

neo4jsbml: import Systems Biology Markup Language data into the graph database Neo4j

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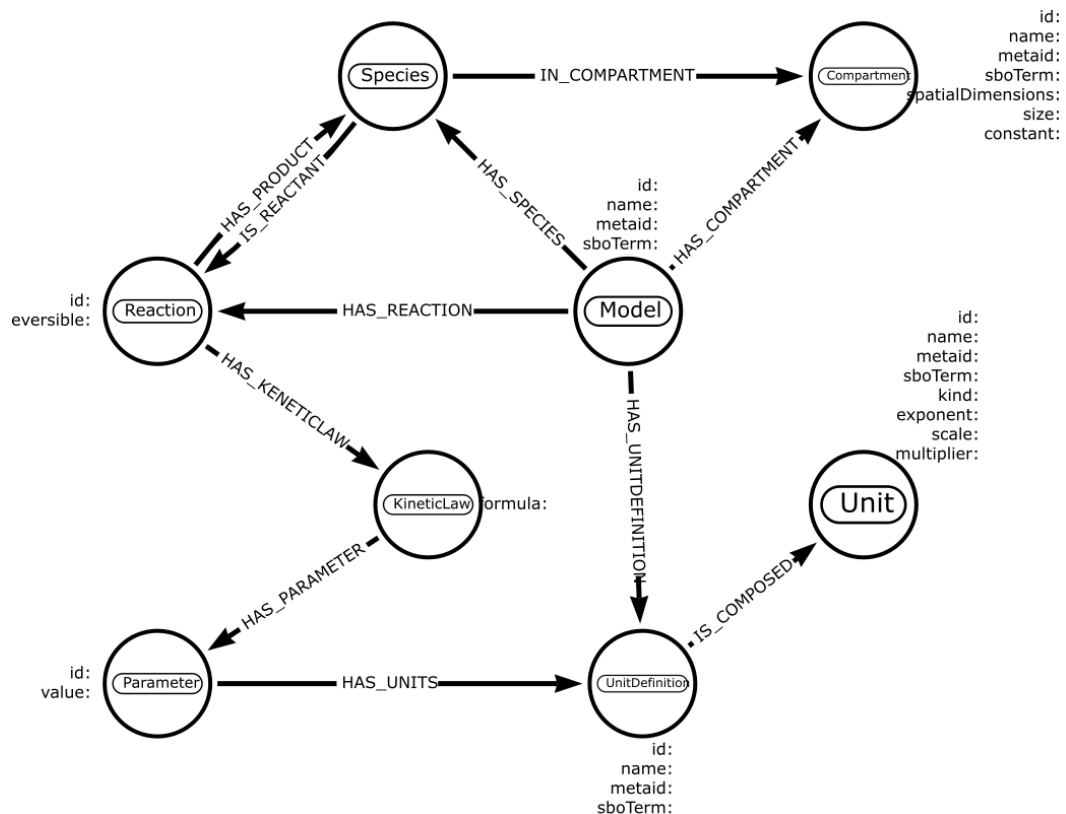
¹ MICALIS, INRAE, Domaine de Vilvert, Jouy-en-Josas, 78352, France

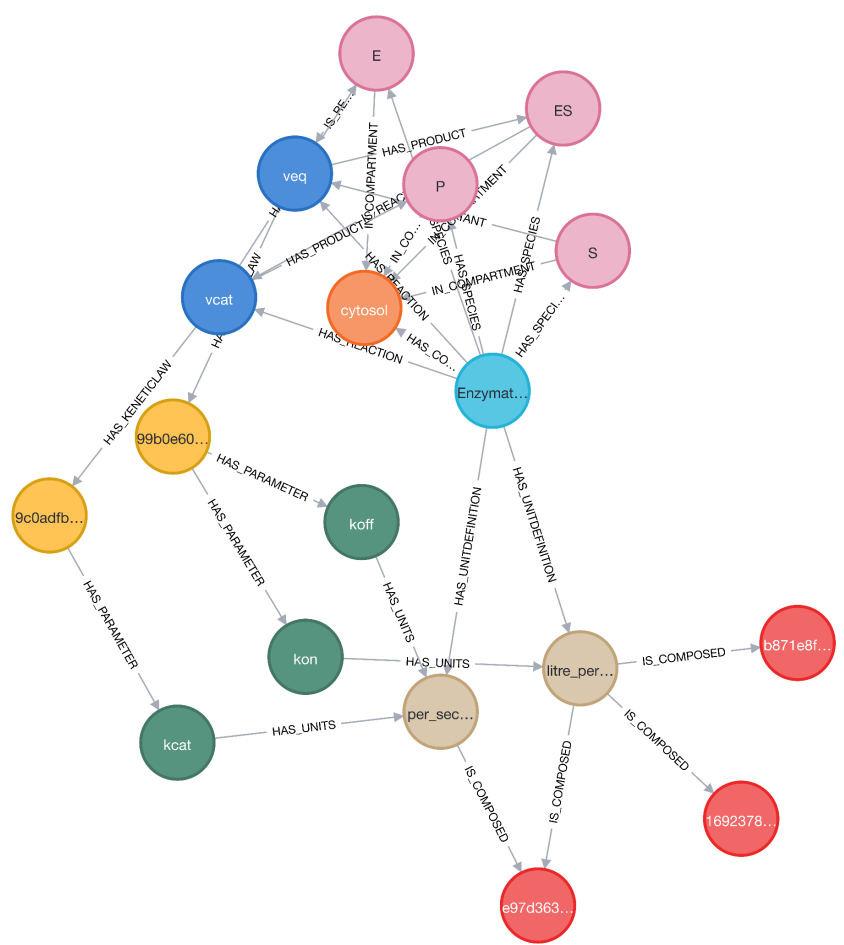
² MaIAGE, INRAE, Domaine de Vilvert, Jouy-en-Josas, 78352, France

Supplementary Figure S3

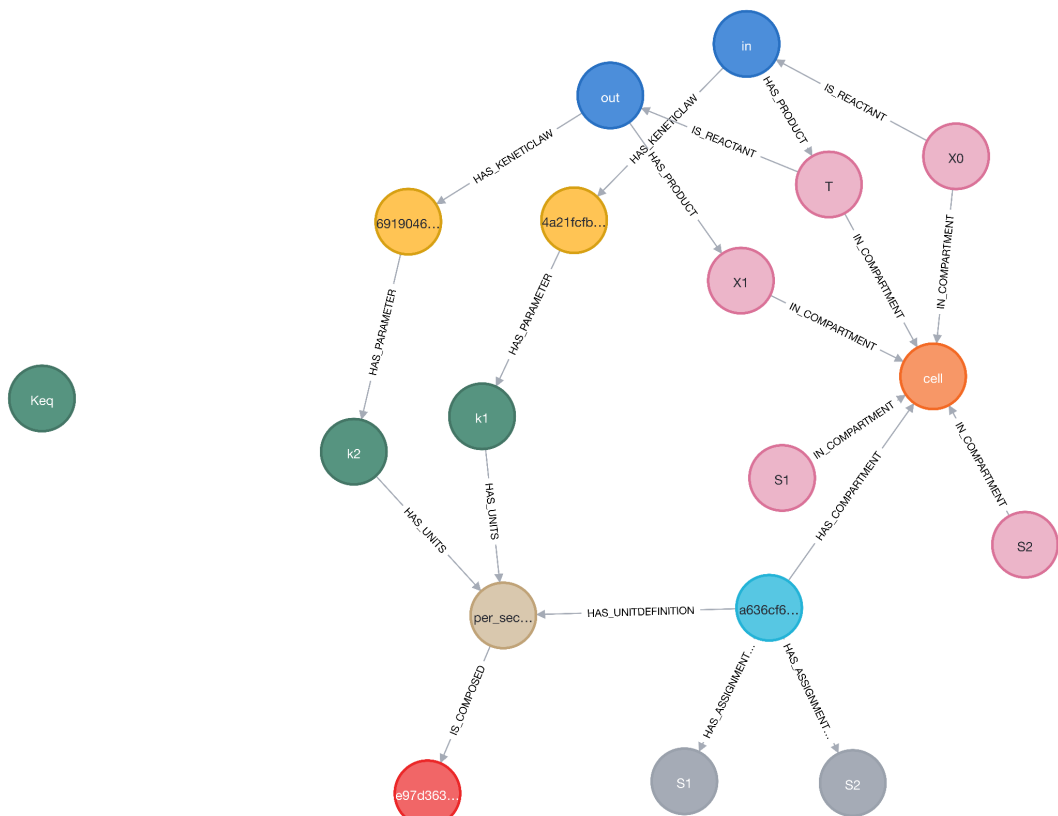
