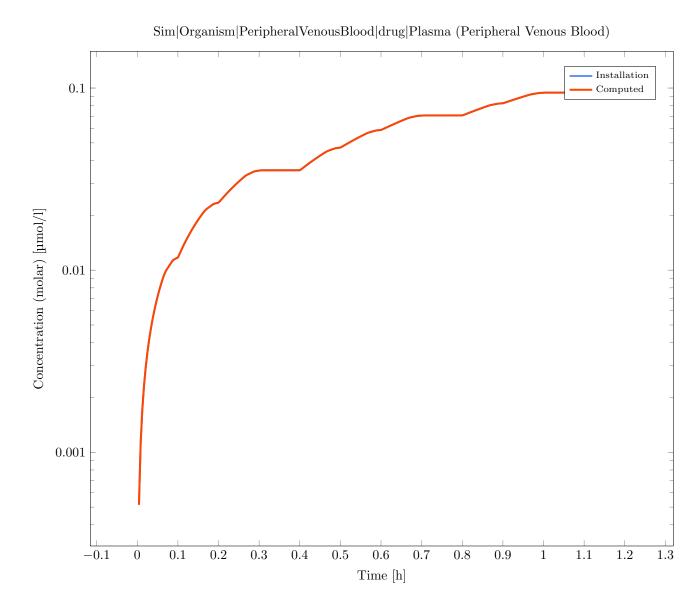


Figure 1.19

 $Simulation: \ Human_MultiORAL_6_12_12_Dissolved_EHC_continuous_fraction_1 \\ Result of the validation: \ Valid$

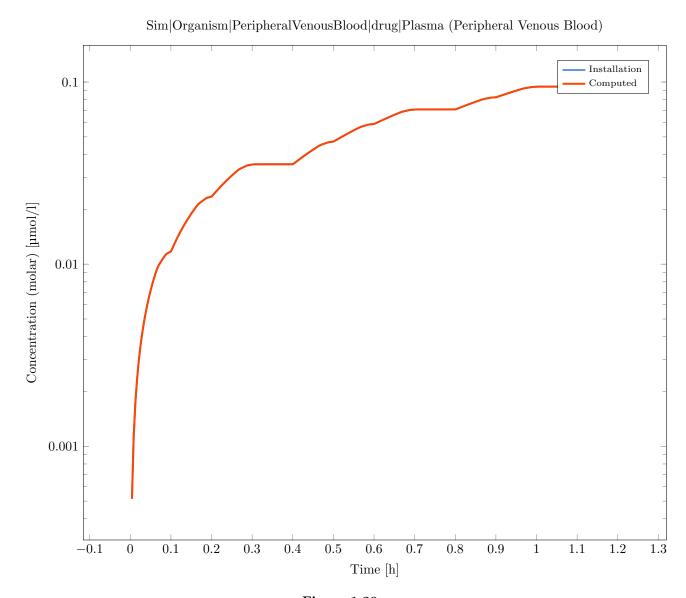


Figure 1.20

 $Simulation: \ Human_MultiORAL_6_12_12_Dissolved_pKa-dependent \ penalty \ factor \ Result \ of the \ validation: \ Valid$

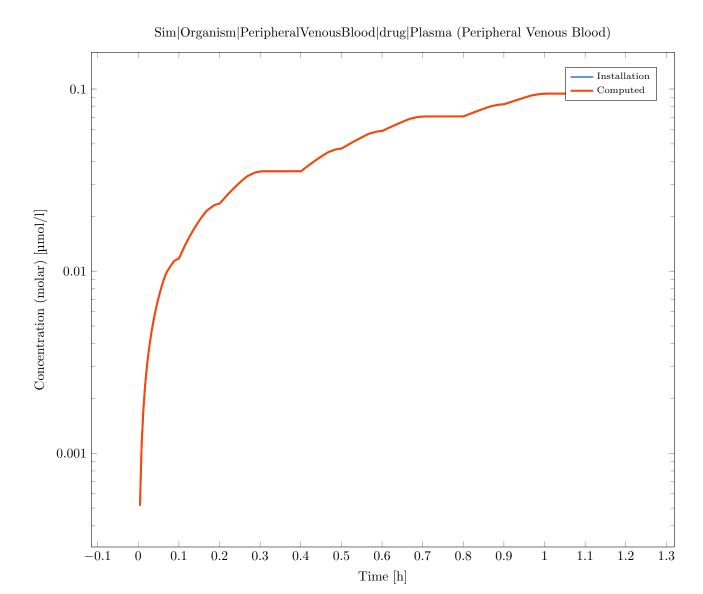


Figure 1.21

 $Simulation: \ Human_MultiORAL_6_12_12_Dissolved_solubility$

Result of the validation: Valid

Sim|Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed 0.1 0.1 0.1

Figure 1.22

0.6

Time [h]

0.7

0.8

0.9

1.1

1.2

1.3

0.5

0.4

Simulation: Human_MultipleIV_AllActiveProcesses

0.2

0.3

0.1

0

Result of the validation: Valid

-0.1

0.1 [II] 0.01 0.01

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

Figure 1.23

0.6

0.7

Time [h]

0.8

0.9

1.1

1.2

1.3

1.4

1.5

 $Simulation: \ Human_Multiple IV_transporters$

0.1

0.2

0.3

0.4

0.5

Result of the validation: Valid

-0.1

0

0.001

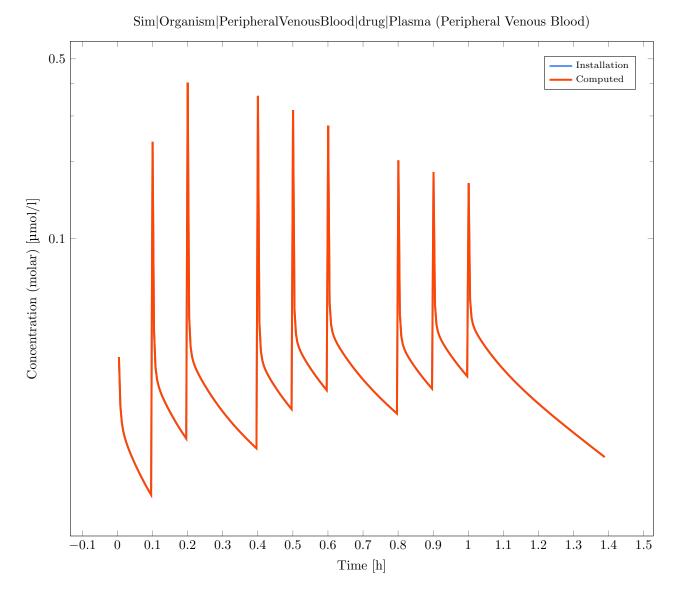


Figure 1.24

Simulation: Human_NonCompetitiveInhibition

Result of the validation: Valid

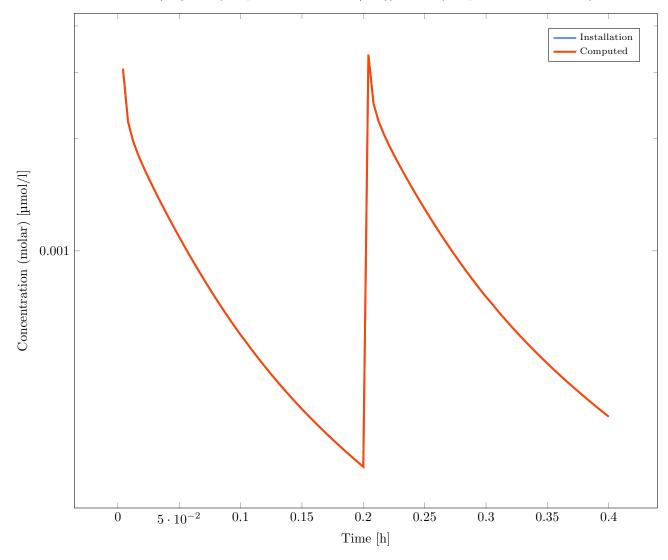


Figure 1.25

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

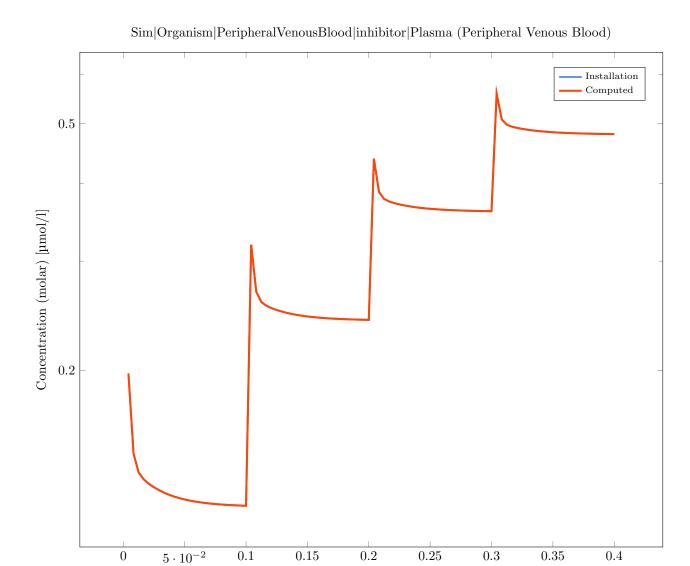


Figure 1.26

Time [h]

Simulation: Human_SingleIV Result of the validation: Valid

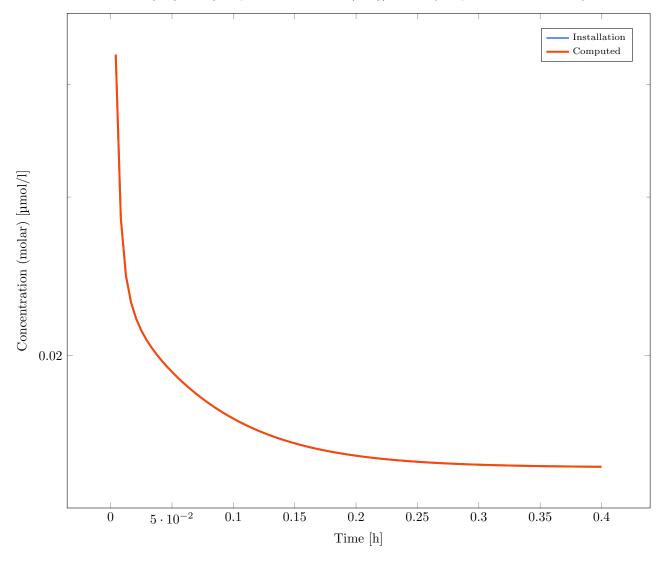


Figure 1.27

 $Simulation: \ Human_Single IV_Configuration$

Result of the validation: Valid

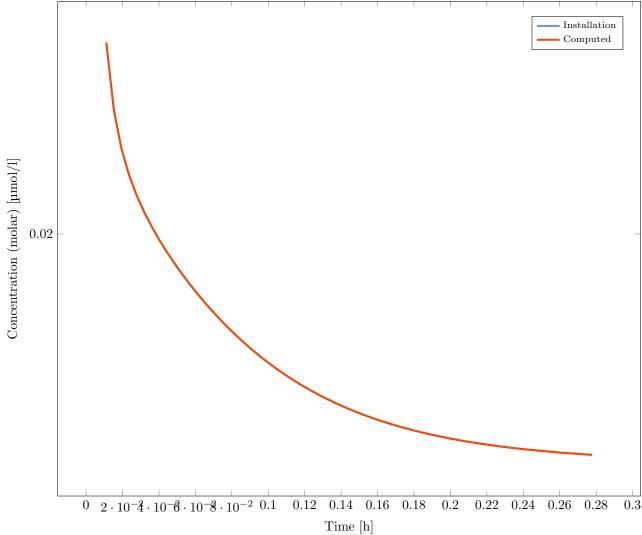


Figure 1.28

 $Simulation: \ Human_SingleIV_MW_200_fu_0.2_LogP_5$

Result of the validation: Valid

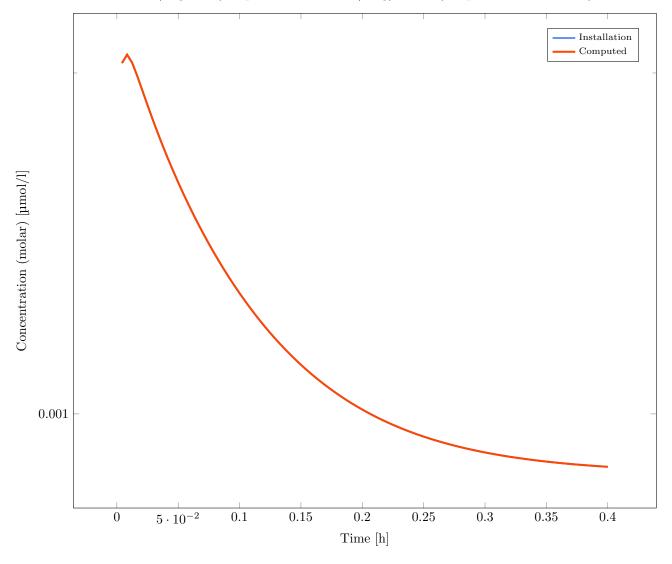


Figure 1.29

 $Simulation: \ Human_SingleIV_MW_800_fu_0.6_LogP_-5$

Result of the validation: Valid

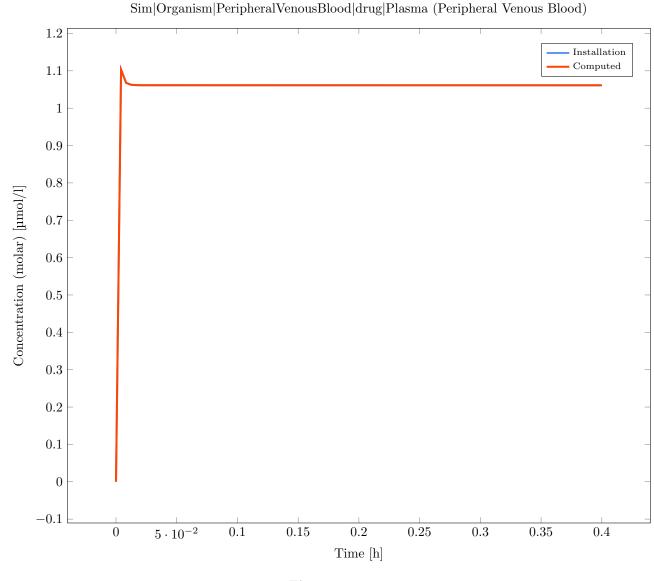
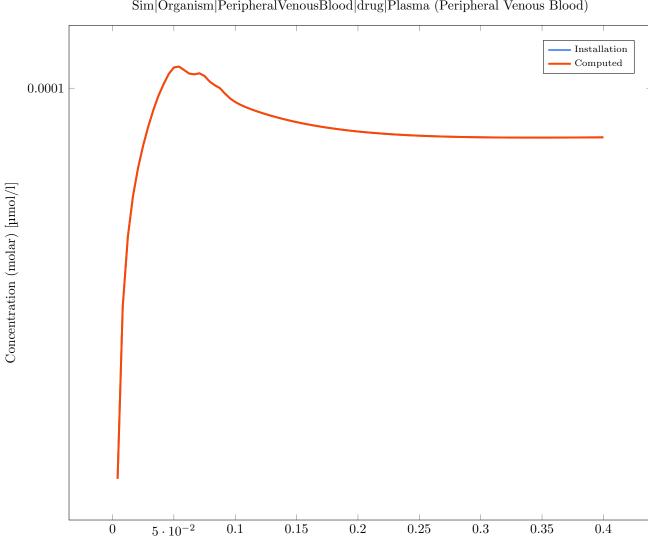


Figure 1.30

 $Simulation: \ Human_SingleORAL_Dissolved$

Result of the validation: Valid



Sim|Organism|Peripheral Venous Blood|drug|Plasma~(Peripheral Venous~Blood)

