



Figure S4: **Hierarchy of metabolites for anaerobic conditions for a network curated with strict criteria.** Same as Figure S3, but only water (and no oxygen) has been added to the seeds. Here, an interesting effect can be observed: Former cluster I splits into a number of subclusters, indicating that the effect of oxygen is more pronounced for this network containing only a limited set of reactions. A possible explanation is that important oxidizing/reducing reactions using other oxidants than oxygen are not included. Remarkably, the remaining clusters are still ordered analogously to the hierarchies displayed in Figs. S1–S3.