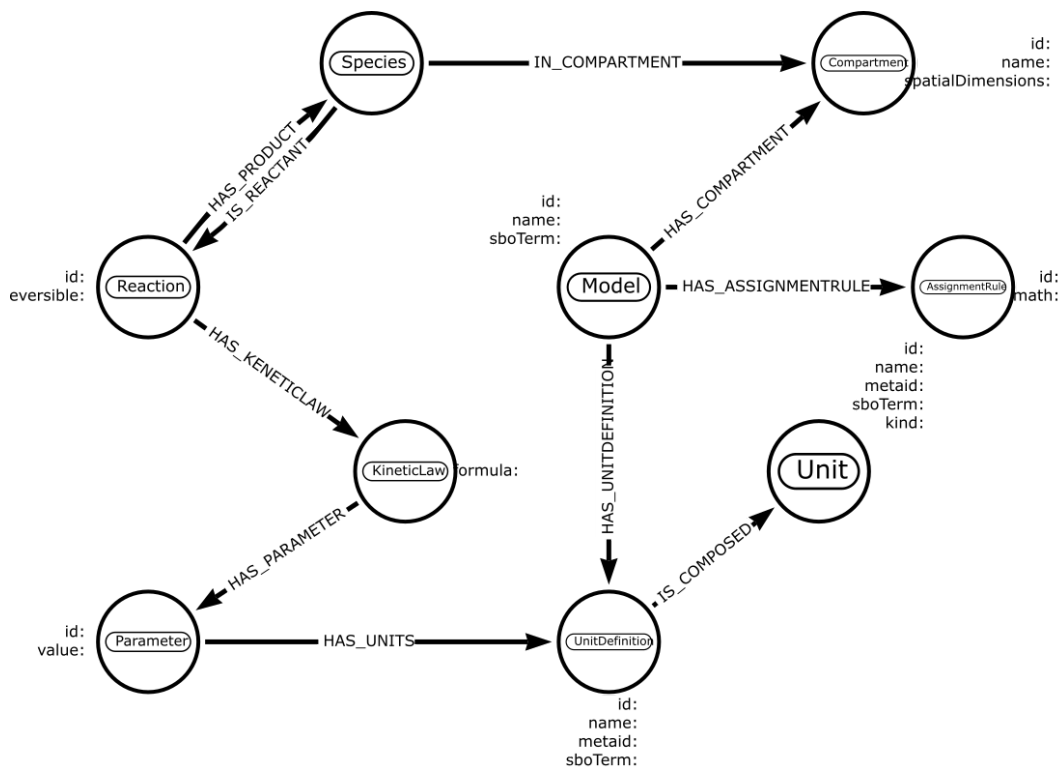
SBML models were extracted from Chapter 7 of the SBML specifications Level 2 Version 5¹, then they were loaded into Neo4j. The Arrows schema used then all the nodes and relationships were shown for each example. **A.** A simple example application of SBML. **B.** Example involving units. **C.** Example of a discrete version of a simple dimerization reaction. **D.** Example involving assignment rules. **E.** Example involving algebraic rules. **F.** Example with combinations of boundaryCondition and constant values on Species with RateRule objects. **G.** Example of translation from a multi-compartmental model to ODEs (Ordinary Differential Equations). **H.** Example involving function definitions. **I.** Example involving delay functions. **J.** Example involving events. **K.** Example involving two-dimensional compartments.