Figure 1.31

Time [h]

 $Simulation: \ Human_Single ORAL_Dissolved_LiverPlasmaClearance_KidneyPlasmaClearance_Number Clearance_Number Clearance_Numb$ Result of the validation: Valid

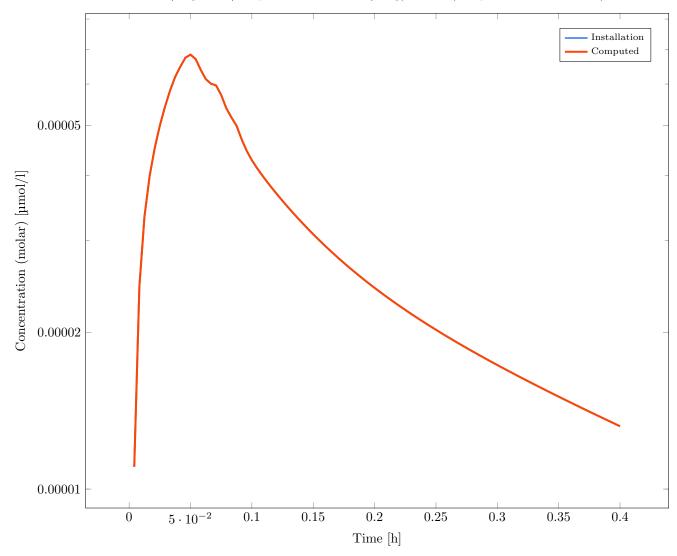


Figure 1.32

 $Simulation: Human_SingleORAL_Dissolved_LiverPlasmaClearance_KidneyPlasmaClearance_MW_-200_fu_0.2_LogP_5$

Result of the validation: Valid

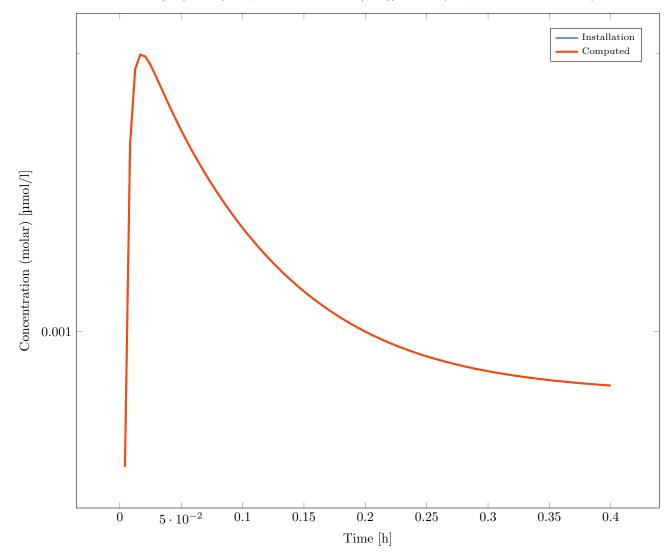


Figure 1.33

 $Simulation: Human_SingleORAL_Dissolved_LiverPlasmaClearance_KidneyPlasmaClearance_MW_800_fu_0.6_LogP_-5$

Result of the validation: Valid

Sim|Organism|Peripheral Venous Blood|drug|Plasma~(Peripheral Venous~Blood)

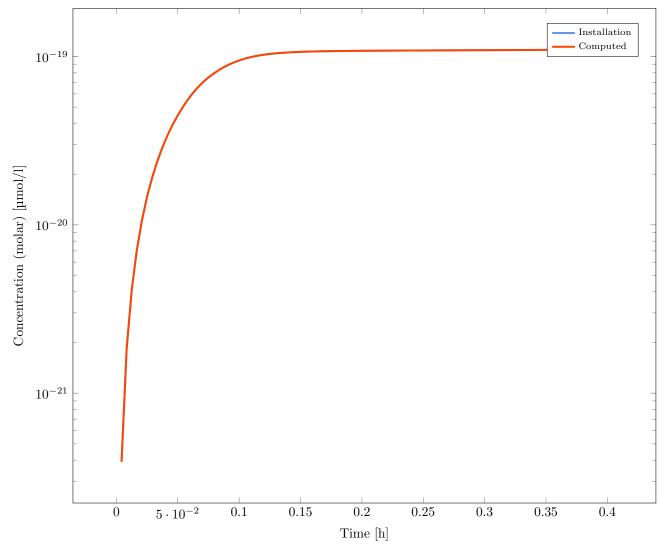


Figure 1.34

 $Simulation: \ Human_SingleORAL_Dissolved_MW_200_fu_0.2_LogP_5$

Result of the validation: Valid

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

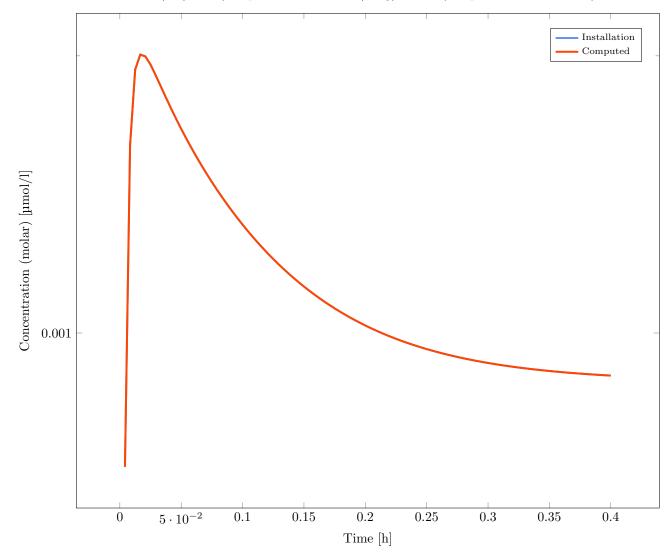


Figure 1.35

 $Simulation: \ Human_SingleORAL_Dissolved_MW_800_fu_0.6_LogP_-5$

Result of the validation: Valid

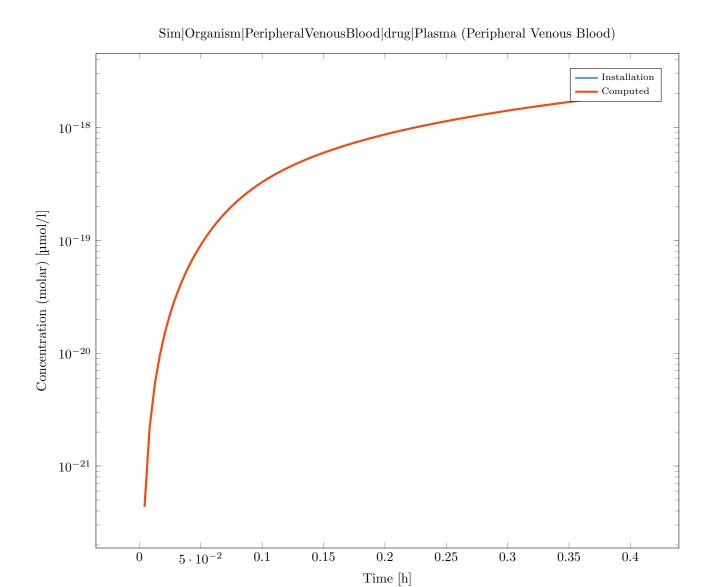


Figure 1.36

Simulation: Human_SingleORAL_Lint80

Result of the validation: Valid

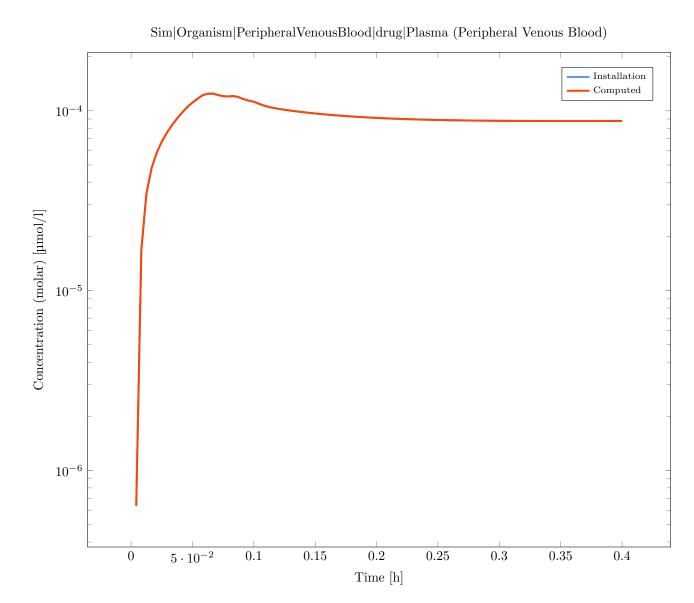


Figure 1.37

Simulation: Human_SingleORAL_Lint80_AsSuspention

Result of the validation: Valid

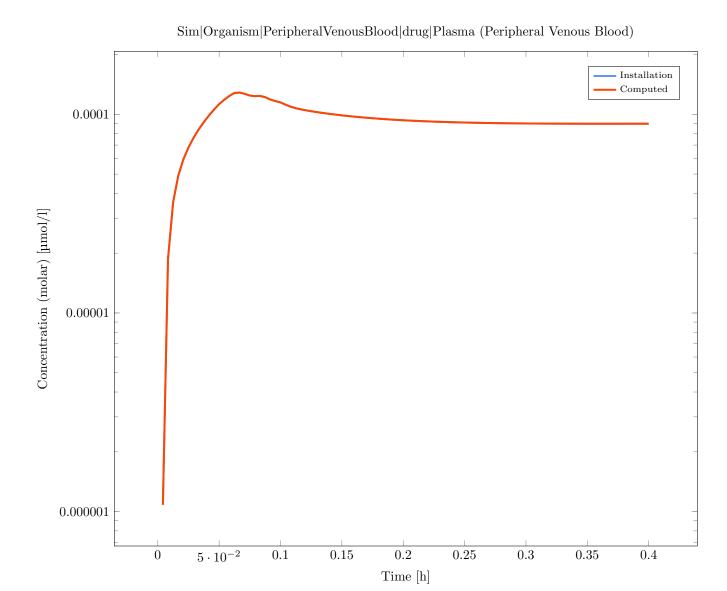


Figure 1.38

 $Simulation: \ Human_SingleORAL_MonoParticles$

Result of the validation: Valid

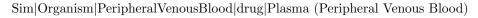
$10^{-5} = 10^{-6} = 0.1 \quad 0.15 \quad 0.2 \quad 0.25 \quad 0.3 \quad 0.35 \quad 0.4$

Figure 1.39

Time [h]

 $Simulation: \ Human_SingleORAL_MonoParticles_AsSuspention$

Result of the validation: Valid



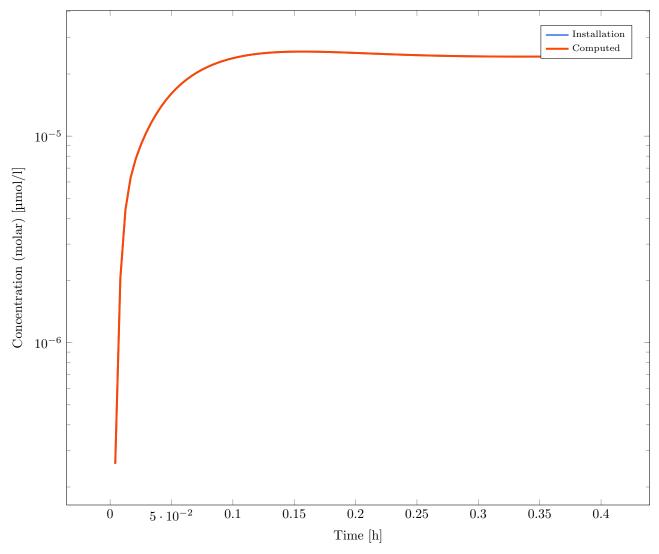


Figure 1.40

Simulation: Human_SingleORAL_PolyParticlesLogNormal

Result of the validation: Valid

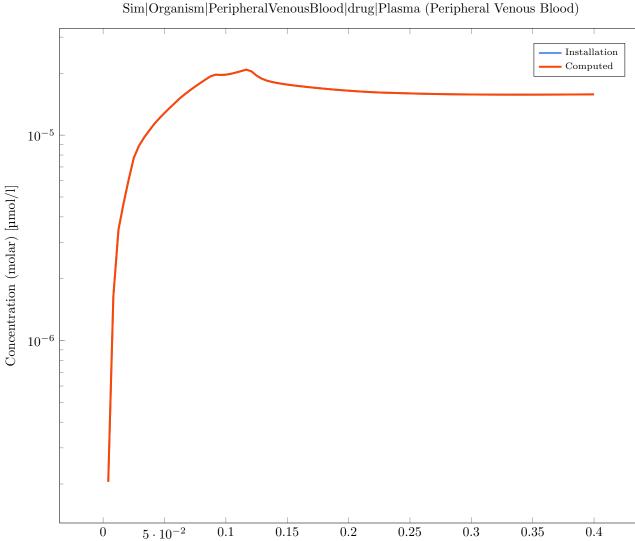


Figure 1.41

Time [h]

