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    </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1"
      />
      <parameter id="k2" name="k2" value="0.1"
      />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_10" name="rx 010">
  - <listOfReactants>
    <speciesReference species="species_10"
      stoichiometry="2" />
  </listOfReactants>
  - <listOfProducts>

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    <speciesReference species="species_82" />
  </listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
    - <apply>
      <times />
      <ci>compartment_1</ci>
    - <apply>
      <minus />
      - <apply>
        <times />
        <ci>k1</ci>
      - <apply>
        <power />
        <ci>species_10</ci>
        <cn>2</cn>
      </apply>
    </apply>
    </apply>
    - <apply>
      <times />
      <ci>k2</ci>
      <ci>species_82</ci>
    </apply>
    </apply>
    </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_11" name="rx 011"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_82" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_11" />
    <speciesReference species="species_10" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>

```

```

        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_82</ci>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_12" name="rx 012"
    reversible="false">
- <listOfReactants>
    <speciesReference species="species_11" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_4" />
    <speciesReference species="species_12" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">
- <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_11</ci>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_13" name="rx 013">
- <listOfReactants>
    <speciesReference species="species_12" />
    <speciesReference species="species_13" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_83" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">

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```

- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />
  - <apply>
    <times />
    <ci>k1</ci>
    <ci>species_12</ci>
    <ci>species_13</ci>
  </apply>
  - <apply>
    <times />
    <ci>k2</ci>
    <ci>species_83</ci>
  </apply>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
  <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_14" name="rx 014"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_83" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_9" />
  <speciesReference species="species_13" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML">
- <apply>
  <times />
  <ci>compartment_1</ci>
  <ci>k1</ci>
  <ci>species_83</ci>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
  />

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        </listOfParameters>
    </kineticLaw>
</reaction>
- <reaction id="reaction_15" name="rx 015">
  - <listOfReactants>
    <speciesReference species="species_4" />
    <speciesReference species="species_14" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_15" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>
        - <apply>
          <minus />
          - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_4</ci>
            <ci>species_14</ci>
          </apply>
          - <apply>
            <times />
            <ci>k2</ci>
            <ci>species_15</ci>
          </apply>
        </apply>
      </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1" />
      <parameter id="k2" name="k2" value="0.1" />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_16" name="rx 016">
  - <listOfReactants>
    <speciesReference species="species_15"
      stoichiometry="2" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_84" />

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</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
    - <apply>
      <times />
      <ci>compartment_1</ci>
    - <apply>
      <minus />
    - <apply>
      <times />
      <ci>k1</ci>
    - <apply>
      <power />
      <ci>species_15</ci>
      <cn>2</cn>
    </apply>
  </apply>
  - <apply>
    <times />
    <ci>k2</ci>
    <ci>species_84</ci>
  </apply>
  </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_17" name="rx 017"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_84" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_16" />
    <speciesReference species="species_15" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />

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        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_84</ci>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_18" name="rx 018"
    reversible="false">
- <listOfReactants>
    <speciesReference species="species_16" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_4" />
    <speciesReference species="species_17" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">
- <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_16</ci>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_19" name="rx 019">
- <listOfReactants>
    <speciesReference species="species_17" />
    <speciesReference species="species_18" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_85" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">
- <apply>

```

```

        <times />
        <ci>compartment_1</ci>
    - <apply>
        <minus />
        - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_17</ci>
            <ci>species_18</ci>
        </apply>
        - <apply>
            <times />
            <ci>k2</ci>
            <ci>species_85</ci>
        </apply>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_20" name="rx 020"
    reversible="false">
    - <listOfReactants>
        <speciesReference species="species_85" />
    </listOfReactants>
    - <listOfProducts>
        <speciesReference species="species_14" />
        <speciesReference species="species_18" />
    </listOfProducts>
    - <kineticLaw>
        - <math
            xmlns="http://www.w3.org/1998/Math/ML"
            hML">
            - <apply>
                <times />
                <ci>compartment_1</ci>
                <ci>k1</ci>
                <ci>species_85</ci>
            </apply>
        </math>
        - <listOfParameters>
            <parameter id="k1" name="k1" value="0.1" />
        </listOfParameters>

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    </kineticLaw>
  </reaction>
- <reaction id="reaction_21" name="rx 021">
  - <listOfReactants>
    <speciesReference species="species_19" />
    <speciesReference species="species_20" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_21" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>
        - <apply>
          <minus />
          - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_19</ci>
            <ci>species_20</ci>
          </apply>
          - <apply>
            <times />
            <ci>k2</ci>
            <ci>species_21</ci>
          </apply>
        </apply>
      </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1" />
      <parameter id="k2" name="k2" value="0.1" />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_22" name="rx 022">
  - <listOfReactants>
    <speciesReference species="species_21" />
    <speciesReference species="species_11" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_22" />
  </listOfProducts>

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- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML" >
  - <apply>
    <times />
    <ci>compartment_1</ci>
  - <apply>
    <minus />
  - <apply>
    <times />
    <ci>k1</ci>
    <ci>species_21</ci>
    <ci>species_11</ci>
    </apply>
  - <apply>
    <times />
    <ci>k2</ci>
    <ci>species_22</ci>
    </apply>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_23" name="rx 023">
  - <listOfReactants>
    <speciesReference species="species_21" />
    <speciesReference species="species_12" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_23" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML" >
    - <apply>
      <times />
      <ci>compartment_1</ci>
    - <apply>
      <minus />
    - <apply>
      <times />