A

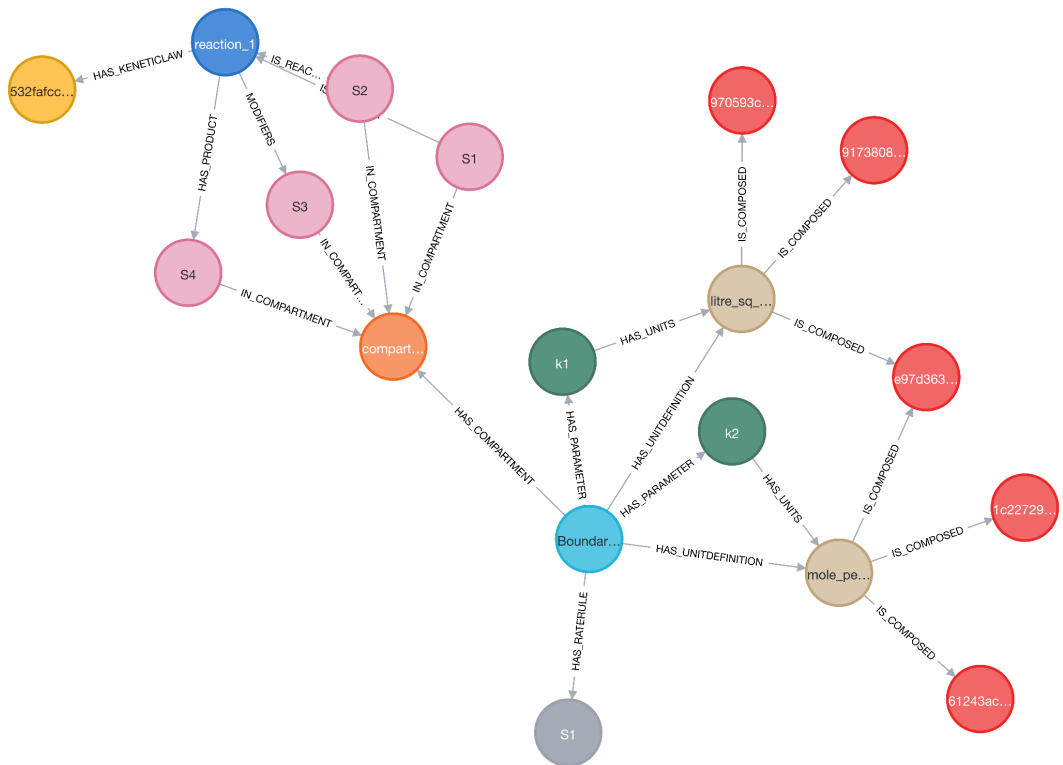
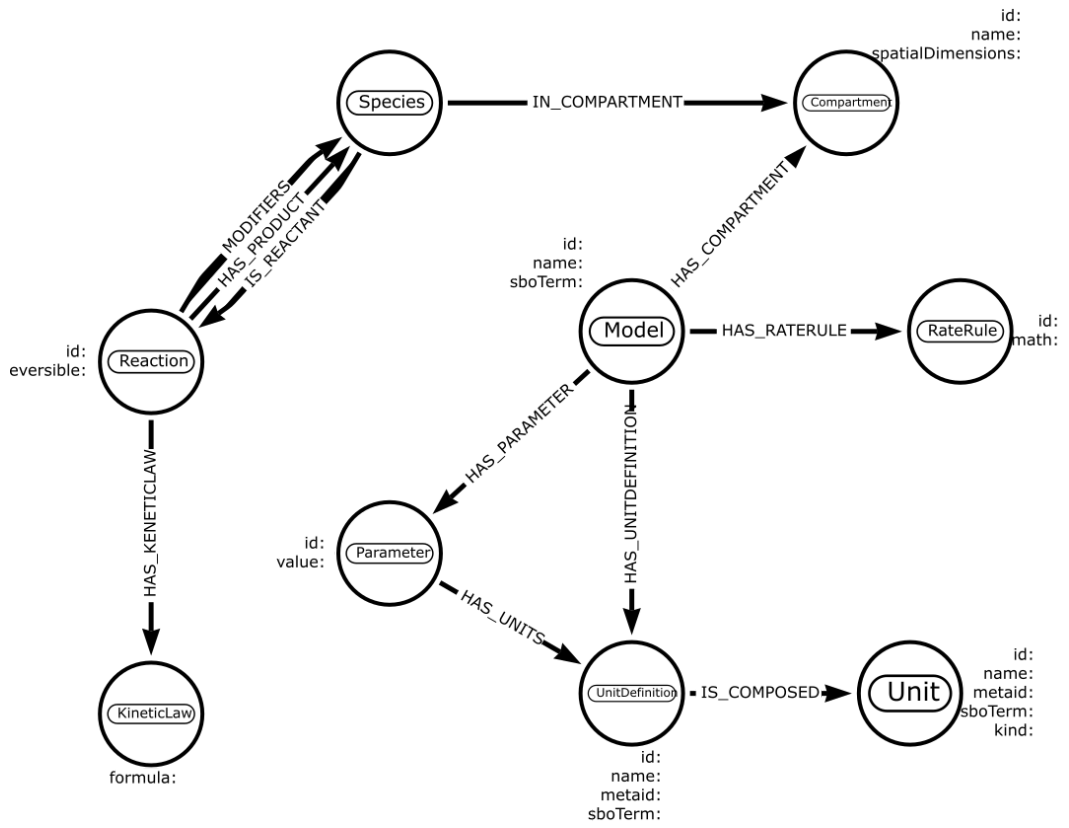




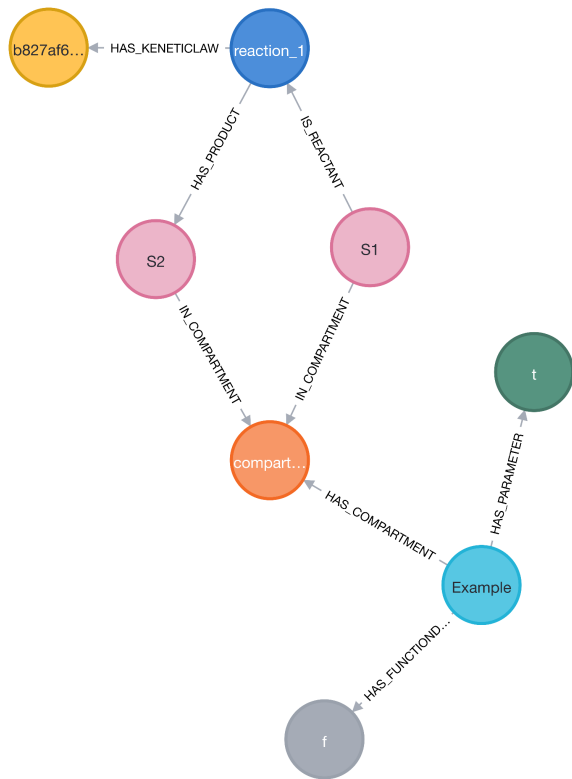
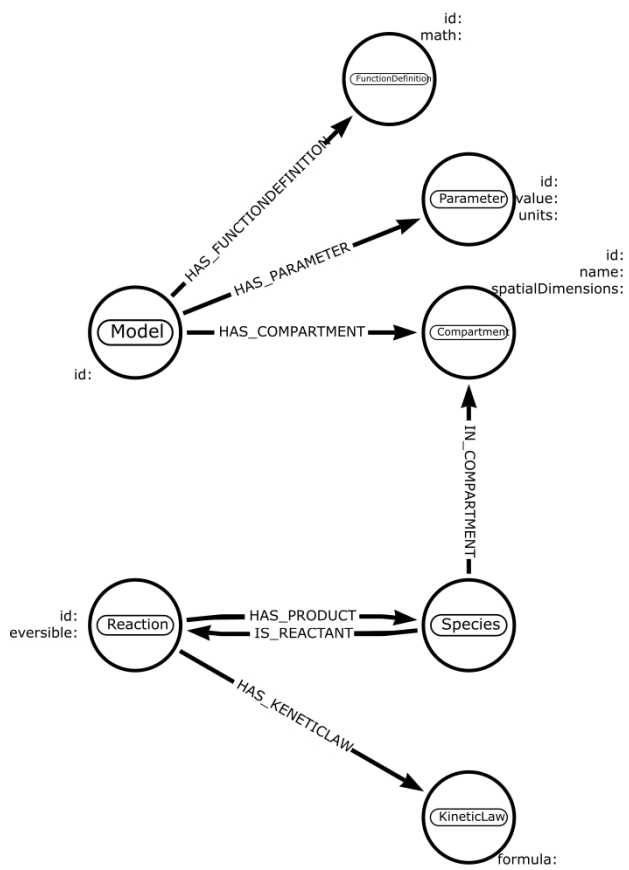