 $Simulation: \ Human_SingleORAL_PolyParticlesLogNormal_AsSuspention$

Result of the validation: Valid



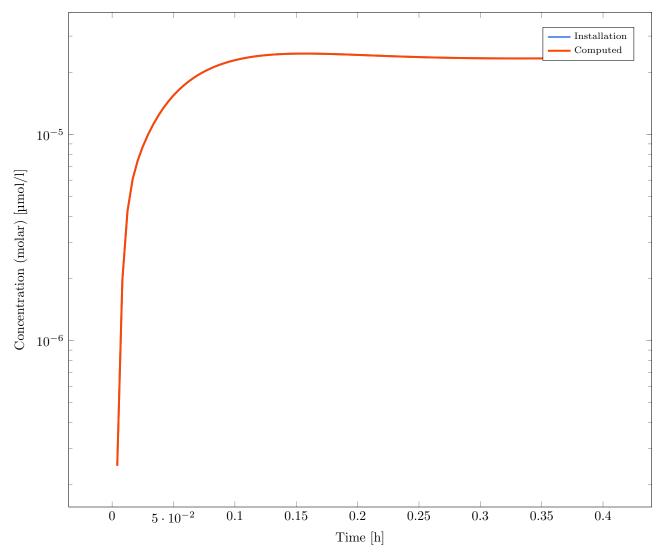


Figure 1.42

Simulation: Human_SingleORAL_PolyParticlesNormal

Result of the validation: Valid

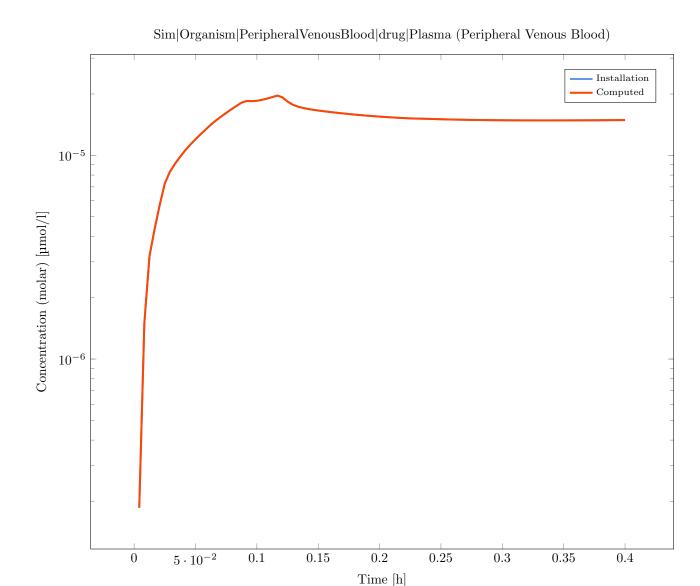


Figure 1.43

 $Simulation: \ Human_SingleORAL_PolyParticlesNormal_AsSuspention$

Result of the validation: Valid

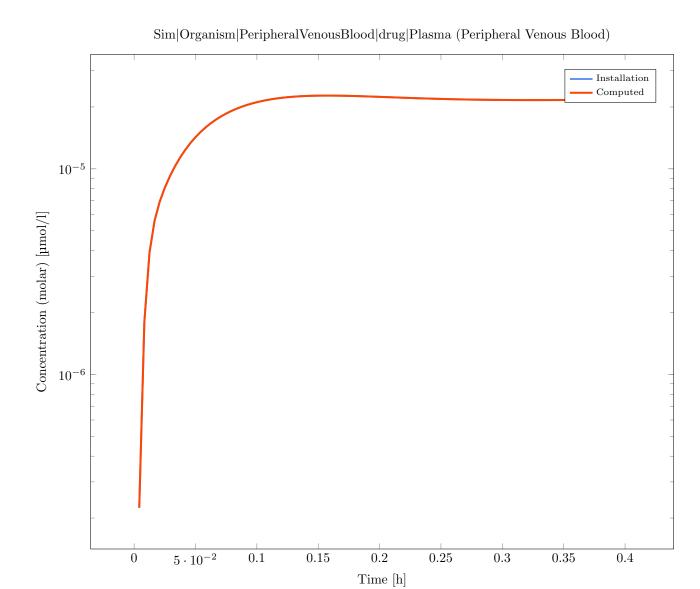


Figure 1.44

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

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

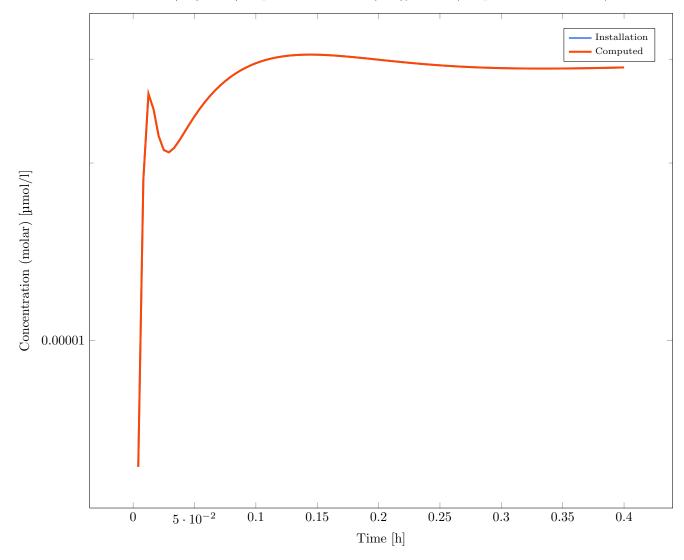


Figure 1.45

 $Simulation: \ Human_SingleORAL_PolyParticlesNormal_AsSuspention_treat_precipated_drug_as_soluble$

Result of the validation: Valid

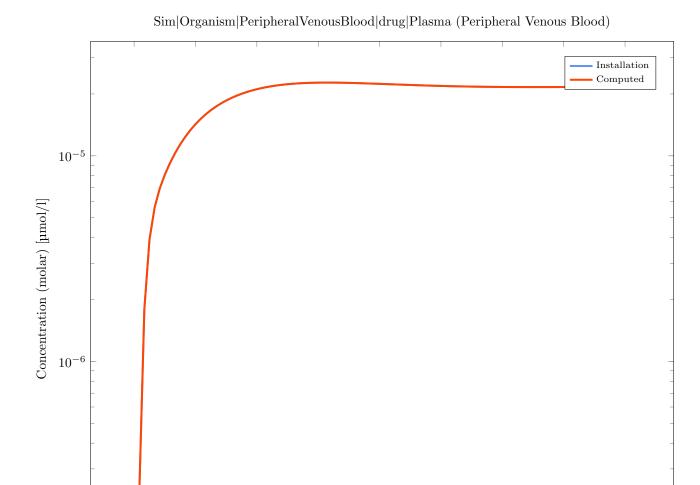


Figure 1.46

0.2

Time [h]

0.25

0.35

0.3

0.4

0.15

 ${\bf Simulation: Human_SingleORAL_PolyParticlesNormal_dissolved_radius}$

0.1

 $5\cdot 10^{-2}$

Result of the validation: Valid

0

Sim|Organism|Peripheral Venous Blood|drug|Plasma~(Peripheral Venous~Blood)

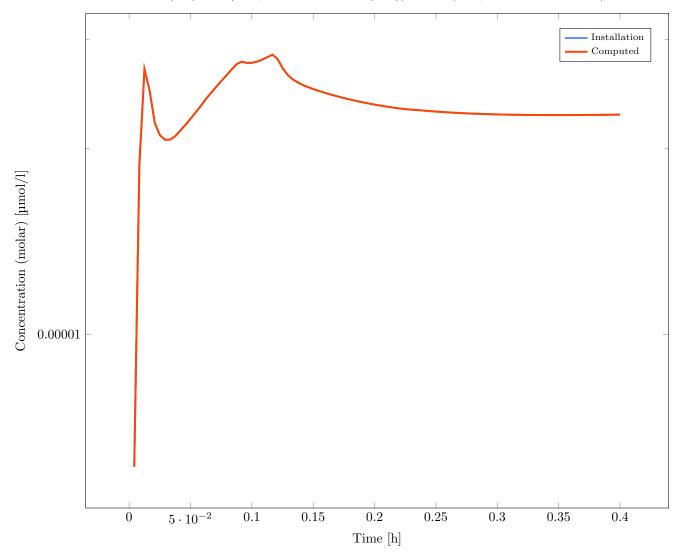


Figure 1.47

 ${\bf Simulation: Human_SingleORAL_PolyParticlesNormal_treat_precipated_drug_as_soluble \\ Result of the validation: Valid$

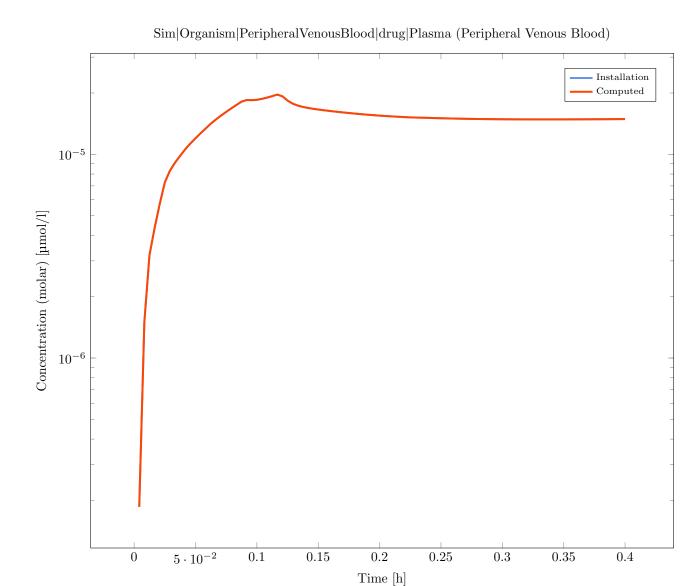


Figure 1.48

Simulation: Human_SingleORAL_Weibull

Result of the validation: Valid

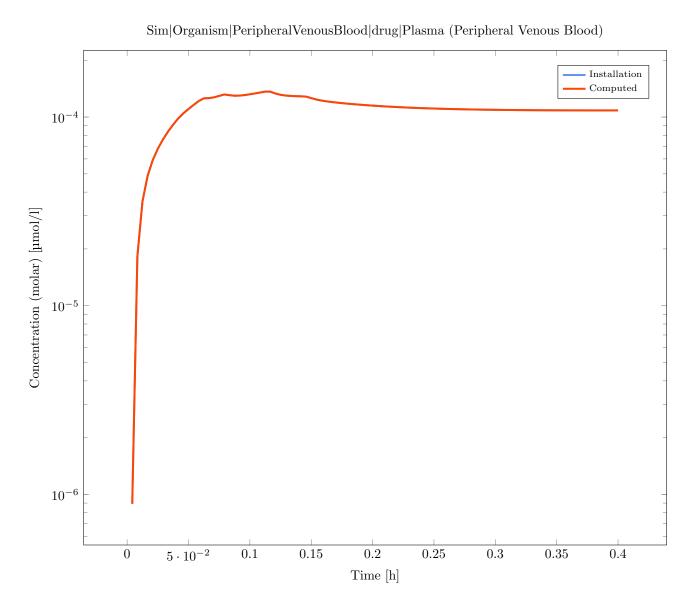


Figure 1.49

 $Simulation: \ Human_SingleORAL_Weibull_AsSuspention$

Result of the validation: Valid

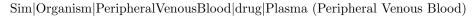
Sim|Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) — Installation — Computed

0.00001 0.000001 0 5.10⁻² 0.1 0.15 0.2 0.25 0.3 0.35 0.4

Figure 1.50

Time [h]

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



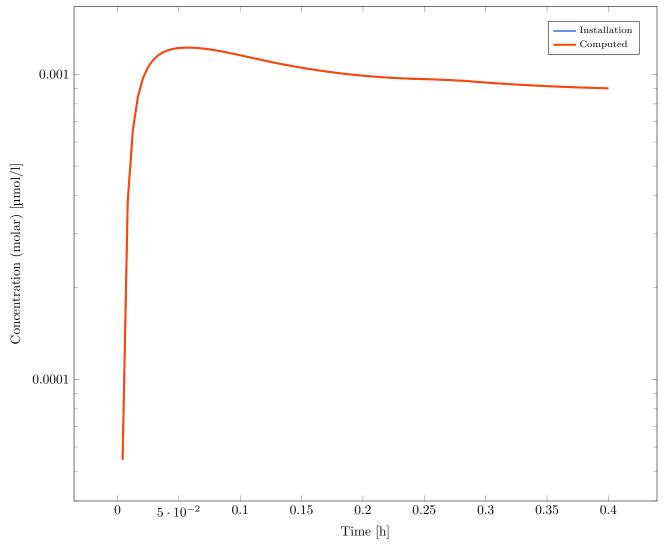


Figure 1.51

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

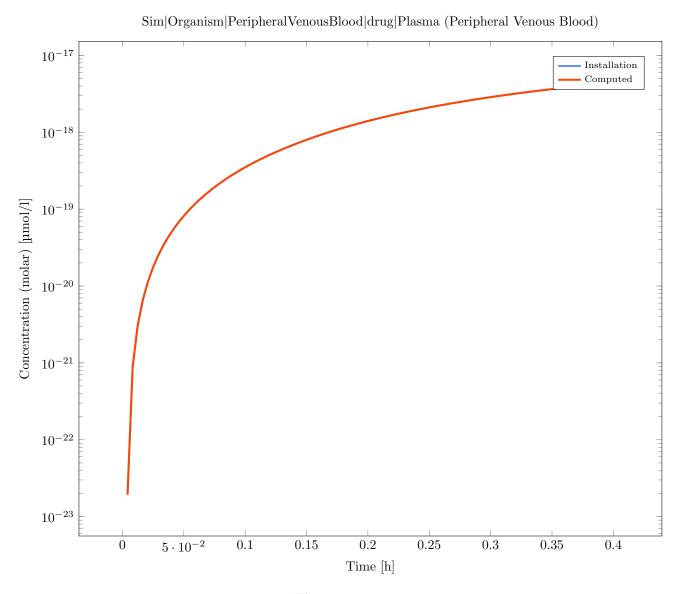
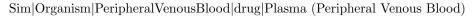


Figure 1.52

Simulation: Human_SingleORAL_Weibull_MW_200_fu_0.2_LogP_5 Result of the validation: Valid



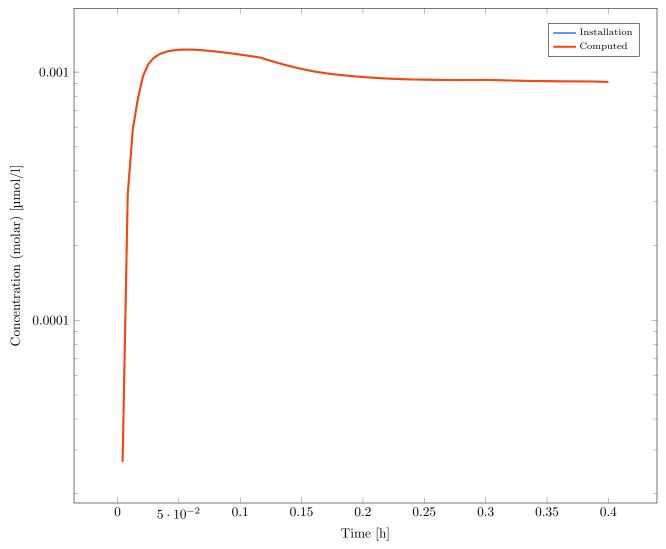


Figure 1.53

 $Simulation: \ Human_SingleORAL_Weibull_MW_800_fu_0.6_LogP_-5$

Result of the validation: Valid

Sim|Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed 10^{-18} 10^{-19} Concentration (molar) [µmol/1] 10^{-20} 10^{-21} 10^{-22} 10^{-23} 0.1 0.15 0.2 0.25 0.3 0.35 0 $5 \cdot 10^{-2}$ 0.4 Time [h]

Figure 1.54

${\bf Simulation: \ Human_Uncompetitive Inhibition}$

Result of the validation: Valid

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

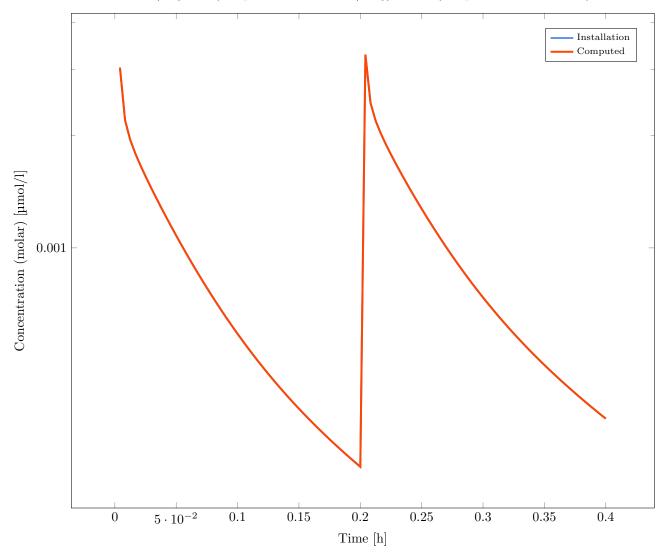


Figure 1.55

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

$Sim|Organism|Peripheral Venous Blood|inhibitor|Plasma\ (Peripheral Venous\ Blood)$

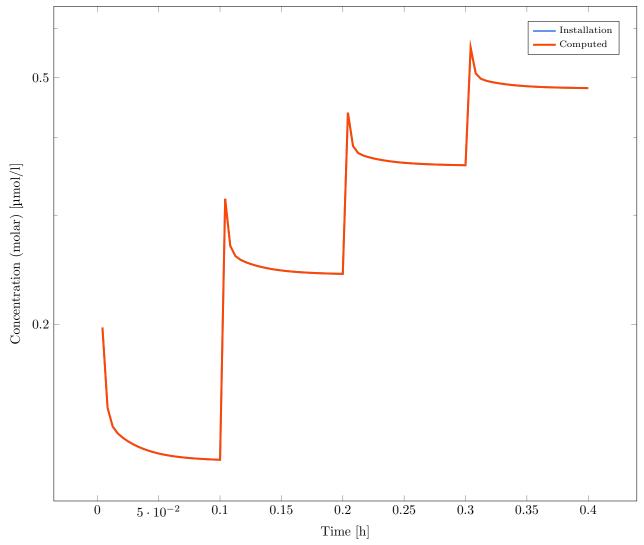


Figure 1.56

Simulation: Minipig_SingleORAL_Dissolved

Result of the validation: Valid

Sim|Organism|Peripheral Venous Blood|drug|Plasma~(Peripheral Venous~Blood)

