SBML Model Report

Model name: "Rohwer2001_Sucrose"

May 6, 2016

1 General Overview

This is a document in SBML Level 2 Version 4 format. This model was created by Jacky L Snoep[1] at May third 2005 at 1:08 p. m. and last time modified at May 20th 2012 at 12:43 a. m. Table 1 provides an overview of the quantities of all components of this model.

Table 1: Number of components in this model, which are described in the following sections.

Element	Quantity	Element	Quantity
compartment types	0	compartments	1
species types	0	species	13
events	0	constraints	0
reactions	11	function definitions	0
global parameters	0	unit definitions	2
rules	0	initial assignments	0

Model Notes

SBML Level 2 code generated for the JWS Online project by Jacky Snoep using PySCeS .

Run this model online at http://jjj.biochem.sun.ac.za .

To cite JWS Online please refer to: Olivier, B.G. and Snoep, J.L. (2004) Web-based modelling using JWS Online , Bioinformatics, 20:2143-2144.

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To cite BioModels Database, please use Le Novre N., Bornstein B., Broicher A., Courtot M., Donizelli M., Dharuri H., Li L., Sauro H., Schilstra M., Shapiro B., Snoep J.L., Hucka M. (2006) BioModels Database: A Free, Centralized Database of Curated, Published, Quantitative Kinetic Models of Biochemical and Cellular Systems Nucleic Acids Res., 34: D689-D691.

2 Unit Definitions

This is an overview of five unit definitions of which three are predefined by SBML and not mentioned in the model.

2.1 Unit `substance`

Name millimole (default)

Definition mmol

2.2 Unit `time`

Name minute (default)

Definition 60 s

2.3 Unit `volume`

Notes Litre is the predefined SBML unit for `volume`.

Definition l

2.4 Unit `area`

Notes Square metre is the predefined SBML unit for `area` since SBML Level 2 Version 1.

Definition m^2

2.5 Unit `length`

Notes Metre is the predefined SBML unit for `length` since SBML Level 2 Version 1.

Definition m

3 Compartment

This model contains one compartment.

Table 2: Properties of all compartments.

Id	Name	SBO	Spatial Dimensions	Size	Unit	Constant	Outside
`compartment`	cell		3	1	litre	☑	

3.1 Compartment `compartment`

This is a three dimensional compartment with a constant size of one litre.

Name cell

4 Species

This model contains 13 species. The boundary condition of eight of these species is set to `true` so that these species' amount cannot be changed by any reaction. Section 6 provides further details and the derived rates of change of each species.

Table 3: Properties of each species.

Id	Name	Compartment	Derived Unit	Constant	Boundary Condition
`Fru`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	⊟
`Glc`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	⊟
`HexP`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	⊟
`Suc6P`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	⊟
`Suc`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	⊟
`Sucvac`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	☑
`glycolysis`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	☑
`phos`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	☑
`UDP`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	☑
`ADP`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	☑
`ATP`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	☑
`Glcex`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	☑
`Fruex`		`compartment`	$\mathrm{mmol} \cdot \mathrm{l}^{-1}$	⊟	☑

5 Reactions

This model contains eleven reactions. All reactions are listed in the following table and are subsequently described in detail. If a reaction is affected by a modifier, the identifier of this species is written above the reaction arrow.

Table 4: Overview of all reactions

№	Id	Name	Reaction Equation	SBO
1	v1		$\text{Fruex} \rightleftharpoons \text{Fru}$	
2	v2		$\text{Glcex} \rightleftharpoons \text{Glc}$	
3	v3		$\text{ATP} + \text{Glc} \overset{\text{Fru}}{\rightleftharpoons} \text{HexP} + \text{ADP}$	
4	v4		$\text{Fru} + \text{ATP} \overset{\text{Glc}}{\rightleftharpoons} \text{HexP} + \text{ADP}$	
5	v5		$\text{Fru} + \text{ATP} \rightleftharpoons \text{HexP} + \text{ADP}$	
6	v6		$2\,\text{HexP} \overset{\text{phos}}{\rightleftharpoons} \text{UDP} + \text{Suc6P}$	
7	v7		$\text{Suc6P} \rightleftharpoons \text{Suc} + \text{phos}$	
8	v8		$\text{HexP} + \text{Fru} \rightleftharpoons \text{Suc} + \text{UDP}$	
9	v9		$\text{Suc} \rightleftharpoons \text{Fru} + \text{Glc}$	
10	v10		$\text{HexP} \rightleftharpoons \text{glycolysis}$	
11	v11		$\text{Suc} \rightleftharpoons \text{Sucvac}$	