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```

        <ci>k1</ci>
        <ci>species_21</ci>
        <ci>species_12</ci>
    </apply>
- <apply>
    <times />
    <ci>k2</ci>
    <ci>species_23</ci>
</apply>
</apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_24" name="rx 024">
- <listOfReactants>
    <speciesReference species="species_21" />
    <speciesReference species="species_17" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_24" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/ML"
- <apply>
    <times />
    <ci>compartment_1</ci>
- <apply>
    <minus />
- <apply>
    <times />
    <ci>k1</ci>
    <ci>species_21</ci>
    <ci>species_17</ci>
</apply>
- <apply>
    <times />
    <ci>k2</ci>
    <ci>species_24</ci>
</apply>
</apply>

```



```

        </apply>
    </math>
    - <listOfParameters>
        <parameter id="k1" name="k1" value="0.1" />
        <parameter id="k2" name="k2" value="0.1" />
    </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_25" name="rx 025">
    - <listOfReactants>
        <speciesReference species="species_25" />
        <speciesReference species="species_22" />
    </listOfReactants>
    - <listOfProducts>
        <speciesReference species="species_86" />
    </listOfProducts>
    - <kineticLaw>
        - <math
            xmlns="http://www.w3.org/1998/Math/ML"
            >
            - <apply>
                <times />
                <ci>compartment_1</ci>
            - <apply>
                <minus />
                - <apply>
                    <times />
                    <ci>k1</ci>
                    <ci>species_25</ci>
                    <ci>species_22</ci>
                </apply>
                - <apply>
                    <times />
                    <ci>k2</ci>
                    <ci>species_86</ci>
                </apply>
            </apply>
            </math>
        - <listOfParameters>
            <parameter id="k1" name="k1" value="0.1" />
            <parameter id="k2" name="k2" value="0.1" />
        </listOfParameters>
    </kineticLaw>
</reaction>

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- <reaction id="reaction_26" name="rx 026"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_86" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_26" />
  <speciesReference species="species_22" />
</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
  - <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_86</ci>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
      />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_27" name="rx 027">
- <listOfReactants>
  <speciesReference species="species_25" />
  <speciesReference species="species_23" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_87" />
</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
  - <apply>
    <times />
    <ci>compartment_1</ci>
  - <apply>
    <minus />
    - <apply>
      <times />
      <ci>k1</ci>
      <ci>species_25</ci>
      <ci>species_23</ci>
      </apply>
    - <apply>

```

```

        <times />
        <ci>k2</ci>
        <ci>species_87</ci>
    </apply>
</apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_28" name="rx 028"
    reversible="false">
- <listOfReactants>
    <speciesReference species="species_87" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_26" />
    <speciesReference species="species_23" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/ML">
- <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_87</ci>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_29" name="rx 029">
- <listOfReactants>
    <speciesReference species="species_25" />
    <speciesReference species="species_24" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_88" />
</listOfProducts>
- <kineticLaw>

```

```

- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />
- <apply>
  <times />
  <ci>k1</ci>
  <ci>species_25</ci>
  <ci>species_24</ci>
</apply>
- <apply>
  <times />
  <ci>k2</ci>
  <ci>species_88</ci>
</apply>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
  <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_30" name="rx 030"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_88" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_26" />
  <speciesReference species="species_24" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
  <ci>k1</ci>
  <ci>species_88</ci>
</apply>
</math>

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```

- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
  />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_31" name="rx 031">
- <listOfReactants>
  <speciesReference species="species_26" />
  <speciesReference species="species_27" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_89" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />
- <apply>
  <times />
  <ci>k1</ci>
  <ci>species_26</ci>
  <ci>species_27</ci>
</apply>
- <apply>
  <times />
  <ci>k2</ci>
  <ci>species_89</ci>
</apply>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
  />
  <parameter id="k2" name="k2" value="0.1"
  />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_32" name="rx 032"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_89" />
</listOfReactants>

```

```

- <listOfProducts>
  <speciesReference species="species_25" />
  <speciesReference species="species_27" />
</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
  >
    - <apply>
      <times />
      <ci>compartment_1</ci>
      <ci>k1</ci>
      <ci>species_89</ci>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_33" name="rx 033">
  - <listOfReactants>
    <speciesReference species="species_14" />
    <speciesReference species="species_41" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_90" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>
      - <apply>
        <minus />
        - <apply>
          <times />
          <ci>k1</ci>
          <ci>species_14</ci>
          <ci>species_41</ci>
        </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_90</ci>
      </apply>
    </math>
  </kineticLaw>
</reaction>

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        </apply>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
    <parameter id="k2" name="k2" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_34" name="rx 034"
    reversible="false">
- <listOfReactants>
    <speciesReference species="species_90" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_28" />
    <speciesReference species="species_41" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">
- <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_90</ci>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_35" name="rx 035">
- <listOfReactants>
    <speciesReference species="species_14" />
    <speciesReference species="species_77" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_91" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">
- <apply>

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```

        <times />
        <ci>compartment_1</ci>
    - <apply>
        <minus />
        - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_14</ci>
            <ci>species_77</ci>
        </apply>
        - <apply>
            <times />
            <ci>k2</ci>
            <ci>species_91</ci>
        </apply>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_36" name="rx 036"
    reversible="false">
    - <listOfReactants>
        <speciesReference species="species_91" />
    </listOfReactants>
    - <listOfProducts>
        <speciesReference species="species_28" />
        <speciesReference species="species_77" />
    </listOfProducts>
    - <kineticLaw>
        - <math
            xmlns="http://www.w3.org/1998/Math/ML"
            hML">
            - <apply>
                <times />
                <ci>compartment_1</ci>
                <ci>k1</ci>
                <ci>species_91</ci>
            </apply>
        </math>
        - <listOfParameters>
            <parameter id="k1" name="k1" value="0.1" />
        </listOfParameters>

```