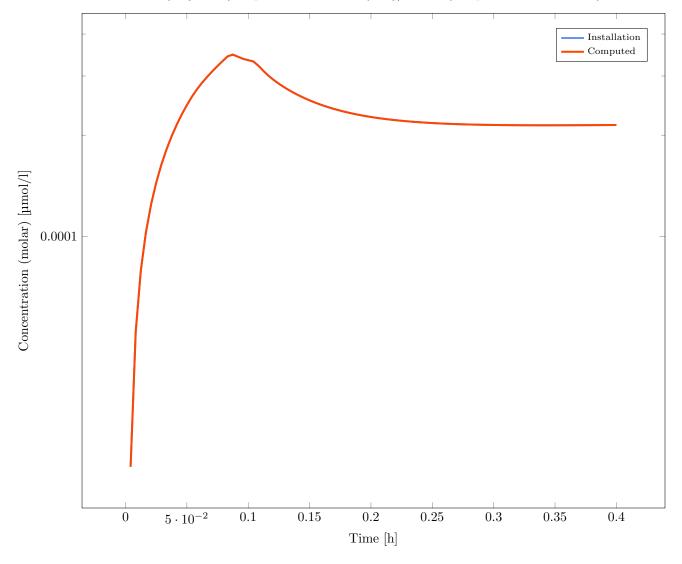


Figure 1.57

 $Simulation: \ Minipig_SingleORAL_Dissolved_MW_200_fu_0.2_LogP_5$

Result of the validation: Valid

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

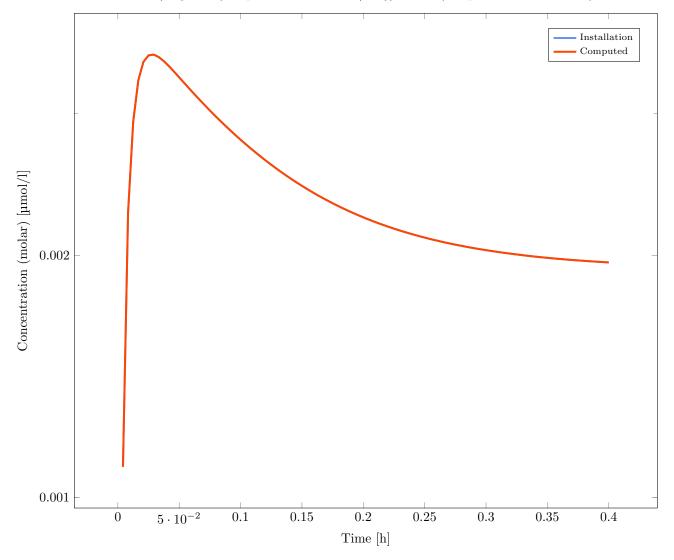


Figure 1.58

 $Simulation: \ Minipig_SingleORAL_Dissolved_MW_800_fu_0.6_LogP_-5$

Result of the validation: Valid

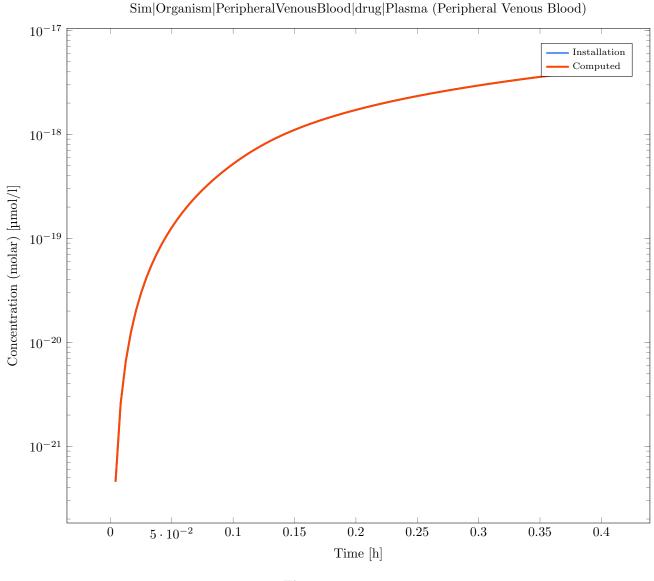


Figure 1.59

 $Simulation: \ Monkey_SingleORAL_Dissolved$

Result of the validation: Valid

Sim|Organism|Peripheral Venous Blood|drug|Plasma~(Peripheral~Venous~Blood)

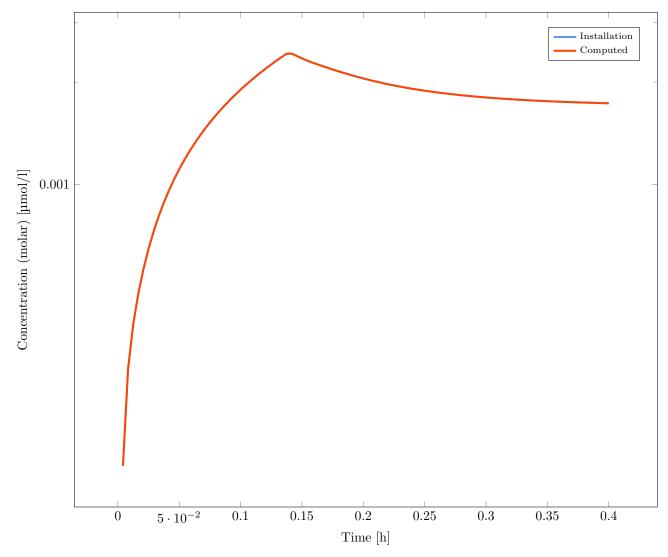


Figure 1.60

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

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

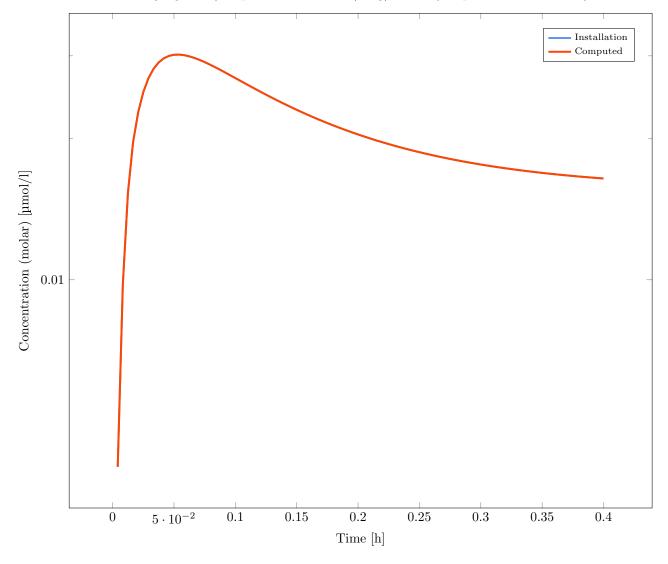


Figure 1.61

 $Simulation: \ Monkey_SingleORAL_Dissolved_MW_800_fu_0.6_LogP_-5$

Result of the validation: Valid

Sim|Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed 10^{-16} Concentration (molar) $[\mu mol/1]$ 10^{-17} 10^{-18} 10^{-19} 10^{-20} 0.1 0.15 0.2 0.25 0.3 0.35 $5 \cdot 10^{-2}$ 0.4 Time [h]

Figure 1.62

 ${\bf Simulation:\ Mouse_SingleORAL_Dissolved}$

Result of the validation: Valid

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

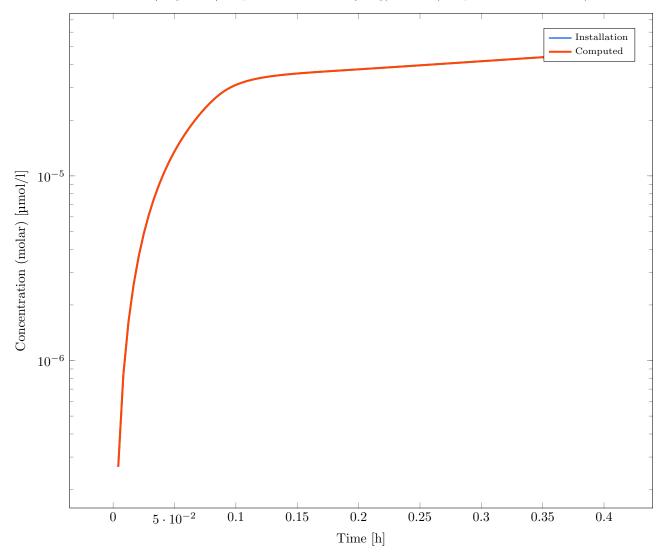


Figure 1.63

Simulation: Mouse_SingleORAL_Dissolved_MW_200_fu_0.2_LogP_5 Result of the validation: Valid

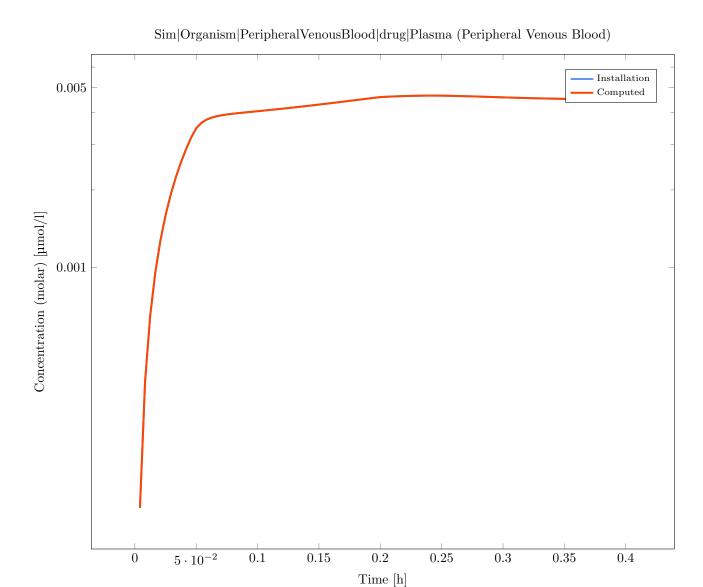


Figure 1.64

Simulation: Mouse_SingleORAL_Dissolved_MW_800_fu_0.6_LogP_-5

Result of the validation: Valid

Sim|Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) 10^{-19} Installation Computed 10^{-20} Concentration (molar) [µmol/1] 10^{-21} 10^{-22} 10^{-23} 0.1 0.15 0.2 0.25 0.3 0.35 0 $5 \cdot 10^{-2}$ 0.4

Figure 1.65

Time [h]

 $Simulation: \ Preterm_SingleIV_Age_0_GA_32_CYP3A4$

Result of the validation: Valid

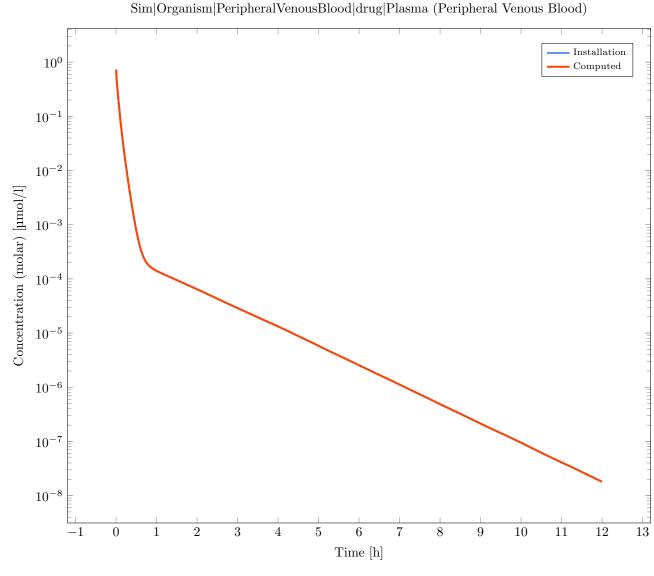


Figure 1.66

Simulation: $Preterm_SingleIV_Age_0_GA_32_GFR$

Result of the validation: Valid

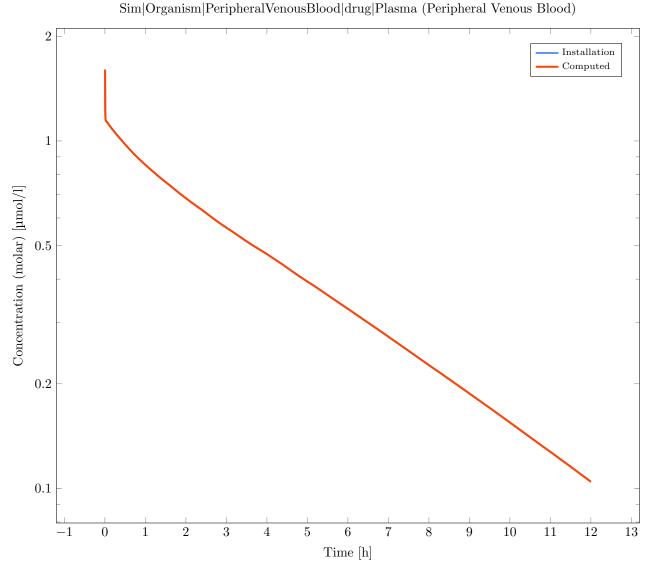


Figure 1.67

Simulation: Preterm_SingleIV_Age_15_GA_32_CYP3A4

Result of the validation: Valid

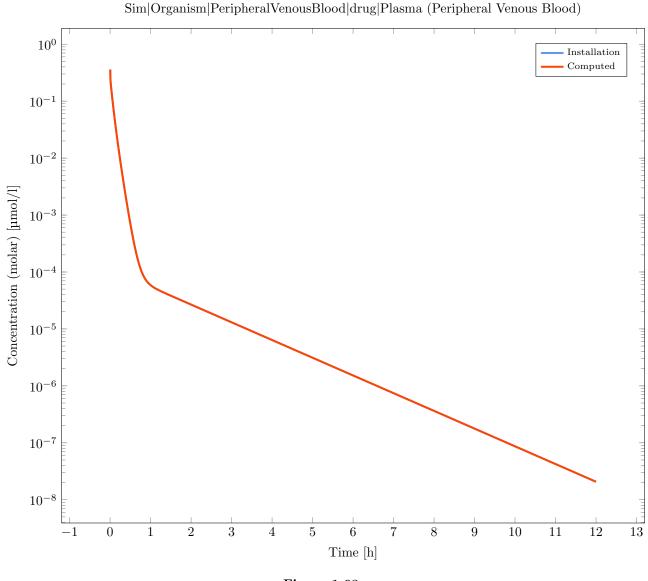


Figure 1.68

Simulation: Preterm_SingleIV_Age_15_GA_32_GFR

Result of the validation: Valid

10

11

13

12

Installation Computed O.1 O.01 O.01

Sim|Organism|Peripheral Venous Blood|drug|Plasma~(Peripheral Venous~Blood)

Figure 1.69

6

Time [h]