5.1 Reaction v1

This is a reversible reaction of one reactant forming one product.

Reaction equation

$$\text{Fruex} \rightleftharpoons \text{Fru} \tag{1}$$

Reactant

Table 5: Properties of each reactant.

Id	Name	SBO
Fruex		

Product

Table 6: Properties of each product.

Id	Name	SBO
Fru		

Kinetic Law

Derived unit contains undeclared units

$$v_1 = \text{vol}(\text{compartment}) \cdot \frac{\text{Vmax1} \cdot [\text{Fruex}]}{\text{Km1Fruex} \cdot \left(1 + \frac{[\text{Fru}]}{\text{Ki1Fru}}\right) + [\text{Fruex}]} \tag{2}$$

Table 7: Properties of each parameter.

Id	Name	SBO	Value	Unit	Constant
Vmax1			0.286		☑
Km1Fruex			0.200		☑
Ki1Fru			1.000		☑

5.2 Reaction v2

This is a reversible reaction of one reactant forming one product.

Reaction equation

$$\mathrm{Glcex} \rightleftharpoons \mathrm{Glc} \tag{3}$$

Reactant

Table 8: Properties of each reactant.

Id	Name	SBO
Glcex		

Product

Table 9: Properties of each product.

Id	Name	SBO
Glc		

Kinetic Law

Derived unit contains undeclared units

$$v_2 = \mathrm{vol}\,(\mathrm{compartment}) \cdot \frac{\mathrm{Vmax2} \cdot [\mathrm{Glcex}]}{\mathrm{Km2Glcex} \cdot \left(1 + \frac{[\mathrm{Glc}]}{\mathrm{Ki2Glc}}\right) + [\mathrm{Glcex}]} \tag{4}$$

Table 10: Properties of each parameter.

Id	Name	SBO	Value	Unit	Constant
Vmax2			0.286		☑
Km2Glcex			0.200		☑
Ki2Glc			1.000		☑

5.3 Reaction v3

This is a reversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{ATP} + \mathrm{Glc} \overset{\mathrm{Fru}}{\rightleftharpoons} \mathrm{HexP} + \mathrm{ADP} \tag{5}$$

Reactants

Table 11: Properties of each reactant.

Id	Name	SBO
ATP		
Glc		

Modifier

Table 12: Properties of each modifier.

Id	Name	SBO
Fru		

Products

Table 13: Properties of each product.

Id	Name	SBO
HexP		
ADP		

Kinetic Law

Derived unit contains undeclared units

$$v_3 = \mathrm{vol}\,(\mathrm{compartment}) \cdot \frac{\mathrm{Vmax3} \cdot \frac{[\mathrm{Glc}]}{\mathrm{Km3Glc}} \cdot \frac{[\mathrm{ATP}]}{\mathrm{Km3ATP}}}{\left(1 + \frac{[\mathrm{ATP}]}{\mathrm{Km3ATP}}\right) \cdot \left(1 + \frac{[\mathrm{Glc}]}{\mathrm{Km3Glc}} + \frac{[\mathrm{Fru}]}{\mathrm{Km4Fru}} + \frac{0.113 \cdot [\mathrm{HexP}]}{\mathrm{Ki3G6P}} + \frac{0.0575 \cdot [\mathrm{HexP}]}{\mathrm{Ki4F6P}}\right)} \tag{6}$$

Table 14: Properties of each parameter.