```

    </kineticLaw>
  </reaction>
- <reaction id="reaction_37" name="rx 037"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_28" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_14" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_28</ci>
      </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1"
        />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_38" name="rx 038">
  - <listOfReactants>
    <speciesReference species="species_29" />
    <speciesReference species="species_32" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_92" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
      - <apply>
        <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_29</ci>
        <ci>species_32</ci>
      </apply>
    </math>

```

```

      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_92</ci>
      </apply>
    </apply>
  </math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
  <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_39" name="rx 039"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_92" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_30" />
  <speciesReference species="species_32" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML">
- <apply>
  <times />
  <ci>compartment_1</ci>
  <ci>k1</ci>
  <ci>species_92</ci>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_40" name="rx 040">
- <listOfReactants>
  <speciesReference species="species_30" />
  <speciesReference species="species_41" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_93" />
</listOfProducts>

```

```

- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML" >
  - <apply>
    <times />
    <ci>compartment_1</ci>
  - <apply>
    <minus />
  - <apply>
    <times />
    <ci>k1</ci>
    <ci>species_30</ci>
    <ci>species_41</ci>
  </apply>
  - <apply>
    <times />
    <ci>k2</ci>
    <ci>species_93</ci>
  </apply>
  </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_41" name="rx 041"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_93" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_31" />
    <speciesReference species="species_41" />
  </listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML" >
  - <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_93</ci>
  </apply>

```

```

    </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
      />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_42" name="rx 042">
  - <listOfReactants>
    <speciesReference species="species_30" />
    <speciesReference species="species_33" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_94" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/Mat
        hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
      - <apply>
        <minus />
        - <apply>
          <times />
          <ci>k1</ci>
          <ci>species_30</ci>
          <ci>species_33</ci>
        </apply>
        - <apply>
          <times />
          <ci>k2</ci>
          <ci>species_94</ci>
        </apply>
      </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1"
        />
      <parameter id="k2" name="k2" value="0.1"
        />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_43" name="rx 043"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_94" />

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    </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_29" />
    <speciesReference species="species_33" />
  </listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
  >
    - <apply>
      <times />
      <ci>compartment_1</ci>
      <ci>k1</ci>
      <ci>species_94</ci>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_44" name="rx 044">
  - <listOfReactants>
    <speciesReference species="species_31" />
    <speciesReference species="species_33" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_95" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>
      - <apply>
        <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_31</ci>
        <ci>species_33</ci>
      </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_95</ci>
      </apply>
    </math>
  </kineticLaw>
</reaction>

```

```

        </apply>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
    <parameter id="k2" name="k2" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_45" name="rx 045"
reversible="false">
- <listOfReactants>
    <speciesReference species="species_95" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_30" />
    <speciesReference species="species_33" />
</listOfProducts>
- <kineticLaw>
- <math
xmlns="http://www.w3.org/1998/Math/Mat
hML">
- <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_95</ci>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_46" name="rx 046">
- <listOfReactants>
    <speciesReference species="species_29" />
    <speciesReference species="species_54" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_96" />
</listOfProducts>
- <kineticLaw>
- <math
xmlns="http://www.w3.org/1998/Math/Mat
hML">

```

```

- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />
  - <apply>
    <times />
    <ci>k1</ci>
    <ci>species_29</ci>
    <ci>species_54</ci>
  </apply>
  - <apply>
    <times />
    <ci>k2</ci>
    <ci>species_96</ci>
  </apply>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
  <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_47" name="rx 047"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_96" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_34" />
  <speciesReference species="species_54" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML">
- <apply>
  <times />
  <ci>compartment_1</ci>
  <ci>k1</ci>
  <ci>species_96</ci>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />

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    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_48" name="rx 048"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_34" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_29" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_34</ci>
      </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1"
        />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_49" name="rx 049">
  - <listOfReactants>
    <speciesReference species="species_26" />
    <speciesReference species="species_30" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_35" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
        - <apply>
          <minus />
          - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_26</ci>
            <ci>species_30</ci>
          </apply>
        </apply>
      </math>
    </kineticLaw>
  </reaction>

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```

        </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_35</ci>
      </apply>
    </apply>
  </apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
  <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_50" name="rx 050">
  - <listOfReactants>
    <speciesReference species="species_36" />
    <speciesReference species="species_35" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_97" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML" >
      - <apply>
        <times />
        <ci>compartment_1</ci>
      - <apply>
        <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_36</ci>
        <ci>species_35</ci>
      </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_97</ci>
      </apply>
    </apply>
  </math>
  - <listOfParameters>

```

```

        <parameter id="k1" name="k1" value="0.1"
          />
        <parameter id="k2" name="k2" value="0.1"
          />
      </listOfParameters>
    </kineticLaw>
  </reaction>
- <reaction id="reaction_51" name="rx 051"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_97" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_37" />
    <speciesReference species="species_35" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_97</ci>
      </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1"
        />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_52" name="rx 052">
  - <listOfReactants>
    <speciesReference species="species_37" />
    <speciesReference species="species_35" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_98" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
      - <apply>
        <minus />

```

```

      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_37</ci>
        <ci>species_35</ci>
      </apply>
    - <apply>
      <times />
      <ci>k2</ci>
      <ci>species_98</ci>
    </apply>
  </apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
  <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_53" name="rx 053"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_98" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_38" />
    <speciesReference species="species_35" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_98</ci>
      </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1" />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_54" name="rx 054">
  - <listOfReactants>