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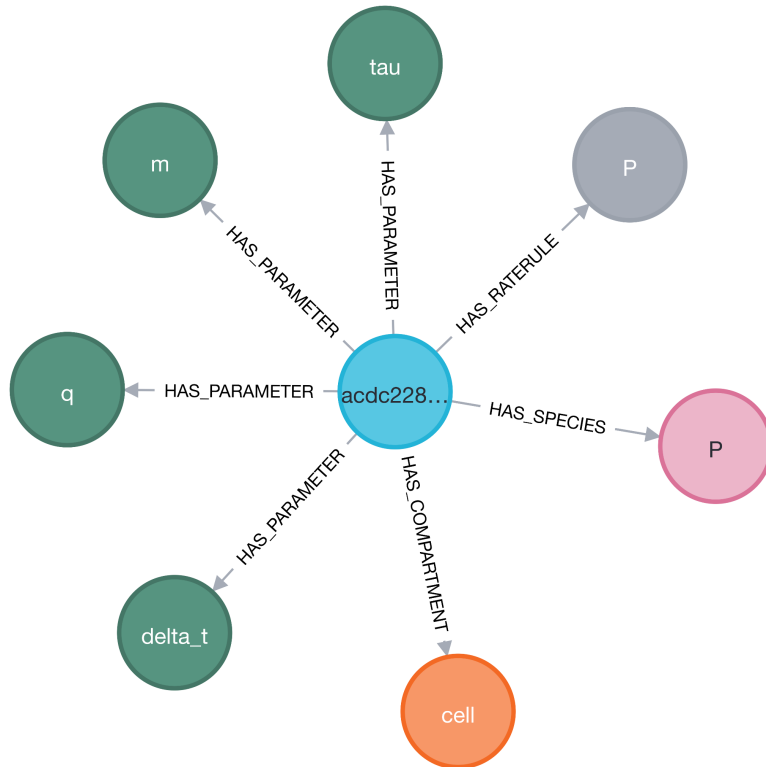
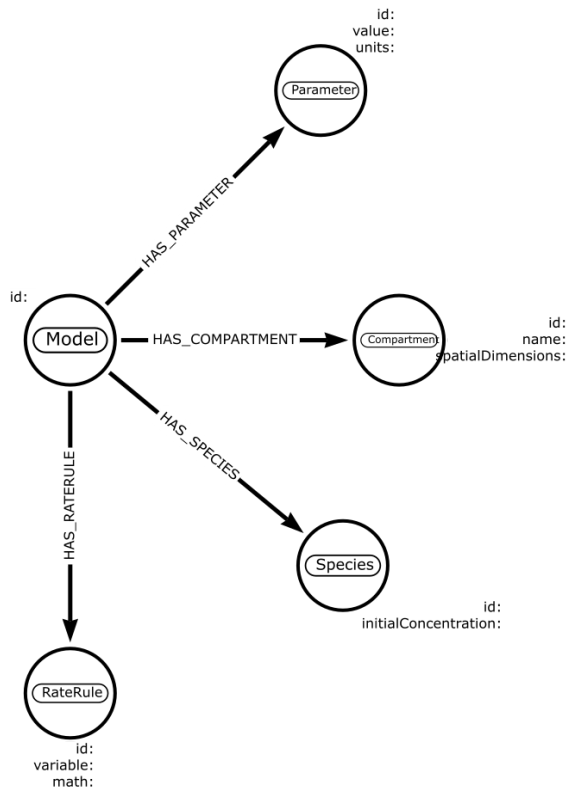
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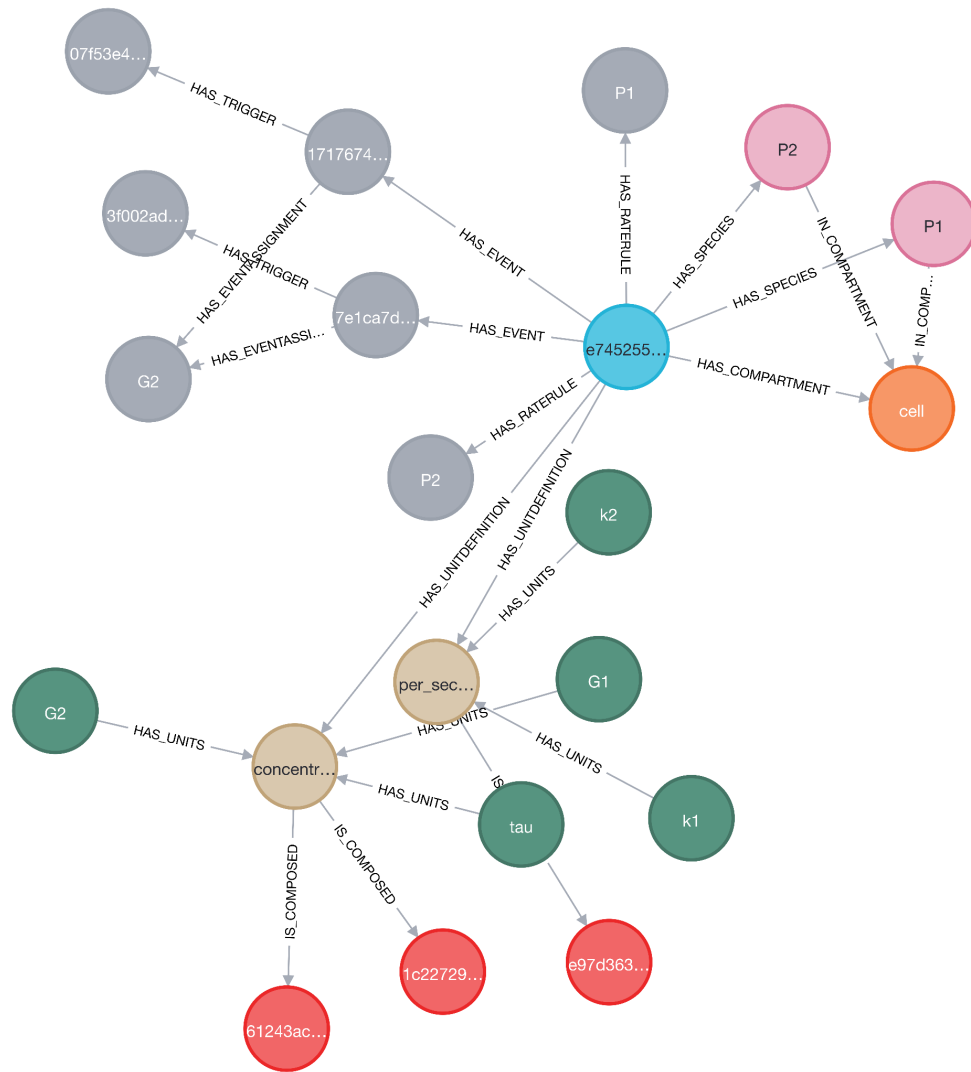