5

Simulation: Rat_MultiORAL_6_6_12_Dissolved

2

3

4

Result of the validation: Valid

-1

0

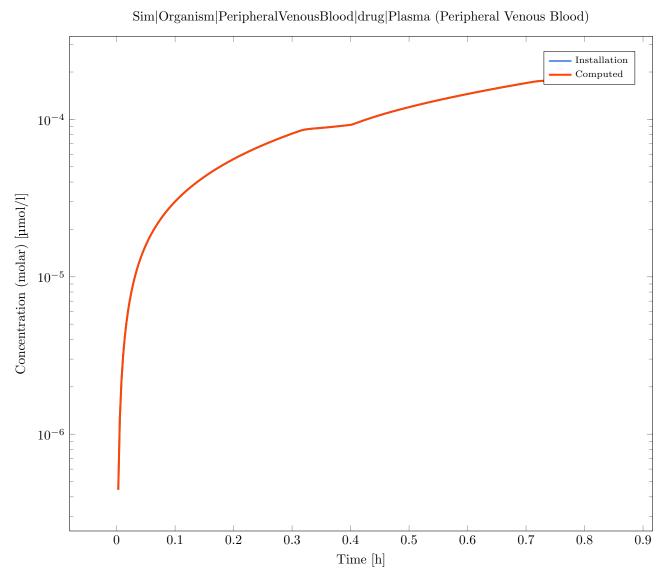


Figure 1.70

Simulation: Rat_MultiORAL_6_6_6_6_Dissolved

Result of the validation: Valid

Sim|Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed 10^{-4} Concentration (molar) $[\mu]$ 10^{-5} 10^{-6} 0.1 0.2 0 0.3 0.4 0.50.6 0.7 0.8 0.9

Figure 1.71

Time [h]

Simulation: Rat_MultiORAL_8_8_8_Dissolved

Result of the validation: Valid

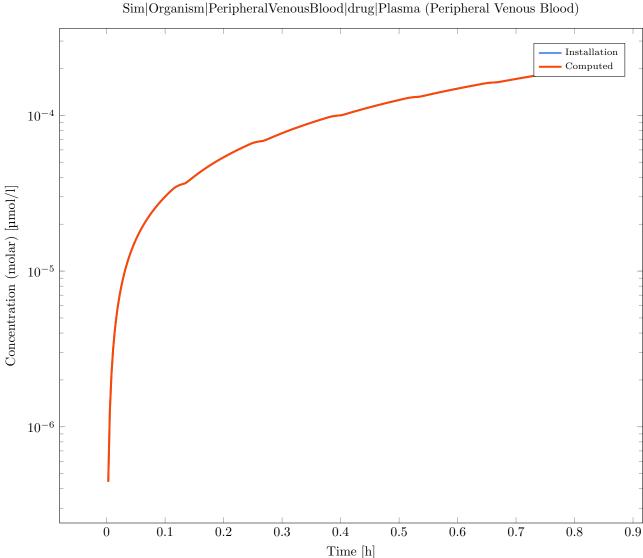


Figure 1.72

 $Simulation: Single IV_2 Pores_Human$

Result of the validation: Valid

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

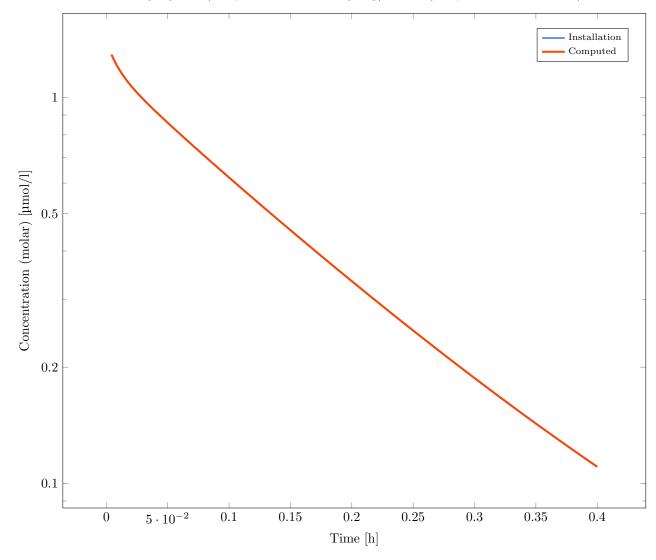


Figure 1.73

Simulation: SingleIV_2Pores_Human_SimulationC

Result of the validation: Valid

Sim|Organism|Peripheral Venous Blood|drug|Plasma~(Peripheral Venous~Blood)

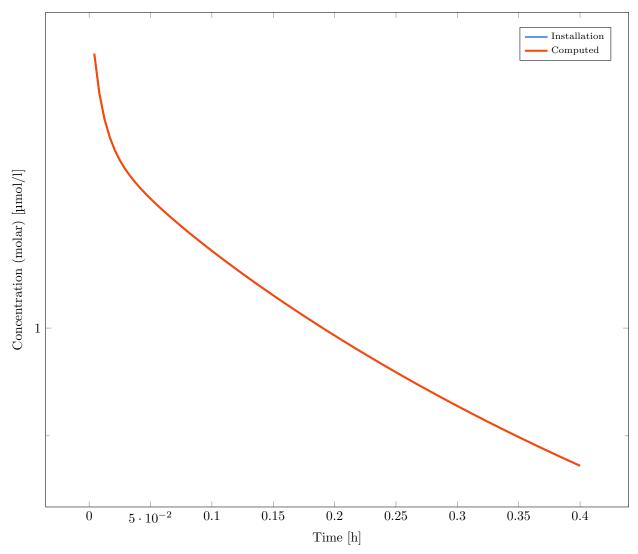


Figure 1.74

Simulation: SingleIV_2Pores_Human_SimulationD

Result of the validation: Valid

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

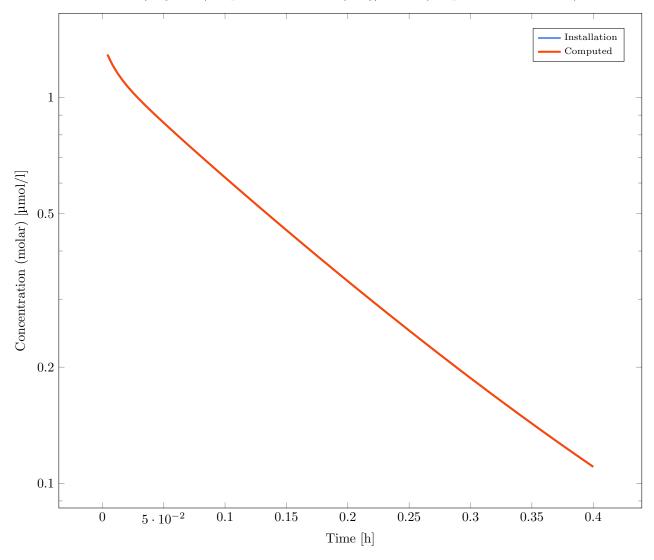


Figure 1.75

 $Simulation: Single IV_2 Pores_Human_Simulation F$

Result of the validation: Valid

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

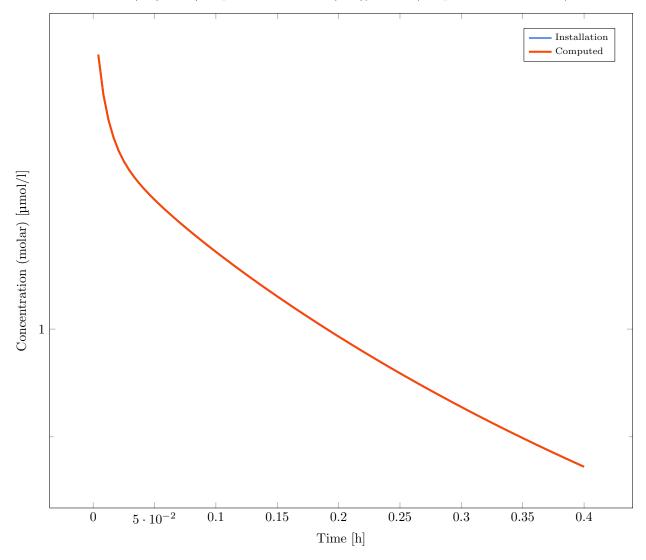


Figure 1.76

Simulation: SingleIV_2Pores_Monkey

Result of the validation: Valid

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

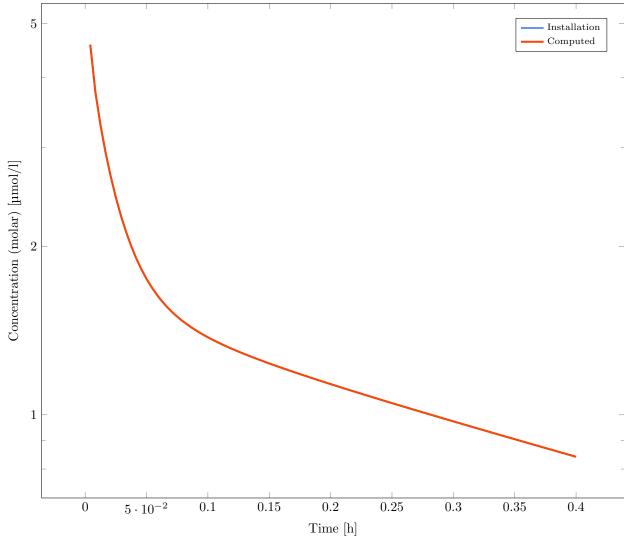


Figure 1.77

Simulation: SingleIV_2Pores_Monkey_SimulationG

Result of the validation: Valid

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

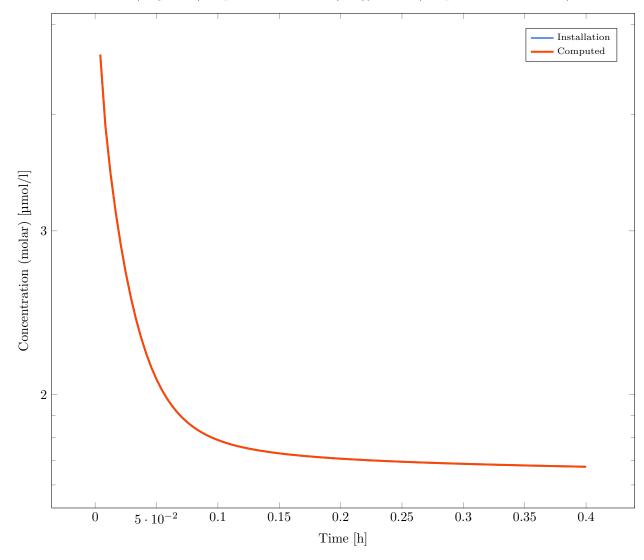


Figure 1.78

Simulation: SingleIV_2Pores_Monkey_SimulationH

Result of the validation: Valid

5 Installation Computed Concentration (molar) [µmol/1] 1

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

Figure 1.79

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

Simulation: SingleIV_2Pores_Mouse

 $5\cdot 10^{-2}$

Result of the validation: Valid

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

0.1

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

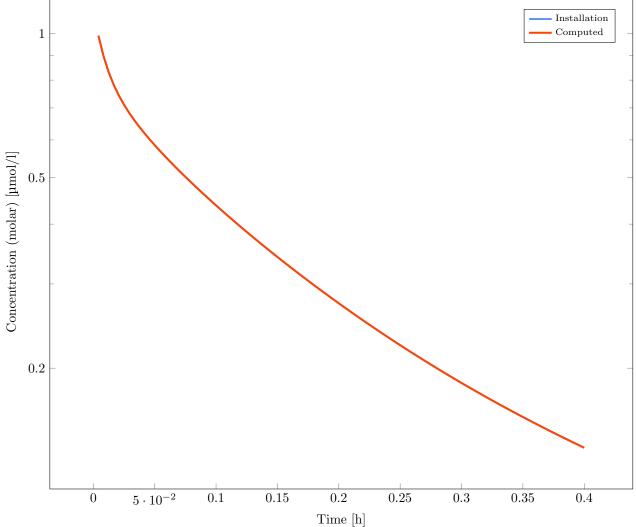


Figure 1.80

Simulation: SingleIV_2Pores_Mouse_SimulationA

Result of the validation: Valid

Sim|Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed O.5

Figure 1.81

0.2

Time [h]

0.25

0.3

0.35

0.4

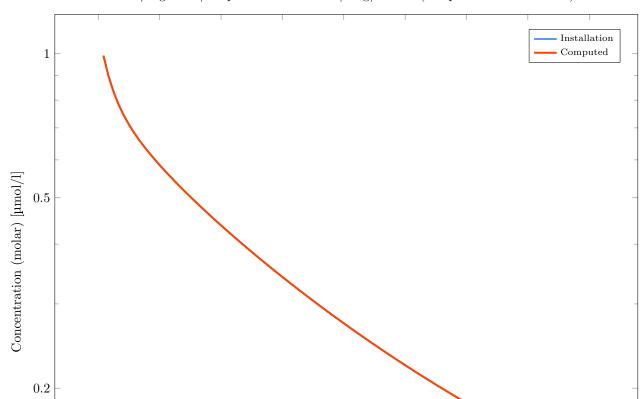
0.15

0.1

 $Simulation: Single IV_2 Pores_Mouse_Simulation B$

 $5\cdot 10^{-2}$

Result of the validation: Valid



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

Figure 1.82

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

0.1

Simulation: SingleIV_2Pores_Mouse_SimulationE

 $5\cdot 10^{-2}$

Result of the validation: Valid

0

Sim|Organism|PeripheralVenousBlood|drug|Plasma (Peripheral Venous Blood) Installation Computed O 5 · 10⁻² 0.1 0.15 0.2 0.25 0.3 0.35 0.4

Figure 1.83

Time [h]

 ${\bf Simulation: Single IV_C1_4 Comp_standard_st$

Result of the validation: Valid

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

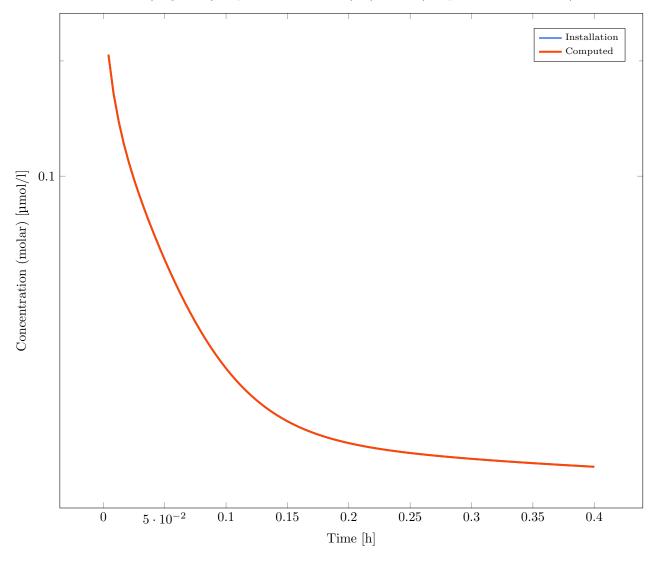


Figure 1.84

 $Simulation: \ Single IV_C2_4 Comp_PT_standard_standard$

Result of the validation: Valid

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

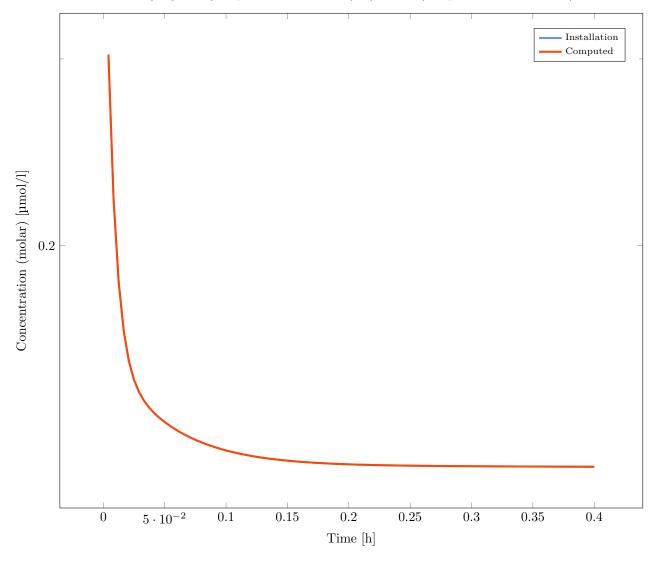


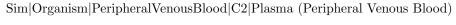
Figure 1.85

 $Simulation: \ Single IV_C2_4Comp_RR_standard_standard$

Result of the validation: Valid

Output Path: Sim|Organism|Peripheral VenousBlood|C2|Plasma (Peripheral Venous Blood) Deviation: 0