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```

        <speciesReference species="species_37" />
        <speciesReference species="species_33" />
    </listOfReactants>
- <listOfProducts>
    <speciesReference species="species_99" />
</listOfProducts>
- <kineticLaw>
    - <math
        xmlns="http://www.w3.org/1998/Math/ML"
        hML">
        - <apply>
            <times />
            <ci>compartment_1</ci>
        - <apply>
            <minus />
        - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_37</ci>
            <ci>species_33</ci>
        </apply>
        - <apply>
            <times />
            <ci>k2</ci>
            <ci>species_99</ci>
        </apply>
        </apply>
        </apply>
    </math>
    - <listOfParameters>
        <parameter id="k1" name="k1" value="0.1"
            />
        <parameter id="k2" name="k2" value="0.1"
            />
    </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_55" name="rx 055"
    reversible="false">
    - <listOfReactants>
        <speciesReference species="species_99" />
    </listOfReactants>
    - <listOfProducts>
        <speciesReference species="species_36" />
        <speciesReference species="species_33" />
    </listOfProducts>
    - <kineticLaw>
        - <math
            xmlns="http://www.w3.org/1998/Math/ML"
            hML">

```

```

- <apply>
  <times />
  <ci>compartment_1</ci>
  <ci>k1</ci>
  <ci>species_99</ci>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
  />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_56" name="rx 056">
- <listOfReactants>
  <speciesReference species="species_38" />
  <speciesReference species="species_33" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_100" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />
- <apply>
  <times />
  <ci>k1</ci>
  <ci>species_38</ci>
  <ci>species_33</ci>
</apply>
- <apply>
  <times />
  <ci>k2</ci>
  <ci>species_100</ci>
</apply>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
  />
  <parameter id="k2" name="k2" value="0.1"
  />

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```

    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_57" name="rx 057"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_100" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_37" />
    <speciesReference species="species_33" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_100</ci>
      </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1" />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_58" name="rx 058">
  - <listOfReactants>
    <speciesReference species="species_39" />
    <speciesReference species="species_38" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_101" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>
        - <apply>
          <minus />
          - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_39</ci>

```

```

        <ci>species_38</ci>
      </apply>
    - <apply>
      <times />
      <ci>k2</ci>
      <ci>species_101</ci>
    </apply>
  </apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
  <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_59" name="rx 059"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_101" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_40" />
    <speciesReference species="species_38" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_101</ci>
      </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1" />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_60" name="rx 060">
  - <listOfReactants>
    <speciesReference species="species_40" />
    <speciesReference species="species_38" />
  </listOfReactants>
  - <listOfProducts>

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```

    <speciesReference species="species_102" />
  </listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
    - <apply>
      <times />
      <ci>compartment_1</ci>
    - <apply>
      <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_40</ci>
        <ci>species_38</ci>
      </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_102</ci>
      </apply>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_61" name="rx 061"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_102" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_41" />
    <speciesReference species="species_38" />
  </listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
    - <apply>
      <times />
      <ci>compartment_1</ci>
      <ci>k1</ci>

```



```

        <ci>species_102</ci>
      </apply>
    </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_62" name="rx 062">
  - <listOfReactants>
    <speciesReference species="species_40" />
    <speciesReference species="species_42" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_103" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>
      - <apply>
        <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_40</ci>
        <ci>species_42</ci>
      </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_103</ci>
      </apply>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_63" name="rx 063"
  reversible="false">

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- <listOfReactants>
  <speciesReference species="species_103" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_39" />
  <speciesReference species="species_42" />
</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
  >
    - <apply>
      <times />
      <ci>compartment_1</ci>
      <ci>k1</ci>
      <ci>species_103</ci>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_64" name="rx 064">
  - <listOfReactants>
    <speciesReference species="species_41" />
    <speciesReference species="species_42" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_104" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>
        - <apply>
          <minus />
          - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_41</ci>
            <ci>species_42</ci>
          </apply>
        </apply>
      </math>
    </kineticLaw>
  </reaction>

```

```

        <ci>k2</ci>
        <ci>species_104</ci>
    </apply>
</apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
    <parameter id="k2" name="k2" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_65" name="rx 065"
    reversible="false">
- <listOfReactants>
    <speciesReference species="species_104" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_40" />
    <speciesReference species="species_42" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
- <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_104</ci>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_66" name="rx 066">
- <listOfReactants>
    <speciesReference species="species_43" />
    <speciesReference species="species_17" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_44" />
</listOfProducts>
- <kineticLaw>

```

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- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />
- <apply>
  <times />
  <ci>k1</ci>
  <ci>species_43</ci>
  <ci>species_17</ci>
  </apply>
- <apply>
  <times />
  <ci>k2</ci>
  <ci>species_44</ci>
  </apply>
  </apply>
  </apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
  <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_67" name="rx 067">
- <listOfReactants>
  <speciesReference species="species_45" />
  <speciesReference species="species_44" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_105" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />
- <apply>
  <times />
  <ci>k1</ci>