Id	Name	SBO	Value	Unit	Constant
Vmax3			0.197		☑
Km3Glc			0.070		☑
Km3ATP			0.250		☑
Km4Fru			10.000		☑
Ki3G6P			0.100		☑
Ki4F6P			10.000		☑

5.4 Reaction v4

This is a reversible reaction of two reactants forming two products influenced by one modifier.

Reaction equation

$$\mathrm{Fru} + \mathrm{ATP} \overset{\mathrm{Glc}}{\rightleftharpoons} \mathrm{HexP} + \mathrm{ADP} \tag{7}$$

Reactants

Table 15: Properties of each reactant.

Id	Name	SBO
Fru		
ATP		

Modifier

Table 16: Properties of each modifier.

Id	Name	SBO
Glc		

Products

Table 17: Properties of each product.

Id	Name	SBO
HexP		
ADP		

Kinetic Law

Derived unit contains undeclared units

$$v_4 = \mathrm{vol}\left(\mathrm{compartment}\right) \cdot \frac{\mathrm{Vmax4} \cdot \frac{[\mathrm{Fru}]}{\mathrm{Km4Fru}} \cdot \frac{[\mathrm{ATP}]}{\mathrm{Km4ATP}}}{\left(1 + \frac{[\mathrm{ATP}]}{\mathrm{Km4ATP}}\right) \cdot \left(1 + \frac{[\mathrm{Glc}]}{\mathrm{Km3Glc}} + \frac{[\mathrm{Fru}]}{\mathrm{Km4Fru}} + \frac{0.113 \cdot [\mathrm{HexP}]}{\mathrm{Ki3G6P}} + \frac{0.0575 \cdot [\mathrm{HexP}]}{\mathrm{Ki4F6P}}\right)} \tag{8}$$

Table 18: Properties of each parameter.

Id	Name	SBO	Value	Unit	Constant
Vmax4			0.197		☑
Km4Fru			10.000		☑
Km4ATP			0.250		☑
Km3Glc			0.070		☑
Ki3G6P			0.100		☑
Ki4F6P			10.000		☑

5.5 Reaction v5

This is a reversible reaction of two reactants forming two products.

Reaction equation

$$\mathrm{Fru} + \mathrm{ATP} \rightleftharpoons \mathrm{HexP} + \mathrm{ADP} \tag{9}$$

Reactants

Table 19: Properties of each reactant.

Id	Name	SBO
Fru		
ATP		

Products

Table 20: Properties of each product.

Id	Name	SBO
HexP		
ADP		

Kinetic Law

Derived unit contains undeclared units

$$v_5 = \mathrm{vol}(\mathrm{compartment}) \cdot \frac{\frac{\mathrm{Vmax5}}{1+\frac{[\mathrm{Fru}]}{\mathrm{Ki5Fru}}} \cdot \frac{[\mathrm{Fru}]}{\mathrm{Km5Fru}} \cdot \frac{[\mathrm{ATP}]}{\mathrm{Km5ATP}}}{1 + \frac{[\mathrm{Fru}]}{\mathrm{Km5Fru}} + \frac{[\mathrm{ATP}]}{\mathrm{Km5ATP}} + \frac{[\mathrm{Fru}]\cdot[\mathrm{ATP}]}{\mathrm{Km5Fru}\cdot\mathrm{Km5ATP}} + \frac{[\mathrm{ADP}]}{\mathrm{Ki5ADP}}} \tag{10}$$

Table 21: Properties of each parameter.

Id	Name	SBO	Value	Unit	Constant
Vmax5			0.164		☑
Ki5Fru			12.000		☑
Km5Fru			0.100		☑
Km5ATP			0.085		☑
Ki5ADP			2.000		☑

5.6 Reaction v6

This is a reversible reaction of one reactant forming two products influenced by one modifier.

Reaction equation

$$2\,\mathrm{HexP} \overset{\mathrm{phos}}{\rightleftharpoons} \mathrm{UDP} + \mathrm{Suc6P} \tag{11}$$

Reactant

Table 22: Properties of each reactant.

