

Table S1. Stoichiometry of the biomass compounds involved in the biomass synthesis equation of the WP3 GEM.

| Compound_ID | Stoichiometry | Compound_Name | Molecular Weight (g/mol) | Weight (g/gDW) |
|--------------|---------------|------------------------------------|--------------------------|----------------|
| cpd_12dag3p | 0.000078 | 1,2-Diacyl-sn-glycerol 3-phosphate | 645.2608 | 5.033034E-05 |
| cpd_12dgr | 0.139174 | 1,2-Diacylglycerol | 567.2988 | 7.895324E-02 |
| cpd_5mthf | 0.050000 | 5-Methyltetrahydrofolate | 458.4620 | 2.292310E-02 |
| cpd_accoa | 0.000050 | Acetyl-CoA | 805.5480 | 4.027740E-05 |
| cpd_amp | 0.001000 | AMP | 345.2160 | 3.452160E-04 |
| cpd_coa | 0.000006 | CoenzymeA | 763.5120 | 4.581072E-06 |
| cpd_dna | 0.001819 | DNA | 30792.5160 | 5.601159E-02 |
| cpd_fad | 0.000050 | FAD | 783.5480 | 3.917740E-05 |
| cpd_lps_Core | 0.011270 | LPS | 3052.1980 | 3.439675E-02 |
| cpd_nad | 0.002150 | NAD | 662.4280 | 1.424220E-03 |
| cpd_nadh | 0.000050 | NADH | 663.4360 | 3.317180E-05 |
| cpd_nadp | 0.000130 | NADP | 740.3900 | 9.625070E-05 |
| cpd_nadph | 0.000400 | NADPH | 741.3980 | 2.965592E-04 |
| cpd_pe | 0.078517 | Phosphatidylethanolamine | 690.3468 | 5.420396E-02 |
| cpd_peptx | 0.031434 | Peptidoglycan subunit crosslinked | 899.8900 | 2.828714E-02 |
| cpd_pgly | 0.022716 | Phosphatidylglycerol | 720.3468 | 1.636340E-02 |
| cpd_protein | 0.000551 | Protein | 1083383.9340 | 5.969445E-01 |
| cpd_rna | 0.000003 | RNA | 32013.8140 | 9.604144E-05 |
| cpd_succoa | 0.000003 | Succinyl-CoA | 862.5760 | 2.587728E-06 |
| cpd_udpg | 0.003000 | UDP-Glucose | 564.2860 | 1.692858E-03 |
| cpd_glycogen | 0.472431 | Glycogen | 162.1400 | 7.659996E-02 |
| cpd_ptrc | 0.035000 | Putrescine | 90.1720 | 3.156020E-03 |
| cpd_spmnd | 0.007000 | Spermidine | 148.2760 | 1.037932E-03 |
| cpd_k | 0.169185 | K+ | 38.9637 | 6.592084E-03 |
| cpd_nh4 | 0.011279 | NH4 | 18.0390 | 2.034622E-04 |
| cpd_mg2 | 0.007519 | Mg2+ | 23.9850 | 1.803515E-04 |
| cpd_ca2 | 0.004512 | Ca2+ | 39.9626 | 1.802956E-04 |
| cpd_fe2 | 0.006767 | Fe2+ | 55.9349 | 3.785345E-04 |
| cpd_cu2 | 0.012698 | Cu2+ | 63.5460 | 8.069333E-04 |
| cpd_mn2 | 0.012698 | Mn2+ | 54.9380 | 6.976254E-04 |
| cpd_mobd | 0.012698 | Molybdate | 159.9400 | 2.030984E-03 |
| cpd_cobalt2 | 0.012698 | Co2+ | 58.9332 | 7.483581E-04 |
| cpd_cl | 0.019048 | Chloride | 34.9689 | 6.660743E-04 |
| cpd_so4 | 0.015873 | SO4 | 96.0620 | 1.524794E-03 |
| cpd_pydx5p | 0.000223 | Pyridoxal 5'-phosphate | 245.1270 | 5.474503E-05 |
| cpd_pheme | 0.000223 | Protoheme | 690.6269 | 1.542400E-04 |
| cpd_udcpdp | 0.000055 | Undecaprenyl diphosphate | 924.2580 | 5.116008E-05 |
| cpd_chor | 0.000223 | Chorismate | 224.1680 | 5.006419E-05 |
| cpd_amet | 0.000223 | S-Adenosyl-L-methionine | 399.4520 | 8.921095E-05 |
| cpd_ribflv | 0.000223 | Riboflavin | 376.3690 | 8.405574E-05 |
| cpd_sheme | 0.000223 | Siroheme | 908.6969 | 2.026394E-04 |
| cpd_ubq8h2 | 0.000223 | Ubiquinol-8 | 729.1430 | 1.625989E-04 |
| cpd_mqn7 | 0.000223 | Menaquinone 7 | 719.1510 | 1.603707E-04 |
| cpd_cobamcoa | 0.000223 | Cobamide coenzyme | 1579.5818 | 3.522467E-04 |
| cpd_thmpp | 0.000223 | Thiamine diphosphate | 422.2950 | 9.417179E-05 |
| cpd_btn | 0.000002 | Biotin | 244.3100 | 4.886200E-07 |