```

```

        <ci>species_45</ci>
        <ci>species_44</ci>
    </apply>
    - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_105</ci>
    </apply>
</apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_68" name="rx 068"
    reversible="false">
    - <listOfReactants>
        <speciesReference species="species_105" />
    </listOfReactants>
    - <listOfProducts>
        <speciesReference species="species_46" />
        <speciesReference species="species_44" />
    </listOfProducts>
    - <kineticLaw>
        - <math
            xmlns="http://www.w3.org/1998/Math/ML"
            hML">
            - <apply>
                <times />
                <ci>compartment_1</ci>
                <ci>k1</ci>
                <ci>species_105</ci>
            </apply>
            </math>
        - <listOfParameters>
            <parameter id="k1" name="k1" value="0.1" />
        </listOfParameters>
    </kineticLaw>
</reaction>
- <reaction id="reaction_69" name="rx 069">
    - <listOfReactants>
        <speciesReference species="species_46" />
        <speciesReference species="species_47" />
    </listOfReactants>

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```

- <listOfProducts>
  <speciesReference species="species_106" />
</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
  >
    - <apply>
      <times />
      <ci>compartment_1</ci>
    - <apply>
      <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_46</ci>
        <ci>species_47</ci>
      </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_106</ci>
      </apply>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_70" name="rx 070"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_106" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_45" />
    <speciesReference species="species_47" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>

```

```

        <ci>k1</ci>
        <ci>species_106</ci>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_71" name="rx 071">
- <listOfReactants>
    <speciesReference species="species_46" />
    <speciesReference species="species_48" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_49" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/ML"
    >
- <apply>
    <times />
    <ci>compartment_1</ci>
- <apply>
    <minus />
- <apply>
    <times />
    <ci>k1</ci>
    <ci>species_46</ci>
    <ci>species_48</ci>
    </apply>
- <apply>
    <times />
    <ci>k2</ci>
    <ci>species_49</ci>
    </apply>
    </apply>
</apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
    <parameter id="k2" name="k2" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>

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- <reaction id="reaction_72" name="rx 072">
- <listOfReactants>
  <speciesReference species="species_46" />
  <speciesReference species="species_50" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_51" />
</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
    - <apply>
      <times />
      <ci>compartment_1</ci>
    - <apply>
      <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_46</ci>
        <ci>species_50</ci>
      </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_51</ci>
      </apply>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_73" name="rx 073">
- <listOfReactants>
  <speciesReference species="species_49" />
  <speciesReference species="species_51" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_107" />
</listOfProducts>
- <kineticLaw>

```



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- <math
  xmlns="http://www.w3.org/1998/Math/Mat
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />
- <apply>
  <times />
  <ci>k1</ci>
  <ci>species_49</ci>
  <ci>species_51</ci>
  </apply>
- <apply>
  <times />
  <ci>k2</ci>
  <ci>species_107</ci>
  </apply>
  </apply>
  </apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
  />
  <parameter id="k2" name="k2" value="0.1"
  />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_74" name="rx 074"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_107" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_52" />
  <speciesReference species="species_51" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/Mat
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
  <ci>k1</ci>
  <ci>species_107</ci>
  </apply>
</math>

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- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
  />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_75" name="rx 075">
- <listOfReactants>
  <speciesReference species="species_52" />
  <speciesReference species="species_53" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_108" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />
- <apply>
  <times />
  <ci>k1</ci>
  <ci>species_52</ci>
  <ci>species_53</ci>
</apply>
- <apply>
  <times />
  <ci>k2</ci>
  <ci>species_108</ci>
</apply>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
  />
  <parameter id="k2" name="k2" value="0.1"
  />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_76" name="rx 076"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_108" />
</listOfReactants>

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- <listOfProducts>
  <speciesReference species="species_49" />
  <speciesReference species="species_53" />
</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
  >
    - <apply>
      <times />
      <ci>compartment_1</ci>
      <ci>k1</ci>
      <ci>species_108</ci>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_77" name="rx 077">
  - <listOfReactants>
    <speciesReference species="species_52" />
    <speciesReference species="species_75" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_109" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>
      - <apply>
        <minus />
        - <apply>
          <times />
          <ci>k1</ci>
          <ci>species_52</ci>
          <ci>species_75</ci>
        </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_109</ci>
      </apply>
    </math>
  </kineticLaw>
</reaction>

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        </apply>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
    <parameter id="k2" name="k2" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_78" name="rx 078"
    reversible="false">
- <listOfReactants>
    <speciesReference species="species_109" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_54" />
    <speciesReference species="species_75" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">
- <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_109</ci>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_79" name="rx 079">
- <listOfReactants>
    <speciesReference species="species_54" />
    <speciesReference species="species_55" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_110" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">
- <apply>

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```

        <times />
        <ci>compartment_1</ci>
    - <apply>
        <minus />
        - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_54</ci>
            <ci>species_55</ci>
        </apply>
        - <apply>
            <times />
            <ci>k2</ci>
            <ci>species_110</ci>
        </apply>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_80" name="rx 080"
    reversible="false">
    - <listOfReactants>
        <speciesReference species="species_110" />
    </listOfReactants>
    - <listOfProducts>
        <speciesReference species="species_52" />
        <speciesReference species="species_55" />
    </listOfProducts>
    - <kineticLaw>
        - <math
            xmlns="http://www.w3.org/1998/Math/ML"
            hML">
            - <apply>
                <times />
                <ci>compartment_1</ci>
                <ci>k1</ci>
                <ci>species_110</ci>
            </apply>
        </math>
        - <listOfParameters>
            <parameter id="k1" name="k1" value="0.1" />
        </listOfParameters>

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```

    </kineticLaw>
  </reaction>
- <reaction id="reaction_81" name="rx 081">
  - <listOfReactants>
    <speciesReference species="species_56" />
    <speciesReference species="species_59" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_111" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>
        - <apply>
          <minus />
          - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_56</ci>
            <ci>species_59</ci>
          </apply>
          - <apply>
            <times />
            <ci>k2</ci>
            <ci>species_111</ci>
          </apply>
        </apply>
      </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1" />
      <parameter id="k2" name="k2" value="0.1" />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_82" name="rx 082"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_111" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_57" />
    <speciesReference species="species_59" />
  </listOfProducts>

```

