**Table S4:** 1H-NMR chemical shifts and multiplicity of the resonance signals of the main metabolites (aminoacids and others) observed in the spectra of *DMEM*, *24h DMEM*, *Com. Medium*, and *24h/48h* *Com. Medium*.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Metabolites** | **Group** | **Chemical shifts (ppm);****Multiplicity** | **DMEM** | **24h DMEM** | **Com. Medium** | **24h Com. Medium** | **48h Com. Medium** |
| **Amino Acids** |
| **Alanine** | βCH3αCH | 1.48(d)3.78(q)  | - | - | 4.639 | 2.57 | 3.535 |
| **Arginine** | δCH2γCH2 βCH2 αCH | 3.23(t)1.67(m)1.89(m)3.77(t) | 0.309 | 0.389 | 0.523 | 0.46 | 0.514 |
| **Cysteine** | βCH2 αCH | 3.17/2.93\*\*3.80 | n.d.\* | n.d.\* | n.d.\* | n.d.\* | n.d.\* |
| **Cystine** | βCH2 αCH | 3.17/2.93\*\*3.77 | n.d.\* | n.d.\* | n.d.\* | n.d.\* | n.d.\* |
| **Glutamate** | γCH2 βCH2 αCH | 2.36(t)2.08(m)4.18(dd) | - | - | 2.201 | 1.73 | 2.106 |
| **Glutamine** | γCH2 βCH2 αCH | 2.44(t)2.51/2.04(m)4.18(dd) | 1.770 | 2.410 | 3.233 | 2.48 | 2.048 |
| **Isoleucine** | δCH3 γCH2 βCH βCH3 αCH  | 0.95(dd)1.27/1.46(m)1.98(m)1.01(d)3.67(d) | 0.560 | 0.670 | 1.443 | 1.18 | 1.367 |
| **Leucine** | δCH3δ’CH3γCHβCH2 αCH | 0.95(d)0.97(d)1.69(m)1.71(m)3.73(d) | 0.490 | 0.545 | 1.439 | 0.95 | 1.361 |
| **Lysine** | εCH2δCH2γCH2 βCH2 αCH | 3.04(t)1.73(m)1.47(m)1.93(m)3.77(t)  | 0.610 | 0.718 | 2.019 | 1.21 | 1.618 |
| **Methionine** | δCH3γCH2 βCH2 αCH | 2.2 (s)2.45(m)2.13(m)3.75(t) | 0.380 | 0.390 | 7.063 | 3.00 | 3.031 |
| **Thiamine** | H6H12 | 5.478.03 | 0.009 | 0.0098 | 0.0089 | 0.01 | 0.009 |
| **Threonine** | γCH3βCH2 αCH | 1.33(d)4.25(m)3.56(d) | 0.470 | 0.654 | 1.651 | 1.34 | 1.523 |
| **Tryptophan** | βCH2 αCHH2H4H5H6H7 | 3.29/3.47\*\*4.057.307.74(d)7.20(t)7.28(t)7.55(d) | 0.060 | 0.060 | 0.068 | 0.06 | 0.059 |
| **Valine** | γCH3γ’CH3βCH2 αCH | 0.98(d)1.05(d)2.27(m)3.61(d) | 0.530 | 0.634 | 1.421 | 0.94 | 1.338 |

**Table S4** (continuation).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Metabolites** | **Group** | **Chemical shifts (ppm);****Multiplicity** | **DMEM** | **24h DMEM** | **Com. Medium** | **24h Com. Medium** | **48h Com. Medium** |
| **Others** |  |  |  |  |  |  |  |
| **α-Glucose** | H1H2H3H4H5H6aH6b | 5.24(d)3.54(dd)3.72(t)3.41(t)3.47(ddd)3.91(dd)3.72(dd) | 7.110 | 8.194 | 5.077 | 2.270 | 3.727 |
| **β-Glucose** | H1H2H3H4H5,6aH6b | 4.65(d)3.24(t)3.49(t)3.42(t)3.84(m)3.78(dd) | 7.100 | 10.069 | 6.753 | 2.683 | 4.515 |
| **Acetate**  | CH3COO- | 1.92(s) | 0.136 | 0.136 | 0.468 | 0,300 | 0.237 |
| **Ethanol** | βCH3αCH2 | 1.18(t)3.65(q) | - | 0.419 | 0.146 | 0.511 | 0.470 |
| **Formate** | CH | 8.47 | 0.010 | 0.030 | 0.060 | 0.050 | 0.06 |
| **Lactate** | βCH3αCH | 1.34(d)4.13(q) | - | 2.636 | 3.045 | 6.238 | 5.085 |
| **Nicotinamide** | H2H4H5H6 | 8.89(s)8.21(d)7.57(t)8.69(d) | 0.030 | 0.027 | 0.056 | 0.043 | 0.050 |
| **Purines** | CH | 8.1-8.4 |  |  |  |  |  |
| **Piruvate** | CH2 | 2.38(s) | - | - | 1.186 | 0.457 | 0.673 |
| **Urea** | NH2 | 5.90 | - | - | - | 0.040 | 0.090 |

\* Not detectible (n.d.) due to peaks overlap and low intensity;

 \*\* Chem. Shifts from the literature.