Open Systems Pharmacology Suite - 7.1.0 Installation Validation



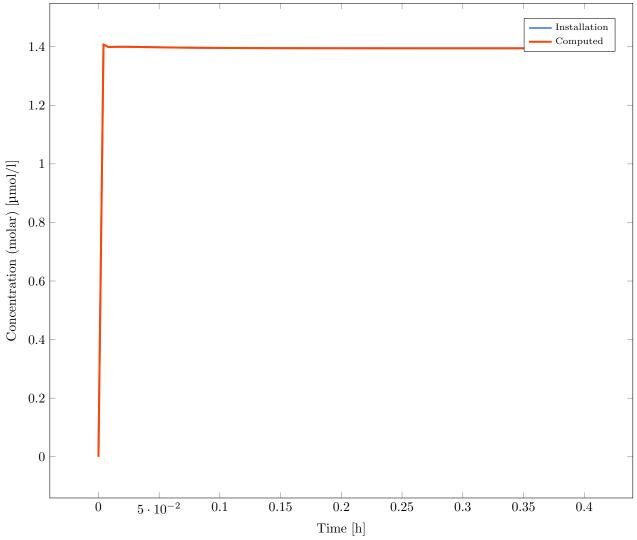


Figure 1.86

 $Simulation: Single IV_C2_4 Comp_standard_schmitt_standard$

Result of the validation: Valid

Output Path: Sim|Organism|Peripheral VenousBlood|C2|Plasma (Peripheral Venous Blood) Deviation: 0

Open Systems Pharmacology Suite - 7.1.0 Installation Validation

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

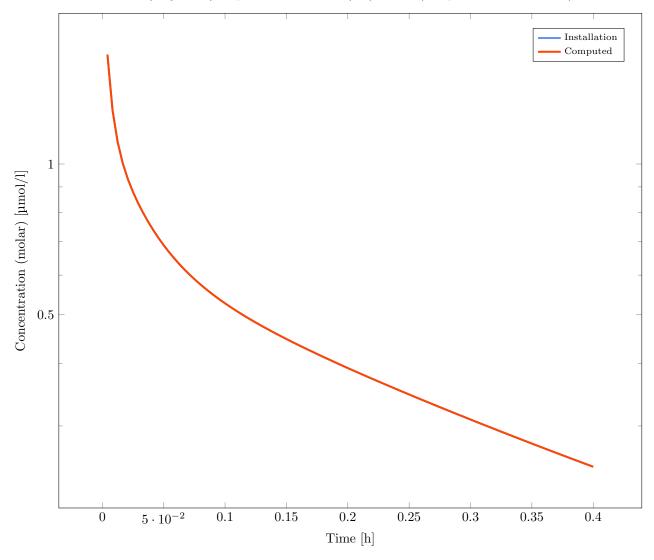


Figure 1.87

 $Simulation: Single IV_C3_4 Comp_RR_schmitt_standard$

Result of the validation: Valid

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

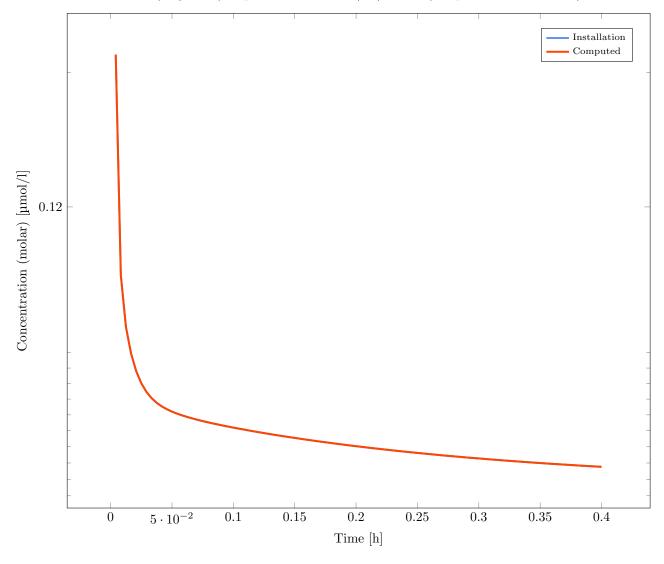


Figure 1.88

 ${\bf Simulation: Single IV_C3_4 Comp_standard_schmittnormlized_standard} \\ {\bf Result \ of \ the \ validation: \ Valid}$

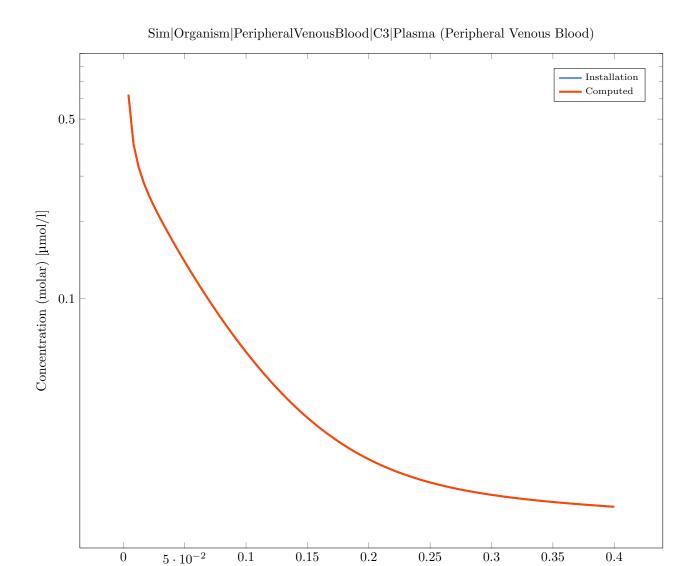


Figure 1.89

Time [h]

Simulation: SingleIV_C4_2Pores_RR_standard_standard

Result of the validation: Valid

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

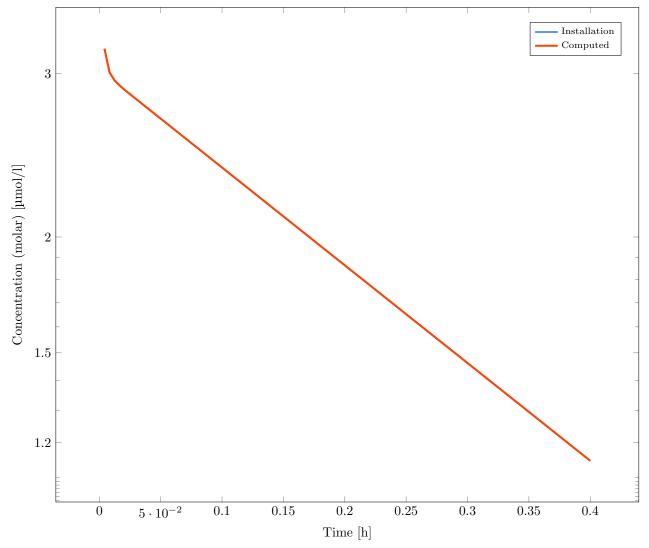


Figure 1.90

Simulation: SingleIV_C4_4Comp_Ber_standard_standard

Result of the validation: Valid

 $Output\ Path:\ Sim|Organism|Peripheral Venous Blood|C4|Plasma\ (Peripheral\ Venous\ Blood)$

Deviation: 0



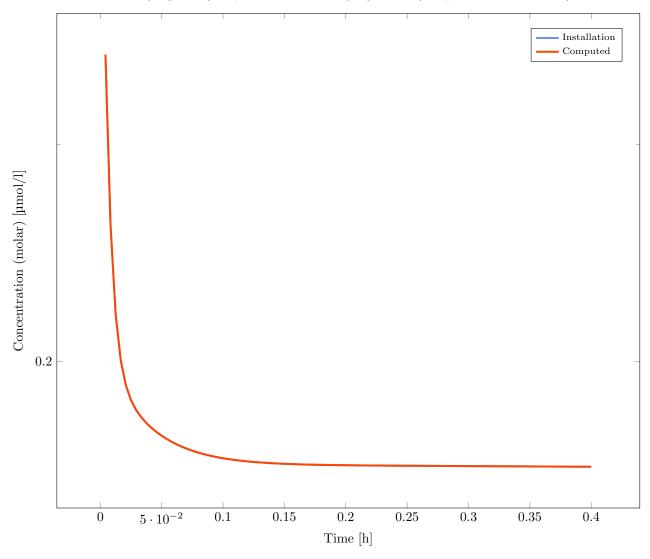


Figure 1.91

 $Simulation: Single IV_C5_2 Pores_Ber_standard_standard$

Result of the validation: Valid



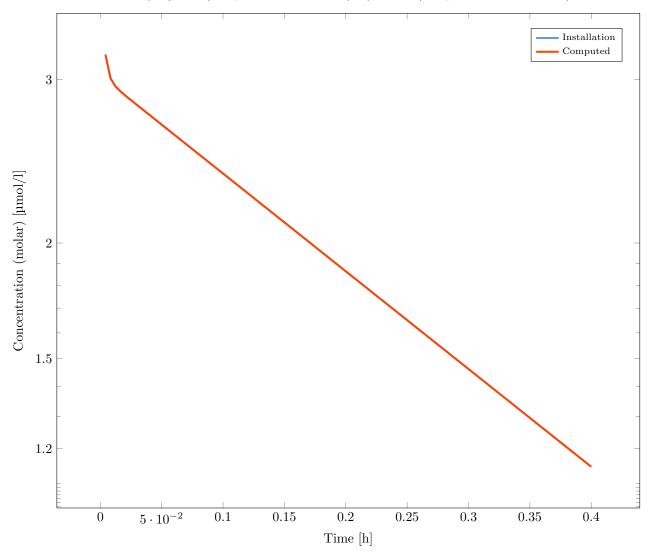


Figure 1.92

 $Simulation: Single IV_C5_2 Pores_PT_standard_standard$

Result of the validation: Valid



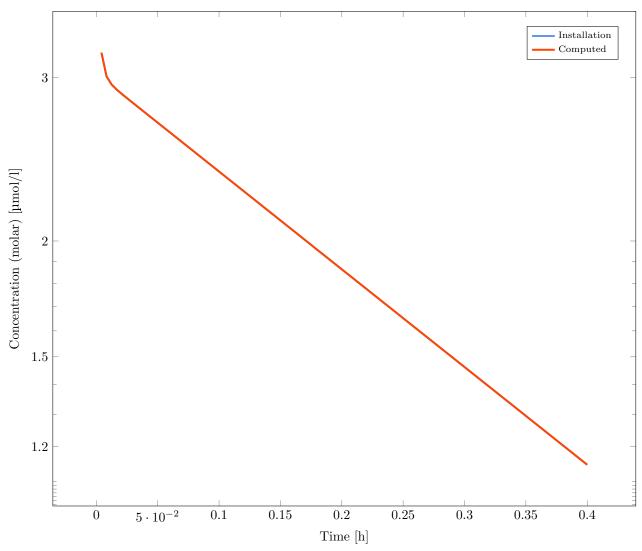
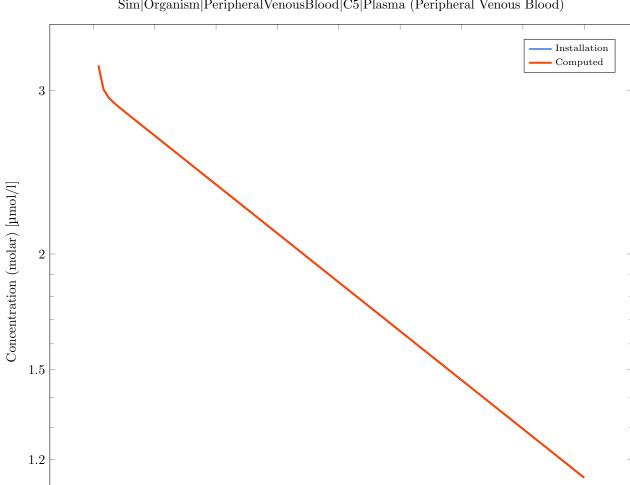


Figure 1.93

 $Simulation: Single IV_C5_2 Pores_RR_schmitt_standard$

Result of the validation: Valid



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

Figure 1.94

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

 $Simulation: Single IV_C6_2 Pores_standard_stan$

0.1

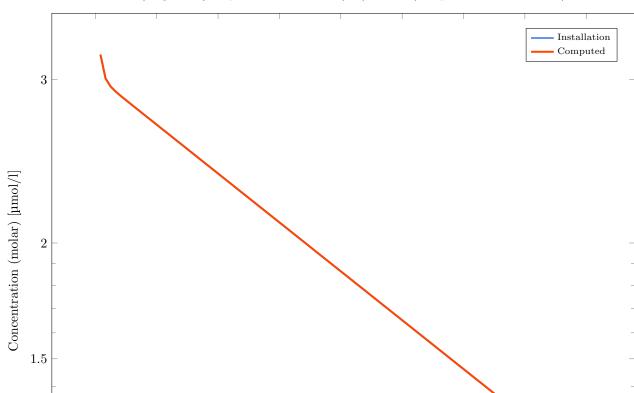
Result of the validation: Valid

0

 $5\cdot 10^{-2}$

1.2

0



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

Figure 1.95

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

 ${\bf Simulation: Single IV_C7_2 Pores_standard_schmitt_standard} \\ {\bf Result \ of \ the \ validation: \ Valid}$

0.1

 $5\cdot 10^{-2}$

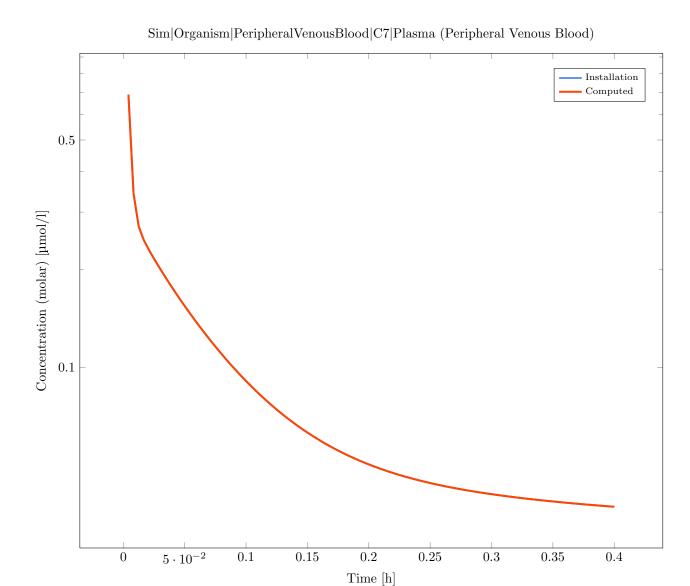


Figure 1.96

 $Simulation: \ Single IV_C7_4 Comp_schmitt_standard_standard$

Result of the validation: Valid

$Sim|Organism|Peripheral Venous Blood|C7|Plasma\ (Peripheral Venous\ Blood)$

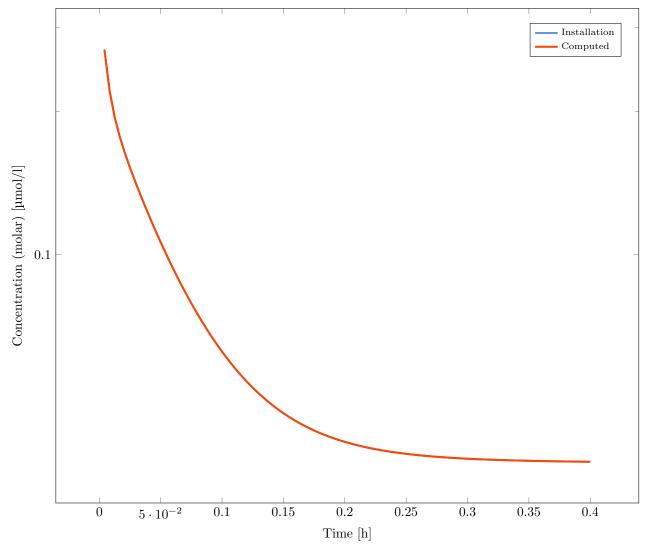


Figure 1.97

 ${\bf Simulation: Single IV_C8_2 Pores_standard_schmittnormalized_standard \ Result of the validation: Valid}$

