| dditional file 6. Carbon source เ           | utilization of <i>R.</i><br>Experiment |        |
|---|--|--------|
| Malate                                      | 0                                      | 0      |
| 2,3-butanediol                              | X                                      | X      |
| 2-aminoethanol                              | X                                      | X      |
| 2-oxoglutarate                              | X                                      | X      |
| 2-phospho-D-glycerate                       | 0                                      | 0      |
| 3-hydroxy-benzoate                          | 0                                      | 0      |
| 3-hydroxybutyrate<br>3-phospho-D-glycerate  | 0                                      | 0      |
| 4-Cresol                                    | Ö                                      | 0      |
| 4-Fluorobenzoate                            | Ō                                      | Ö      |
| 4-hydroxy benzoate                          | 0                                      | 0      |
| 5-keto-gluconate                            | X                                      | X      |
| 6-Chlorohydroxyquinol                       | 0                                      | 0      |
| Acetate                                     | 0                                      | 0      |
| Adipate                                     | O<br>X                                 | O<br>X |
| adonitol<br>Trehalose                       | X                                      | X      |
| alpha-cyclodextrin                          | X                                      | X      |
| alpha-D-glucose                             | X                                      | X      |
| alpha-d-lactose                             | X                                      | X      |
| 2-Hydroxybutyric acid                       | 0                                      | 0      |
| 2-Ketobutyric acid                          | 0                                      | 0      |
| Anthranilate                                | 0                                      | 0      |
| Benzoate                                    | 0                                      | 0      |
| Benzoylformate                              | 0                                      | 0      |
| Bezaldehyde                                 | 0                                      | 0      |
| 3-hydroxybutyric acid Biphenyl-2,3-diol     | 0                                      | 0      |
| b-methyl-d-glucoside                        | X                                      | X      |
| Butyric acid                                | Ô                                      | Ô      |
| catechol                                    | 0                                      | 0      |
| cellobiose                                  | X                                      | X      |
| cis, cis-muconate                           | 0                                      | 0      |
| cis-Aconitic acid                           | 0                                      | 0      |
| Citrate                                     | 0                                      | 0      |
| D-alanine                                   | 0                                      | 0      |
| d-arabitol                                  | X<br>X                                 | X<br>X |
| Decanoate<br>dextrin                        | ×                                      | X      |
| D-Fructose                                  | Ô                                      | Ô      |
| D-galactonate                               | X                                      | X      |
| D-galactonic acid lactone                   | X                                      | X      |
| D-galactose                                 | X                                      | X      |
| D-galacturonic acid                         | X                                      | X      |
| D-gluconic acid                             | 0                                      | 0      |
| d-glucosaminic acid                         | X<br>X                                 | X<br>X |
| D-glucuronic acid                           | X                                      | X      |
| dl-alpha-glycerol phosphate<br>dl-carnitine | X                                      | X      |
| dl-lactic acid                              | Ô                                      | Ô      |
| D-mannitol                                  | X                                      | X      |
| D-mannose                                   | X                                      | X      |
| d-melibiose                                 | X                                      | X      |
| d-raffinose                                 | X                                      | X      |
| D-Saccharic acid                            | X                                      | X      |
| D-serine                                    | X                                      | X      |
| d-sorbitol<br>ethanol                       | X<br>X                                 | X<br>X |
| Formic acid                                 | Ô                                      | Ô      |
| Fumarate                                    | Ö                                      | Ö      |
| gamma-aminobutyric acid                     | X                                      | X      |
| 4-Hydroxybutyric acid                       | 0                                      | 0      |
| gentiobiose                                 | X                                      | X      |
| Gentisate                                   | 0                                      | 0      |
| glucose-1-phosphate                         | X                                      | X      |
| glucose-6-phosphate                         | X<br>O                                 | X<br>O |
| Glycerol<br>Glycogen                        | X                                      | X      |
| Glycolate                                   | Ô                                      | Ô      |
| glycyl-l-aspartic acid                      | X                                      | X      |
| glyoxylate                                  | 0                                      | 0      |
| hydroxy-l-proline                           | X                                      | Χ      |
| i-erythritol                                | X                                      | X      |
| inosine                                     | X                                      | X      |
| isocitrate                                  | 0                                      | 0      |
| Isomaltose<br>Itaconic acid                 | X<br>X                                 | X<br>X |
| Kynurenate                                  | 0                                      | Ô      |
| Kynurenine                                  | 0                                      | 0      |
| lactate                                     | Ö                                      | Ö      |
| Lactose                                     | X                                      | Χ      |
| lactulose                                   | X                                      | X      |
| L-alanine                                   | 0                                      | 0      |

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