Id	Name	SBO
HexP		

Modifier

Table 23: Properties of each modifier.

Id	Name	SBO
phos		

Products

Table 24: Properties of each product.

Id	Name	SBO
UDP		
Suc6P		

Kinetic Law

Derived unit contains undeclared units

$$v_6 = \mathrm{vol}\,(\mathrm{compartment}) \tag{12}$$

.

$$0.0575 \cdot [\mathrm{HexP}] \cdot 0.8231 \cdot [\mathrm{HexP}] \cdot \left(1 + \frac{[\mathrm{Suc6P}]}{\mathrm{Ki6Suc6P}}\right) + \mathrm{Km6F6P} \cdot \left(1 + \frac{[\mathrm{phos}]}{\mathrm{Ki6Pi}}\right) \cdot (0.8231 \cdot [\mathrm{HexP}] + \mathrm{Ki6UDPGlc}) +$$

Table 25: Properties of each parameter.

Id	Name	SBO	Value	Unit	Constant
Vmax6f			0.379		☑
Keq6			10.000		☑
Ki6Suc6P			0.070		☑
Km6F6P			0.600		☑
Ki6Pi			3.000		☑
Ki6UDPGlc			1.400		☑
Km6UDPGlc			1.800		☑
Vmax6r			0.200		☑
Km6UDP			0.300		☑
Km6Suc6P			0.100		☑
Ki6F6P			0.400		☑

5.7 Reaction v7

This is a reversible reaction of one reactant forming two products.

Reaction equation

$$\mathrm{Suc6P} \rightleftharpoons \mathrm{Suc} + \mathrm{phos} \tag{13}$$

Reactant

Table 26: Properties of each reactant.

Id	Name	SBO
Suc6P		

Products

Table 27: Properties of each product.

Id	Name	SBO
Suc		
phos		

Kinetic Law

Derived unit contains undeclared units

$$v_7 = \text{vol}\,(\text{compartment}) \cdot \frac{\text{Vmax7} \cdot [\text{Suc6P}]}{\text{Km7Suc6P} + [\text{Suc6P}]} \tag{14}$$

Table 28: Properties of each parameter.

Id	Name	SBO	Value	Unit	Constant
Vmax7			0.5		☑
Km7Suc6P			0.1		☑

5.8 Reaction v8

This is a reversible reaction of two reactants forming two products.

Reaction equation

$$\text{HexP} + \text{Fru} \rightleftharpoons \text{Suc} + \text{UDP} \tag{15}$$

Reactants

Table 29: Properties of each reactant.

Id	Name	SBO
HexP		
Fru		

Products

Table 30: Properties of each product.

Id	Name	SBO
Suc		

Id	Name	SBO
UDP		

Kinetic Law

Derived unit contains undeclared units

$$v_8 = \mathrm{vol}\,(\mathrm{compartment}) \tag{16}$$

$$\cdot \frac{\mathrm{Vmax8f} \cdot \left([\mathrm{Suc}] \cdot [\mathrm{UDP}] - \right.}{[\mathrm{Suc}] \cdot [\mathrm{UDP}] \cdot \left(1 + \frac{[\mathrm{Fru}]}{\mathrm{Ki8Fru}}\right) + \mathrm{Km8Suc} \cdot ([\mathrm{UDP}] + \mathrm{Ki8UDP}) + \mathrm{Km8UDP} \cdot [\mathrm{Suc}] + \frac{\mathrm{Vmax8f}}{\mathrm{Vmax8r} \cdot \mathrm{Keq8}} \cdot \left(\mathrm{Km8UDPGlc}\right.}$$

Table 31: Properties of each parameter.

Id	Name	SBO	Value	Unit	Constant
Vmax8f			0.677		☑
Keq8			5.000		☑
Ki8Fru			4.000		☑
Km8Suc			50.000		☑
Ki8UDP			0.300		☑
Km8UDP			0.300		☑
Vmax8r			0.300		☑
Km8UDPGlc			0.300		☑
Km8Fru			4.000		☑
Ki8Suc			40.000		☑

5.9 Reaction v9

This is a reversible reaction of one reactant forming two products.