Sim|Organism|Peripheral Venous Blood|C8|Plasma~(Peripheral Venous~Blood)

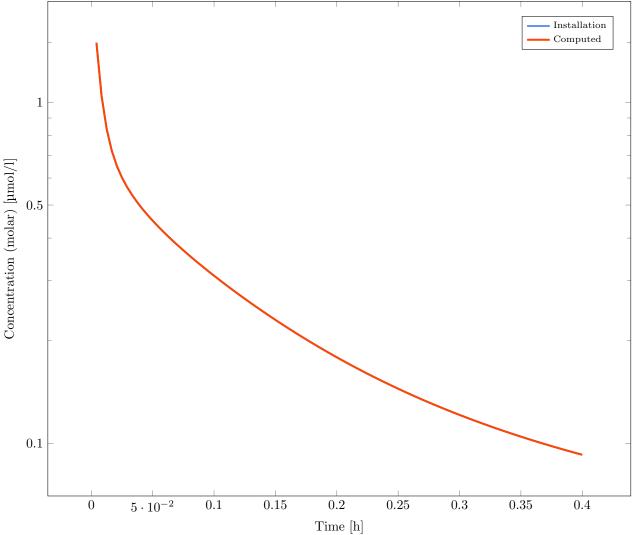


Figure 1.98

 $Simulation: Single IV_C9_2 Pores_schmitt_standard_standard$

Result of the validation: Valid

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

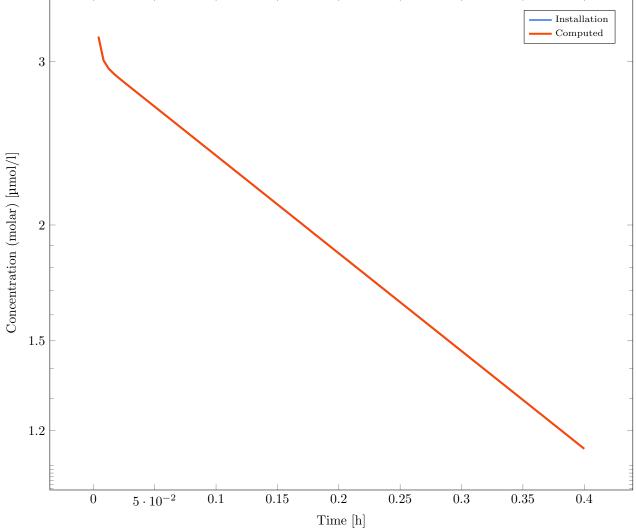


Figure 1.99

Simulation: SingleORAL_C10_4Comp_PT_standard_standard Result of the validation: Valid

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

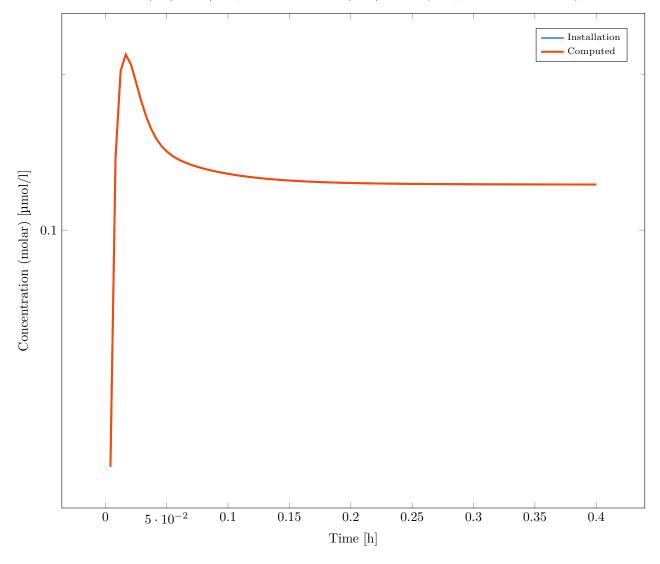


Figure 1.100

 $Simulation: Single ORAL_C11_4 Comp_schmitt_standard_standard$

Result of the validation: Valid

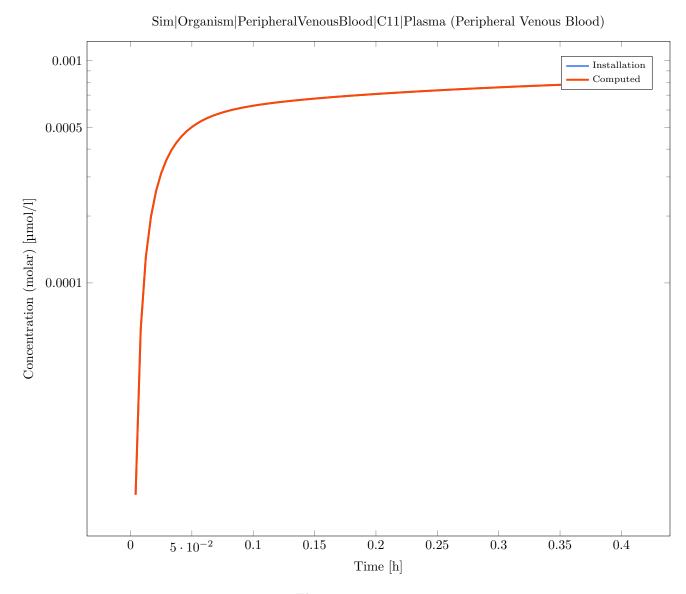


Figure 1.101

 ${\bf Simulation: \ Single ORAL_C11_4 Comp_standard_standa$

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

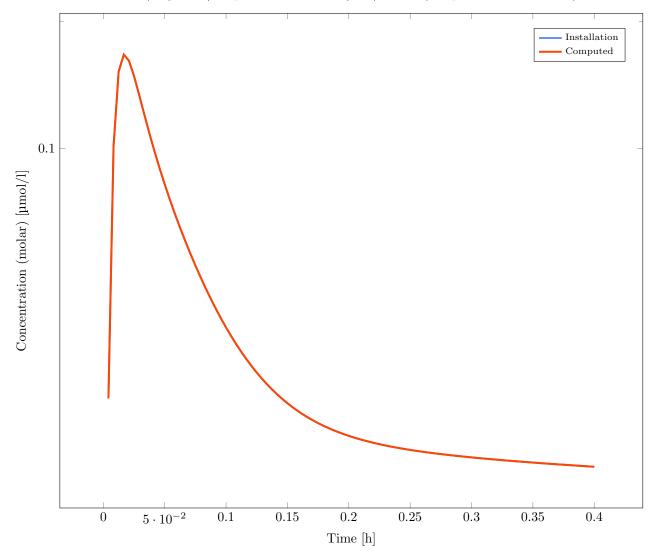
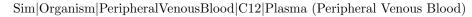


Figure 1.102

 $Simulation: Single ORAL_C12_4 Comp_standard_schmitt_standard$

Result of the validation: Valid



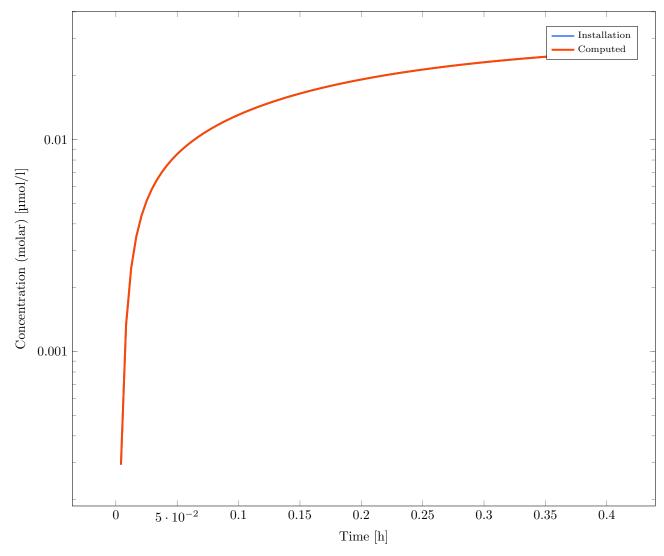


Figure 1.103

 ${\bf Simulation: \ Single ORAL_C13_2 Pores_schmitt_standard_standard}. \\ {\bf Result \ of \ the \ validation: \ Valid}$

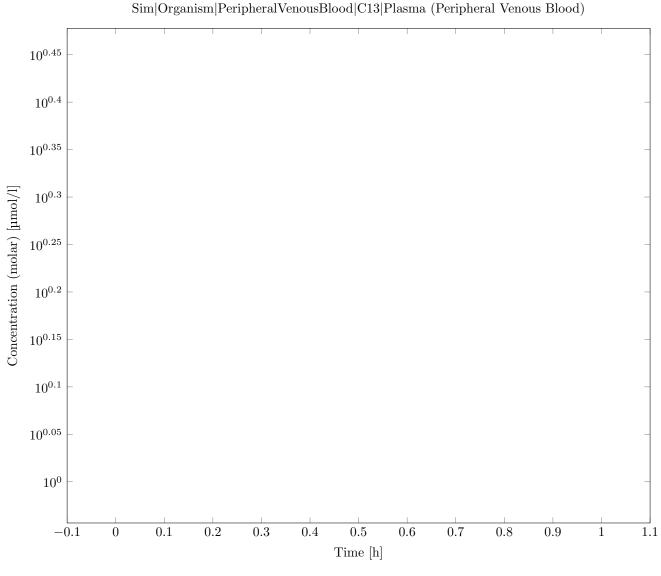


Figure 1.104

 ${\bf Simulation: \ Single ORAL_C13_4 Comp_standard_schmittnormalized_standard\ Result\ of\ the\ validation:\ Valid}$



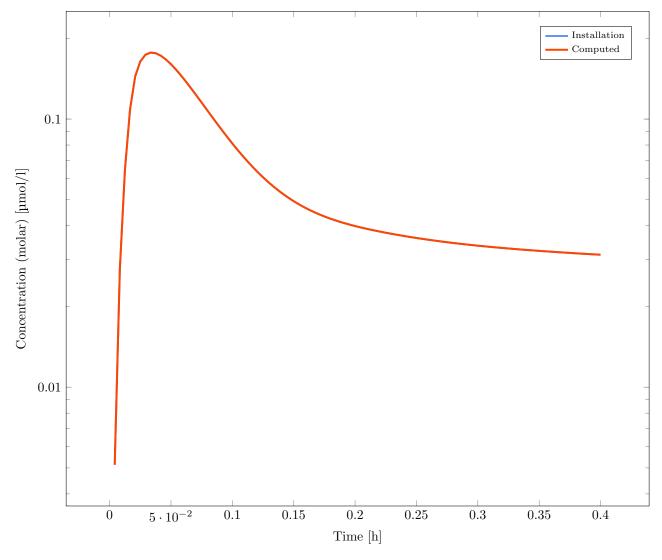
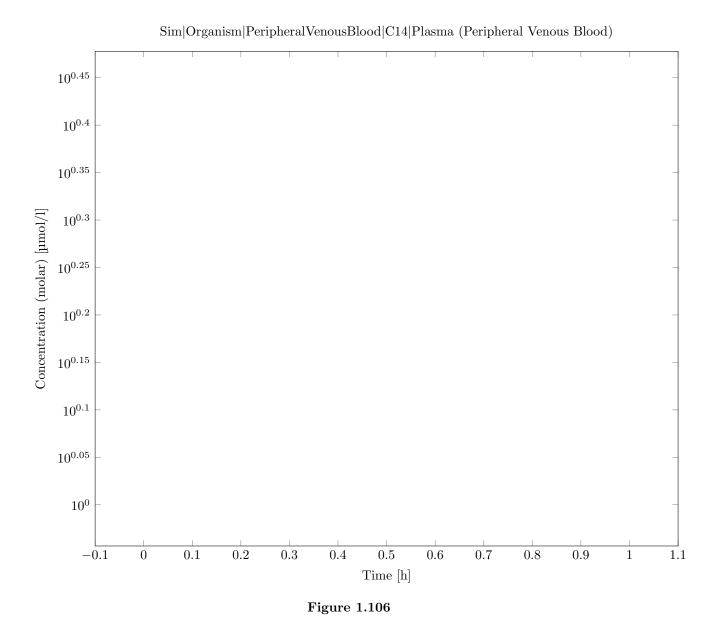


Figure 1.105

 $Simulation: Single ORAL_C14_2 Pores_PT_standard_standard$

Result of the validation: Valid



Simulation: SingleORAL_C2_2Pores_standard_standard_standard

Result of the validation: Valid

Output Path: Sim|Organism|Peripheral VenousBlood|C2|Plasma (Peripheral Venous Blood) Deviation: 0

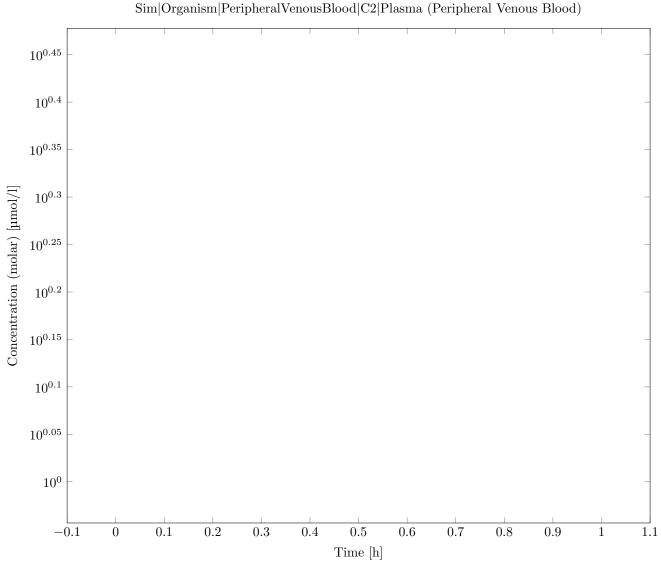
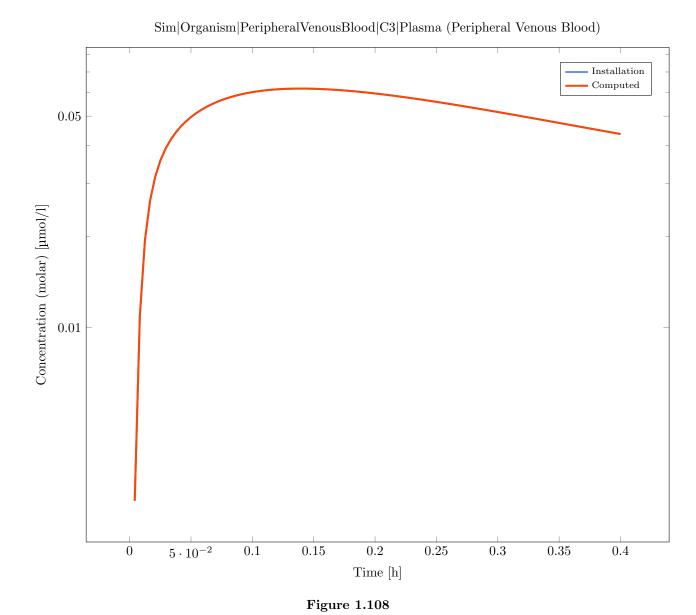


Figure 1.107

 $Simulation: Single ORAL_C3_2 Pores_standard_schmitt_standard$

Result of the validation: Valid

 $Output\ Path:\ Sim|Organism|Peripheral Venous Blood|C3|Plasma\ (Peripheral\ Venous\ Blood)$



