



Abbreviations

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| ATCC | American type culture collection |
| X-Gal | 5-Bromo-4-chloro-3-indolyl- β -D galactopyranoside |
| IPTG | Isopropyl β -D thio galactopyranoside |
| LB | Luria broth |
| SDS | Sodium Dodecyl Sulphate |
| APS | Ammonium persulfate |
| Ori | Origin of replication |
| WT | Wild type |
| PPC | Phosphoenolpyruvate carboxylase |
| CS | Citrate synthase |
| PYC | Pyruvate carboxylase |
| ICL | Isocitrate lyase |
| ICDH | Isocitrate dehydrogenase |
| GDH | Glucose dehydrogenase |
| G-6-PDH | Glucose-6-phosphate dehydrogenase |
| GADH | Gluconate dehydrogenase |
| PEPCK | Phosphoenolpyruvate carboxykinase |
| PYK | Pyruvate kinase |
| ME | Malic enzyme |
| MDH | Malate dehydrogenase |
| LDH | Lactate dehydrogenase |
| POX | Pyruvate oxidase |
| PDH | Pyruvate dehydrogenase |
| PFK | Phosphofructokinase |
| PTS | Phosphotransferase system |
| GFP | Green fluorescent protein |
| PQQ | Pyroloquinoline quinone |
| G-6-P | Glucose-6-phosphate |
| 6-PG | 6-phosphogluconate |
| PEP | Phosphoenolpyruvate |
| OAA | Oxaloacetate |
| ATP | Adenosine triphosphate |
| DNA | Deoxyribonucleic acid |
| cAMP | Cyclic adenosine monophosphate |
| NAD(H) | Nicotinamide adenine dinucleotide (reduced) |
| NADP(H) | Nicotinamide adenine dinucleotide phosphate (reduced) |
| DTT | 1, 4-Dithiothreitol |
| EMP | Embden–Meyerhof–Parnas pathway |
| TCA | Tricarboxylic acid |
| PPP | Pentose phosphate pathway |

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|-------------------|--|
| ETC | Electron transport chain |
| ED | Entner-Doudoroff |
| PSM | Phosphate solubilizing microorganisms |
| P/Pi | Phosphate / inorganic phosphate |
| HPLC | High performance liquid chromatography |
| BLAST | Basic local alignment search tool |
| PCR | Polymerase Chain Reaction |
| PAGE | Polyacrylamide Gel Electrophoresis |
| EDTA | Ethylene diamine tetra acetic acid |
| Tris Tris | (hydroxymethyl) aminomethane buffer |
| CTAB | Cetyl trimethylammonium bromide |
| PGPR | Plant Growth Promoting Rhizobacteria |
| RE | Restriction Endonuclease |
| nm | Nanometer |
| ng | Nanogram |
| μ M | Micromolar |
| kb | kilobase (s) |
| bp | base pair (s) |
| kDa | Kilodalton |
| rpm | Revolutions per minute |
| OD | Optical Density |
| DCW | Dry cell weight |
| mM/M | Millimolar/Molar |
| μ l/ml | Microlitres/millilitres |
| Tet ^r | Tetracycline |
| Ap | Ampicillin |
| Km ^r | Kanamycin |
| Strp ^r | Streptomycin |

Note: The full forms of several rarely used abbreviations have been described within the text.