Reaction equation

$$\mathrm{Suc} \rightleftharpoons \mathrm{Fru} + \mathrm{Glc} \tag{17}$$

Reactant

Table 32: Properties of each reactant.

Id	Name	SBO
Suc		

Products

Table 33: Properties of each product.

Id	Name	SBO
Fru		
Glc		

Kinetic Law

Derived unit contains undeclared units

$$v_9 = \mathrm{vol}\,(\mathrm{compartment}) \cdot \frac{\frac{\mathrm{Vmax9}}{1+\frac{[\mathrm{Glc}]}{\mathrm{Ki9Glc}}} \cdot [\mathrm{Suc}]}{\mathrm{Km9Suc} \cdot \left(1 + \frac{[\mathrm{Fru}]}{\mathrm{Ki9Fru}}\right) + [\mathrm{Suc}]} \tag{18}$$

Table 34: Properties of each parameter.

Id	Name	SBO	Value	Unit	Constant
Vmax9			0.372		☑
Ki9Glc			15.000		☑
Km9Suc			10.000		☑
Ki9Fru			15.000		☑

5.10 Reaction v10

This is a reversible reaction of one reactant forming one product.

Reaction equation

$$\mathrm{HexP} \rightleftharpoons \mathrm{glycolysis} \tag{19}$$

Reactant

Table 35: Properties of each reactant.

Id	Name	SBO
HexP		

Product

Table 36: Properties of each product.

Id	Name	SBO
glycolysis		

Kinetic Law

Derived unit contains undeclared units

$$v_{10} = \mathrm{vol}\,(\mathrm{compartment}) \cdot \frac{\mathrm{Vmax10} \cdot 0.0575 \cdot [\mathrm{HexP}]}{\mathrm{Km10F6P} + 0.0575 \cdot [\mathrm{HexP}]} \tag{20}$$

Table 37: Properties of each parameter.

Id	Name	SBO	Value	Unit	Constant
Vmax10			0.1		☑
Km10F6P			0.2		☑

5.11 Reaction v11

This is a reversible reaction of one reactant forming one product.

Reaction equation

$$\mathrm{Suc} \rightleftharpoons \mathrm{Sucvac} \tag{21}$$

Reactant

Table 38: Properties of each reactant.

Id	Name	SBO
Suc		

Product

Table 39: Properties of each product.

Id	Name	SBO
Sucvac		

Kinetic Law

Derived unit contains undeclared units

$$v_{11} = \mathrm{vol}\,(\mathrm{compartment}) \cdot \frac{\mathrm{Vmax11} \cdot [\mathrm{Suc}]}{\mathrm{Km11Suc} + [\mathrm{Suc}]} \tag{22}$$

Table 40: Properties of each parameter.

Id	Name	SBO	Value	Unit	Constant
`Vmax11`			1.0		☑
`Km11Suc`			100.0		☑

6 Derived Rate Equations

When interpreted as an ordinary differential equation framework, this model implies the following set of equations for the rates of change of each species.

Identifiers for kinetic laws highlighted in gray cannot be verified to evaluate to units of SBML `substance` per `time`. As a result, some SBML interpreters may not be able to verify the consistency of the units on quantities in the model. Please check if

- parameters without an unit definition are involved or
- volume correction is necessary because the `hasOnlySubstanceUnits` flag may be set to `false` and `spacialDimensions`> 0 for certain species.