 ${\bf Simulation: Single ORAL_C4_2 Pores_standard_schmittnormalized_standard \\ Result of the validation: Valid}$

Output Path: Sim|Organism|Peripheral VenousBlood|C4|Plasma (Peripheral Venous Blood) Deviation: 0

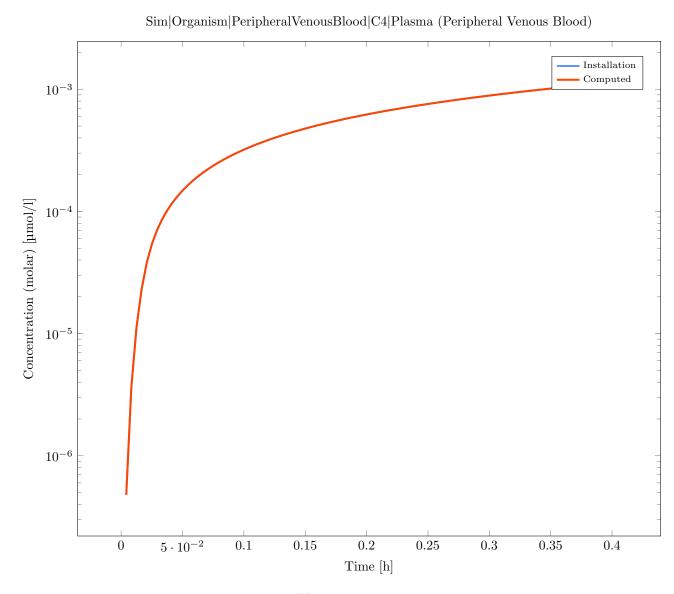
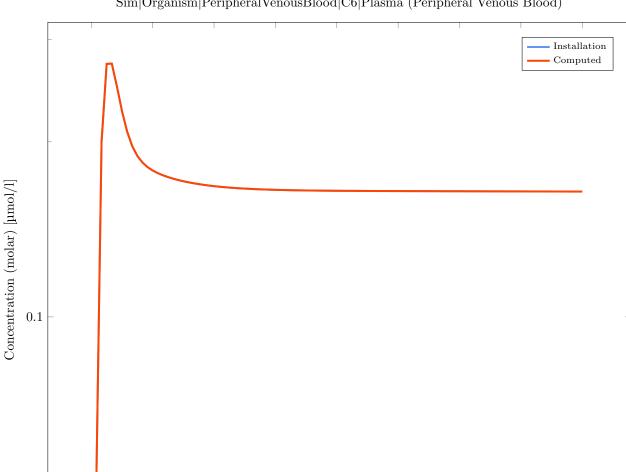


Figure 1.109

Simulation: SingleORAL_C6_4Comp_Ber_standard_standard

Result of the validation: Valid

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



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

Figure 1.110

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

Simulation: SingleORAL_C6_4Comp_RR_standard_standard

0.1

 $5\cdot 10^{-2}$

Result of the validation: Valid

0

Output Path: Sim|Organism|PeripheralVenousBlood|C6|Plasma (Peripheral Venous Blood) Deviation: 0

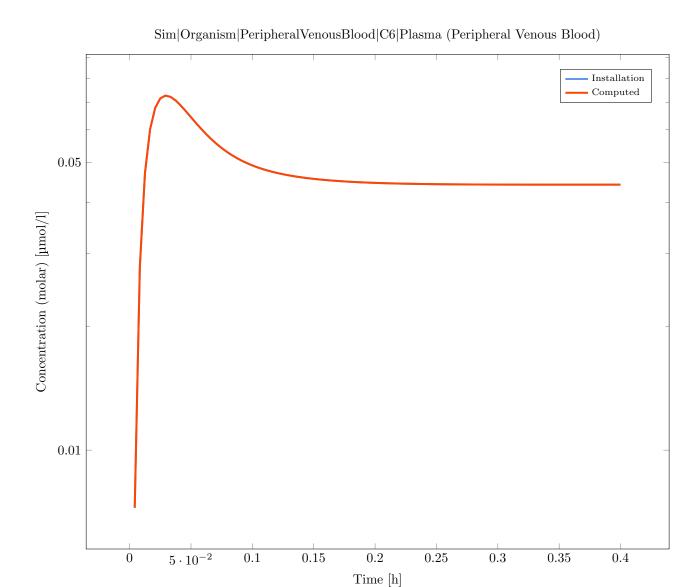


Figure 1.111

Simulation: SingleORAL_C7_2Pores_Ber_standard_standard

Result of the validation: Valid

Output Path: Sim|Organism|Peripheral VenousBlood|C7|Plasma (Peripheral Venous Blood) Deviation: 0

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

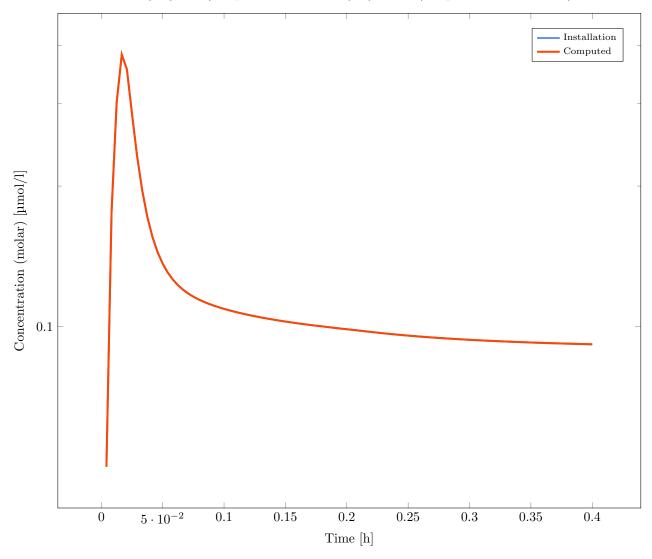


Figure 1.112

Simulation: SingleORAL_C7_4Comp_RR_schmitt_standard

Result of the validation: Valid

Output Path: Sim|Organism|Peripheral VenousBlood|C7|Plasma (Peripheral Venous Blood) Deviation: 0

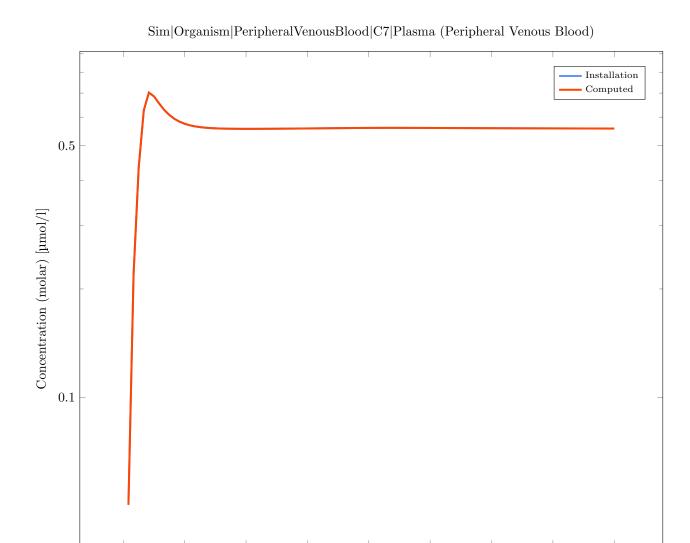


Figure 1.113

0.2

Time [h]

0.25

0.3

0.35

0.4

0.15

 $Simulation: Single ORAL_C8_2 Pores_RR_standard_standard$

0.1

 $5\cdot 10^{-2}$

Result of the validation: Valid

0

 $Output\ Path:\ Sim|Organism|Peripheral Venous Blood|C8|Plasma\ (Peripheral\ Venous\ Blood)$

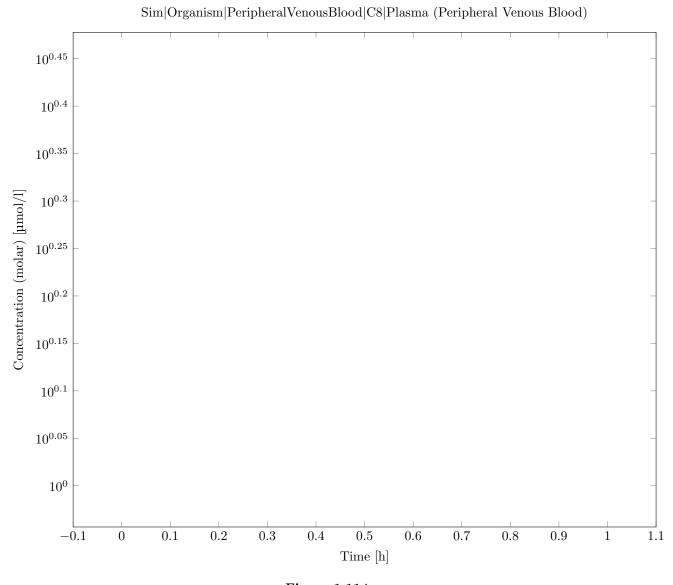


Figure 1.114

Simulation: SingleORAL_C9_2Pores_RR_schmitt_standard

Result of the validation: Valid

 $Output\ Path:\ Sim|Organism|Peripheral Venous Blood|C9|Plasma\ (Peripheral\ Venous\ Blood)$

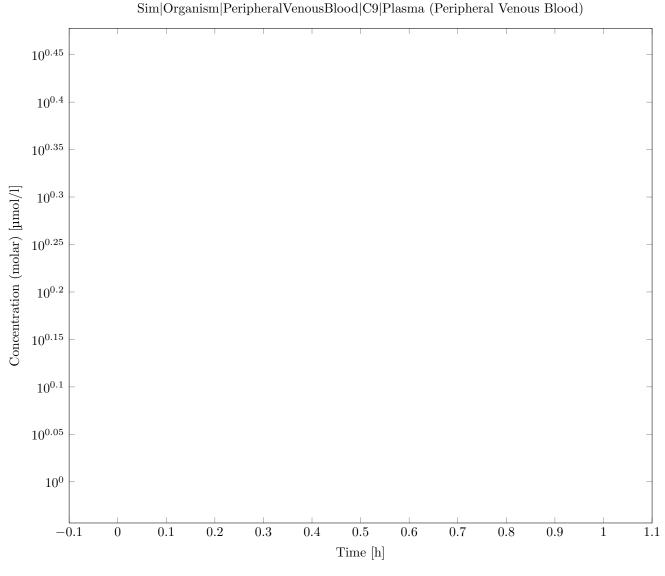


Figure 1.115

Simulation: Test 18.1_I1_C1_A1_Config1

Result of the validation: Valid

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



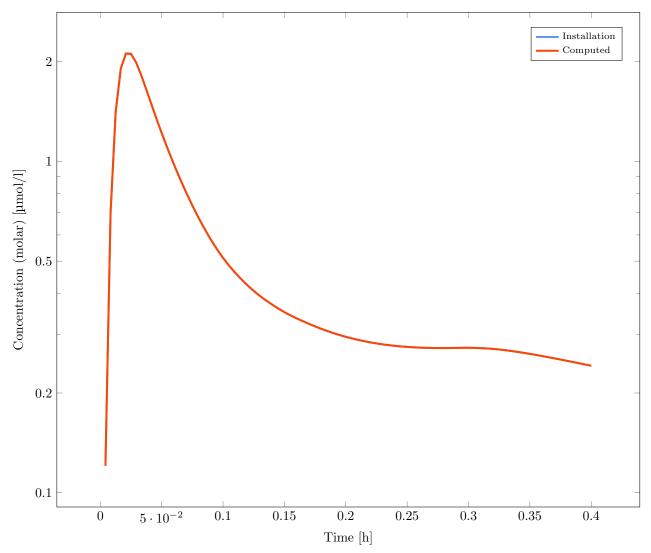


Figure 1.116

Simulation: Test $18.1_I2_C1_A1_Config2$

Result of the validation: Valid

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



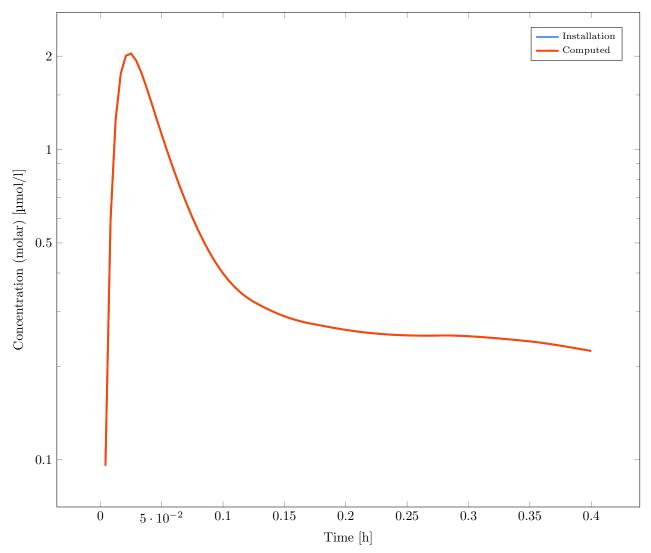


Figure 1.117

Simulation: Test 18.1_I2_C3_A1_Config2

Result of the validation: Valid

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

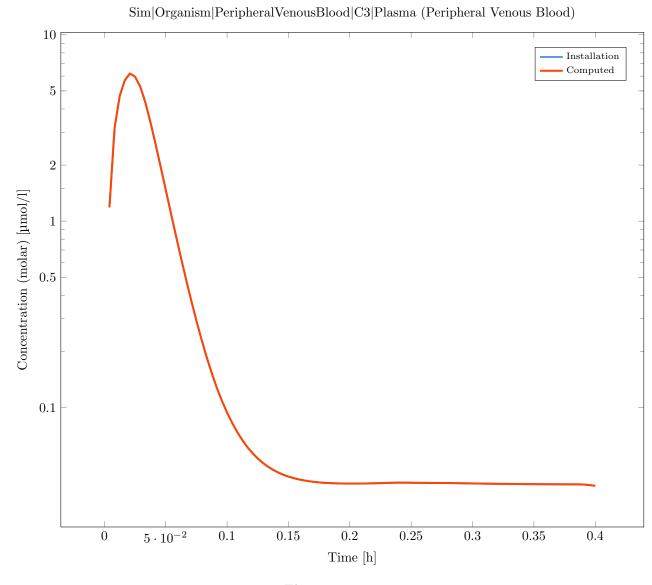


Figure 1.118

Simulation: Test $18.1_I3_C3_A3_Config2$

Result of the validation: Valid

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

Sim|Organism|Peripheral Venous Blood|C3|Plasma~(Peripheral Venous~Blood)

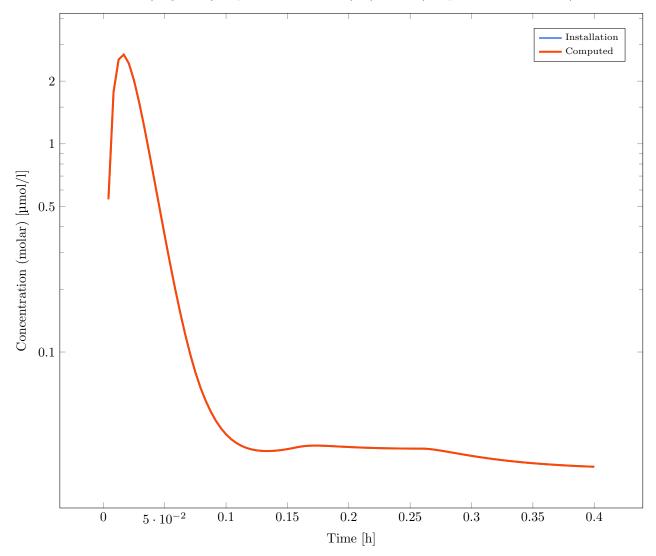


Figure 1.119