```

</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
    - <apply>
      <times />
      <ci>compartment_1</ci>
      <ci>k1</ci>
      <ci>species_111</ci>
    </apply>
    </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
      />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_83" name="rx 083">
  - <listOfReactants>
    <speciesReference species="species_56" />
    <speciesReference species="species_62" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_112" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
        - <apply>
          <minus />
          - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_56</ci>
            <ci>species_62</ci>
          </apply>
          - <apply>
            <times />
            <ci>k2</ci>
            <ci>species_112</ci>
          </apply>
        </apply>
      </math>

```

```

- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
    />
  <parameter id="k2" name="k2" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_84" name="rx 084"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_112" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_57" />
  <speciesReference species="species_62" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/Mat
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
  <ci>k1</ci>
  <ci>species_112</ci>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_85" name="rx 085">
- <listOfReactants>
  <speciesReference species="species_57" />
  <speciesReference species="species_68" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_113" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/Mat
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>

```



```

        <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_57</ci>
        <ci>species_68</ci>
      </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_113</ci>
      </apply>
    </apply>
  </math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
  <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_86" name="rx 086"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_113" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_56" />
    <speciesReference species="species_68" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_113</ci>
      </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1" />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_87" name="rx 087">

```

```

- <listOfReactants>
  <speciesReference species="species_57" />
  <speciesReference species="species_41" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_114" />
</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML" >
    - <apply>
      <times />
      <ci>compartment_1</ci>
    - <apply>
      <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_57</ci>
        <ci>species_41</ci>
      </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_114</ci>
      </apply>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_88" name="rx 088"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_114" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_56" />
    <speciesReference species="species_41" />
  </listOfProducts>
  - <kineticLaw>

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- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  >
- <apply>
  <times />
  <ci>compartment_1</ci>
  <ci>k1</ci>
  <ci>species_114</ci>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
  />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_89" name="rx 089">
- <listOfReactants>
  <speciesReference species="species_57" />
  <speciesReference species="species_54" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_115" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  >
- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />
- <apply>
  <times />
  <ci>k1</ci>
  <ci>species_57</ci>
  <ci>species_54</ci>
</apply>
- <apply>
  <times />
  <ci>k2</ci>
  <ci>species_115</ci>
</apply>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
  />

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        <parameter id="k2" name="k2" value="0.1"
        />
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</kineticLaw>
</reaction>
- <reaction id="reaction_90" name="rx 090"
    reversible="false">
- <listOfReactants>
    <speciesReference species="species_115" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_58" />
    <speciesReference species="species_54" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
- <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_115</ci>
</apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_91" name="rx 091"
    reversible="false">
- <listOfReactants>
    <speciesReference species="species_58" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_57" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
- <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_58</ci>
</apply>
</math>

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- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
  />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_92" name="rx 092">
- <listOfReactants>
  <speciesReference species="species_59" />
  <speciesReference species="species_54" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_116" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />
- <apply>
  <times />
  <ci>k1</ci>
  <ci>species_59</ci>
  <ci>species_54</ci>
</apply>
- <apply>
  <times />
  <ci>k2</ci>
  <ci>species_116</ci>
</apply>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
  />
  <parameter id="k2" name="k2" value="0.1"
  />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_93" name="rx 093"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_116" />
</listOfReactants>

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- <listOfProducts>
  <speciesReference species="species_60" />
  <speciesReference species="species_54" />
</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
  >
    - <apply>
      <times />
      <ci>compartment_1</ci>
      <ci>k1</ci>
      <ci>species_116</ci>
    </apply>
  </math>
  - <listOfParameters>
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      />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_94" name="rx 094"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_60" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_59" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_60</ci>
      </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1"
        />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_95" name="rx 095">
  - <listOfReactants>
    <speciesReference species="species_61" />
    <speciesReference species="species_63" />

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    </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_117" />
  </listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
  - <apply>
    <times />
    <ci>compartment_1</ci>
  - <apply>
    <minus />
    - <apply>
      <times />
      <ci>k1</ci>
      <ci>species_61</ci>
      <ci>species_63</ci>
    </apply>
    - <apply>
      <times />
      <ci>k2</ci>
      <ci>species_117</ci>
    </apply>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_96" name="rx 096"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_117" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_62" />
    <speciesReference species="species_63" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    - <apply>
      <times />

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        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_117</ci>
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</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_97" name="rx 097"
    reversible="false">
- <listOfReactants>
    <speciesReference species="species_62" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_61" />
</listOfProducts>
- <kineticLaw>
- <math
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    hML">
- <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_62</ci>
    </apply>
</math>
- <listOfParameters>
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    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_98" name="rx 098">
- <listOfReactants>
    <speciesReference species="species_61" />
    <speciesReference species="species_54" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_118" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">
- <apply>
    <times />

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        <ci>compartment_1</ci>
      - <apply>
        <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_61</ci>
        <ci>species_54</ci>
      </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_118</ci>
      </apply>
    </apply>
  </math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
  <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_99" name="rx 099"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_118" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_64" />
  <speciesReference species="species_54" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  hML">
- <apply>
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  <ci>k1</ci>
  <ci>species_118</ci>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
</listOfParameters>
</kineticLaw>