6.1 Species `Fru`

Initial concentration $1\ \mathrm{mmol} \cdot \mathrm{l}^{-1}$

This species takes part in six reactions (as a reactant in `v4`, `v5`, `v8` and as a product in `v1`, `v9` and as a modifier in `v3`).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{Fru} = v_1 + v_9 - v_4 - v_5 - v_8 \tag{23}$$

6.2 Species `Glc`

Initial concentration $1\ \mathrm{mmol} \cdot \mathrm{l}^{-1}$

This species takes part in four reactions (as a reactant in `v3` and as a product in `v2`, `v9` and as a modifier in `v4`).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{Glc} = v_2 + v_9 - v_3 \tag{24}$$

6.3 Species HexP

Initial concentration $1\ \mathrm{mmol}\cdot\mathrm{l}^{-1}$

This species takes part in six reactions (as a reactant in v6, v8, v10 and as a product in v3, v4, v5).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{HexP} = v_3 + v_4 + v_5 - 2\,v_6 - v_8 - v_{10} \tag{25}$$

6.4 Species Suc6P

Initial concentration $1\ \mathrm{mmol}\cdot\mathrm{l}^{-1}$

This species takes part in two reactions (as a reactant in v7 and as a product in v6).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{Suc6P} = v_6 - v_7 \tag{26}$$

6.5 Species Suc

Initial concentration $1\ \mathrm{mmol}\cdot\mathrm{l}^{-1}$

This species takes part in four reactions (as a reactant in v9, v11 and as a product in v7, v8).

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{Suc} = v_7 + v_8 - v_9 - v_{11} \tag{27}$$

6.6 Species Sucvac

Initial concentration $0\ \mathrm{mmol}\cdot\mathrm{l}^{-1}$

This species takes part in one reaction (as a product in v11), which does not influence its rate of change because this species is on the boundary of the reaction system:

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{Sucvac} = 0 \tag{28}$$

6.7 Species glycolysis

Initial concentration $0\ \mathrm{mmol}\cdot\mathrm{l}^{-1}$

This species takes part in one reaction (as a product in v10), which does not influence its rate of change because this species is on the boundary of the reaction system:

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{glycolysis} = 0 \tag{29}$$

6.8 Species phos

Initial concentration $5.1\ \mathrm{mmol}\cdot\mathrm{l}^{-1}$

This species takes part in two reactions (as a product in v7 and as a modifier in v6), which do not influence its rate of change because this species is on the boundary of the reaction system:

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{phos} = 0 \tag{30}$$

6.9 Species UDP

Initial concentration $0.2\ \mathrm{mmol}\cdot\mathrm{l}^{-1}$

This species takes part in two reactions (as a product in v6, v8), which do not influence its rate of change because this species is on the boundary of the reaction system:

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{UDP} = 0 \tag{31}$$

6.10 Species ADP

Initial concentration $0.2\ \mathrm{mmol}\cdot\mathrm{l}^{-1}$

This species takes part in three reactions (as a product in v3, v4, v5), which do not influence its rate of change because this species is on the boundary of the reaction system:

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{ADP} = 0 \tag{32}$$

6.11 Species ATP

Initial concentration $1\ \mathrm{mmol}\cdot\mathrm{l}^{-1}$

This species takes part in three reactions (as a reactant in v3, v4, v5), which do not influence its rate of change because this species is on the boundary of the reaction system:

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{ATP} = 0 \tag{33}$$

6.12 Species Glcex

Initial concentration $5\ \mathrm{mmol}\cdot\mathrm{l}^{-1}$

This species takes part in one reaction (as a reactant in v2), which does not influence its rate of change because this species is on the boundary of the reaction system:

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{Glcex} = 0 \tag{34}$$

6.13 Species Fruex

Initial concentration $5\ \mathrm{mmol} \cdot \mathrm{l}^{-1}$

This species takes part in one reaction (as a reactant in v1), which does not influence its rate of change because this species is on the boundary of the reaction system:

$$\frac{\mathrm{d}}{\mathrm{d}t}\mathrm{Fruex} = 0 \tag{35}$$

SBML2LaTeX was developed by Andreas Dräger[a], Hannes Planatscher[a], Dieudonné M Wouamba[a], Adrian Schröder[a], Michael Hucka[b], Lukas Endler[c], Martin Golebiewski[d] and Andreas Zell[a]. Please see http://www.ra.cs.uni-tuebingen.de/software/SBML2LaTeX for more information.

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