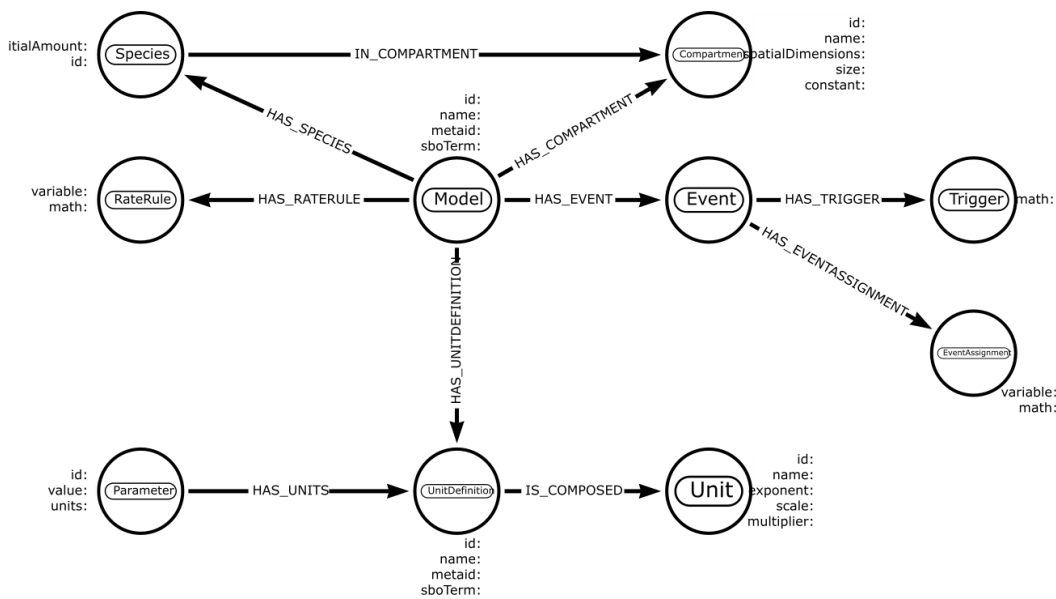
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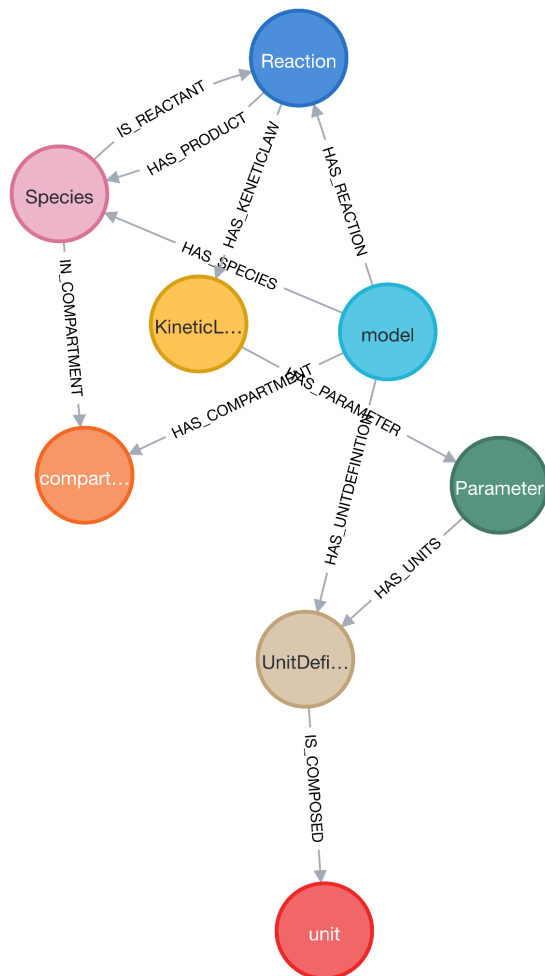
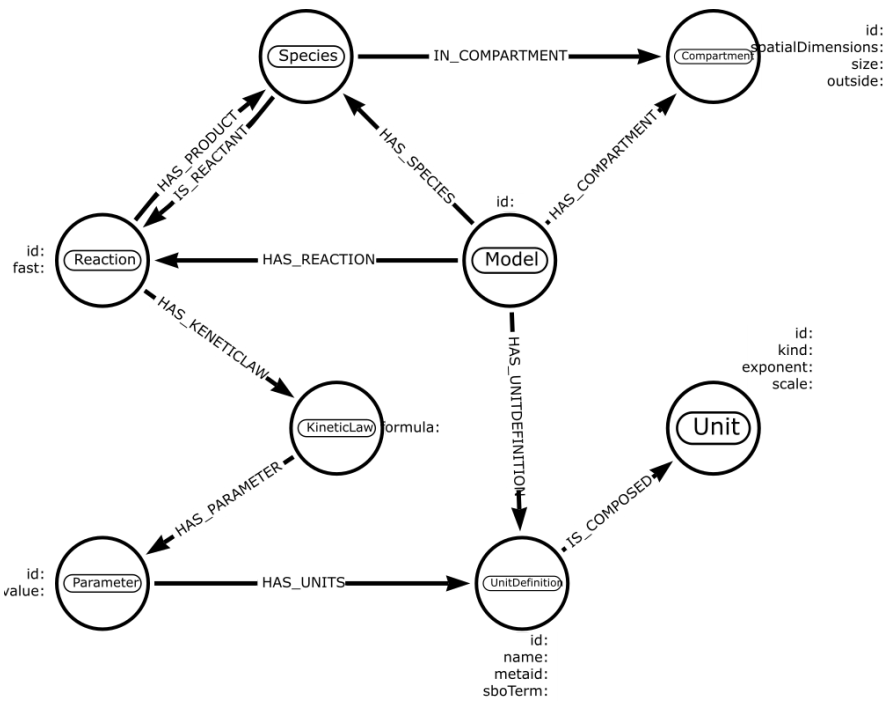
I



J



K



- (1) Hucka, M.; Bergmann, F. T.; Dräger, A.; Hoops, S.; Keating, S. M.; Le Novère, N.; Myers, C. J.; Olivier, B. G.; Sahle, S.; Schaff, J. C.; Smith, L. P.; Waltemath, D.; Wilkinson, D. J. Systems Biology Markup Language (SBML) Level 2 Version 5: Structures and Facilities for Model Definitions. *J. Integr. Bioinforma.* **2015**, *12* (2), 731–901. <https://doi.org/10.1515/jib-2015-271>.