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</reaction>
- <reaction id="reaction_100" name="rx 100"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_64" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_61" />
</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
  - <apply>
    <times />
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    <ci>k1</ci>
    <ci>species_64</ci>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
      />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_101" name="rx 101">
- <listOfReactants>
  <speciesReference species="species_39" />
  <speciesReference species="species_65" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_66" />
</listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
  - <apply>
    <times />
    <ci>compartment_1</ci>
  - <apply>
    <minus />
    - <apply>
      <times />
      <ci>k1</ci>
      <ci>species_39</ci>
      <ci>species_65</ci>
      </apply>
    - <apply>

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        <times />
        <ci>k2</ci>
        <ci>species_66</ci>
    </apply>
</apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
    <parameter id="k2" name="k2" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_102" name="rx 102">
    - <listOfReactants>
        <speciesReference species="species_66" />
        <speciesReference species="species_38" />
    </listOfReactants>
    - <listOfProducts>
        <speciesReference species="species_119" />
    </listOfProducts>
    - <kineticLaw>
        - <math
            xmlns="http://www.w3.org/1998/Math/ML"
            hML">
            - <apply>
                <times />
                <ci>compartment_1</ci>
            - <apply>
                <minus />
            - <apply>
                <times />
                <ci>k1</ci>
                <ci>species_66</ci>
                <ci>species_38</ci>
            </apply>
            - <apply>
                <times />
                <ci>k2</ci>
                <ci>species_119</ci>
            </apply>
        </apply>
    </math>
    - <listOfParameters>
        <parameter id="k1" name="k1" value="0.1"
        />

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        <parameter id="k2" name="k2" value="0.1"
        />
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</kineticLaw>
</reaction>
- <reaction id="reaction_103" name="rx 103"
    reversible="false">
- <listOfReactants>
    <speciesReference species="species_119" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_41" />
    <speciesReference species="species_67" />
    <speciesReference species="species_38" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">
- <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_119</ci>
</apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_104" name="rx 104"
    reversible="false">
- <listOfReactants>
    <speciesReference species="species_67" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_65" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">
- <apply>
    <times />
    <ci>compartment_1</ci>
    <ci>k1</ci>
    <ci>species_67</ci>
</apply>

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    </math>
  - <listOfParameters>
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      />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_105" name="rx 105">
  - <listOfReactants>
    <speciesReference species="species_67" />
    <speciesReference species="species_41" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_120" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/Mat
        hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
      - <apply>
        <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_67</ci>
        <ci>species_41</ci>
      </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_120</ci>
      </apply>
    </apply>
  </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1"
        />
      <parameter id="k2" name="k2" value="0.1"
        />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_106" name="rx 106"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_120" />

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    </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_68" />
    <speciesReference species="species_41" />
  </listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
  >
    - <apply>
      <times />
      <ci>compartment_1</ci>
      <ci>k1</ci>
      <ci>species_120</ci>
    </apply>
  </math>
  - <listOfParameters>
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  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_107" name="rx 107"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_68" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_67" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
    >
      - <apply>
        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_68</ci>
      </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1" />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_108" name="rx 108">
  - <listOfReactants>
    <speciesReference species="species_69" />

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    <speciesReference species="species_57" />
  </listOfReactants>
- <listOfProducts>
    <speciesReference species="species_121" />
  </listOfProducts>
- <kineticLaw>
  - <math
    xmlns="http://www.w3.org/1998/Math/ML"
    hML">
    - <apply>
      <times />
      <ci>compartment_1</ci>
    - <apply>
      <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_69</ci>
        <ci>species_57</ci>
      </apply>
      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_121</ci>
      </apply>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_109" name="rx 109"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_121" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_70" />
    <speciesReference species="species_57" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>

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        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_121</ci>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_110" name="rx 110"
    reversible="false">
- <listOfReactants>
    <speciesReference species="species_70" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_69" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">
- <apply>
    <times />
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    <ci>k1</ci>
    <ci>species_70</ci>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_111" name="rx 111">
- <listOfReactants>
    <speciesReference species="species_71" />
    <speciesReference species="species_69" />
</listOfReactants>
- <listOfProducts>
    <speciesReference species="species_122" />
</listOfProducts>
- <kineticLaw>
- <math
    xmlns="http://www.w3.org/1998/Math/Mat
    hML">
- <apply>

```



```

        <times />
        <ci>compartment_1</ci>
    - <apply>
        <minus />
        - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_71</ci>
            <ci>species_69</ci>
        </apply>
        - <apply>
            <times />
            <ci>k2</ci>
            <ci>species_122</ci>
        </apply>
    </apply>
</math>
- <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_112" name="rx 112"
    reversible="false">
    - <listOfReactants>
        <speciesReference species="species_122" />
    </listOfReactants>
    - <listOfProducts>
        <speciesReference species="species_72" />
        <speciesReference species="species_69" />
    </listOfProducts>
    - <kineticLaw>
        - <math
            xmlns="http://www.w3.org/1998/Math/ML"
            hML">
            - <apply>
                <times />
                <ci>compartment_1</ci>
                <ci>k1</ci>
                <ci>species_122</ci>
            </apply>
        </math>
        - <listOfParameters>
            <parameter id="k1" name="k1" value="0.1" />
        </listOfParameters>

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    </kineticLaw>
  </reaction>
- <reaction id="reaction_113" name="rx 113"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_72" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_71" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_72</ci>
      </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1"
        />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_114" name="rx 114">
  - <listOfReactants>
    <speciesReference species="species_72" />
    <speciesReference species="species_73" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_74" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
      - <apply>
        <minus />
      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_72</ci>
        <ci>species_73</ci>
      </apply>
    </math>

