Table S.1 – Merchuk parameters (A, B and C) and correlation coefficient for each ATPS assayed.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **ATPS** | **Merchuk parameters** | | | | | | **R2** |
| **A ( w/w)** | | **B (w/w)** | | **C (w/w)** | |
| **Without lysis buffer** | **20% (w/w) lysis buffer** | **Without lysis buffer** | **20% (w/w) lysis buffer** | **Without lysis buffer** | **20% (w/w) lysis buffer** |
|
| **PEG 1500/K2HPO4** | 81.5±2.4Aa | 75.2±12.0Aa | 0.5±0.0Ba | -0.5±0.1Bb | 3.3E-04±0.2E-04Ca | 3.7E-04±0.8E-04Ca | 0.99 |
|
| **PEG 1500/(NH4)2SO4** | 80.8±3.9Aa | 76.8±13.1Aa | -0.4±0.0Ba | -0.4±0.1Ba | 2.9E-04±0.1E-04Ca | 1.8E-04±0.7E-04Ca | 0.99 |
|
| **Ethanol/ K2HPO4** | 52.0±2.6Aa | 63.8±0.7Ab | -0.2±0.0Ba | -0.3±0.0Bb | 4.1E-05±9.1E-06Ca | 3.0E-05±1.0E-06Ca | 0.99 |
|
| **Ethanol/(NH4)2SO4** | 104.7±1.4Aa | 79.7±1.2Ab | -0.3±0.0Ba | -0.3±0.0Bb | 1.3E-05±0.7E-06Ca | 3.0E-05±2.0E-06Cb | 0.99 |
|
| **ACN/D-glucose** | 115.4±4.5Aa | 105.2±2.3Ab | -0.3±0.0Ba | -0.3±0.0Bb | 3.46E-06±1.7E-06Ca | -0.7E-06±0.7E-06Cb | 0.99 |
|

The Tukey test was performed separately for each parameter, uppercase letters indicate the parameter considered for its corresponding system and lowercase letters indicate the statistical test result. Thus, values with the same letter are not significantly different from each other (p <0.05).