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```

      - <apply>
        <times />
        <ci>k2</ci>
        <ci>species_74</ci>
      </apply>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1" />
    <parameter id="k2" name="k2" value="0.1" />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_115" name="rx 115">
  - <listOfReactants>
    <speciesReference species="species_76" />
    <speciesReference species="species_41" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_123" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML" >
      - <apply>
        <times />
        <ci>compartment_1</ci>
        - <apply>
          <minus />
          - <apply>
            <times />
            <ci>k1</ci>
            <ci>species_76</ci>
            <ci>species_41</ci>
          </apply>
          - <apply>
            <times />
            <ci>k2</ci>
            <ci>species_123</ci>
          </apply>
        </apply>
      </math>
    - <listOfParameters>

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        <parameter id="k1" name="k1" value="0.1"
          />
        <parameter id="k2" name="k2" value="0.1"
          />
      </listOfParameters>
    </kineticLaw>
  </reaction>
- <reaction id="reaction_116" name="rx 116"
  reversible="false">
- <listOfReactants>
  <speciesReference species="species_123" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_77" />
  <speciesReference species="species_41" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
  <ci>k1</ci>
  <ci>species_123</ci>
</apply>
</math>
- <listOfParameters>
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    />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_117" name="rx 117">
- <listOfReactants>
  <speciesReference species="species_76" />
  <speciesReference species="species_74" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_124" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />

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      - <apply>
        <times />
        <ci>k1</ci>
        <ci>species_76</ci>
        <ci>species_74</ci>
      </apply>
    - <apply>
      <times />
      <ci>k2</ci>
      <ci>species_124</ci>
    </apply>
  </apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1" />
  <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_118" name="rx 118"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_124" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_77" />
    <speciesReference species="species_74" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_124</ci>
      </apply>
    </math>
    - <listOfParameters>
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    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_119" name="rx 119">
  - <listOfReactants>

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    <speciesReference species="species_77" />
    <speciesReference species="species_78" />
  </listOfReactants>
- <listOfProducts>
  <speciesReference species="species_125" />
</listOfProducts>
- <kineticLaw>
  - <math
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    hML">
    - <apply>
      <times />
      <ci>compartment_1</ci>
    - <apply>
      <minus />
    - <apply>
      <times />
      <ci>k1</ci>
      <ci>species_77</ci>
      <ci>species_78</ci>
    </apply>
    - <apply>
      <times />
      <ci>k2</ci>
      <ci>species_125</ci>
    </apply>
    </apply>
    </apply>
  </math>
  - <listOfParameters>
    <parameter id="k1" name="k1" value="0.1"
      />
    <parameter id="k2" name="k2" value="0.1"
      />
  </listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_120" name="rx 120"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_125" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_76" />
    <speciesReference species="species_78" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">

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- <apply>
  <times />
  <ci>compartment_1</ci>
  <ci>k1</ci>
  <ci>species_125</ci>
</apply>
</math>
- <listOfParameters>
  <parameter id="k1" name="k1" value="0.1"
  />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_121" name="rx 121">
- <listOfReactants>
  <speciesReference species="species_78" />
  <speciesReference species="species_74" />
</listOfReactants>
- <listOfProducts>
  <speciesReference species="species_126" />
</listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/Mat
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
- <apply>
  <minus />
- <apply>
  <times />
  <ci>k1</ci>
  <ci>species_78</ci>
  <ci>species_74</ci>
</apply>
- <apply>
  <times />
  <ci>k2</ci>
  <ci>species_126</ci>
</apply>
</apply>
</math>
- <listOfParameters>
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  />
  <parameter id="k2" name="k2" value="0.1"
  />

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    </listOfParameters>
  </kineticLaw>
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- <reaction id="reaction_122" name="rx 122"
  reversible="false">
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  </listOfReactants>
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    <speciesReference species="species_74" />
  </listOfProducts>
  - <kineticLaw>
    - <math
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    >
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        <ci>k1</ci>
        <ci>species_126</ci>
      </apply>
    </math>
    - <listOfParameters>
      <parameter id="k1" name="k1" value="0.1" />
    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_123" name="rx 123">
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  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_127" />
  </listOfProducts>
  - <kineticLaw>
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    >
      - <apply>
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        - <apply>
          <minus />
          - <apply>
            <times />
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            <ci>species_78</ci>

```



```

        <ci>species_54</ci>
      </apply>
    - <apply>
      <times />
      <ci>k2</ci>
      <ci>species_127</ci>
    </apply>
  </apply>
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- <listOfParameters>
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  <parameter id="k2" name="k2" value="0.1" />
</listOfParameters>
</kineticLaw>
</reaction>
- <reaction id="reaction_124" name="rx 124"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_127" />
  </listOfReactants>
  - <listOfProducts>
    <speciesReference species="species_79" />
    <speciesReference species="species_54" />
  </listOfProducts>
  - <kineticLaw>
    - <math
      xmlns="http://www.w3.org/1998/Math/ML"
      hML">
      - <apply>
        <times />
        <ci>compartment_1</ci>
        <ci>k1</ci>
        <ci>species_127</ci>
      </apply>
    </math>
    - <listOfParameters>
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    </listOfParameters>
  </kineticLaw>
</reaction>
- <reaction id="reaction_125" name="rx 125"
  reversible="false">
  - <listOfReactants>
    <speciesReference species="species_79" />
  </listOfReactants>
  - <listOfProducts>

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    <speciesReference species="species_78" />
  </listOfProducts>
- <kineticLaw>
- <math
  xmlns="http://www.w3.org/1998/Math/ML"
  hML">
- <apply>
  <times />
  <ci>compartment_1</ci>
  <ci>k1</ci>
  <ci>species_79</ci>
  </apply>
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- <listOfParameters>
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  />
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</reaction>
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</model>
</sbml>
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