**Table S1:** Preparation of cellulase assay medium (1000mL)

|  |  |
| --- | --- |
| Reagent | Dosage |
| Carboxymethylcellulose | 1% (w/v) |
| Yeast extract | 0.5% (w/v) |
| NH4SO4 | 0.1% (w/v) |
| Glycerol | 0.2% (v/v) |
| MgSO4 | 0.01% (w/v) |
| 50 × Phosphate Buffer (350g K2HPO4+100gKH2PO4+1LdH2O, pH6.9-7.1) | 2% (v/v) |
| Bacterial agar | 1.6% (w/v) |

Note: Pure water was used as the solvent. Sterilization was carried out at 121℃ for 20min.

**Table S2:** Preparation of pectinase assay medium (1000mL)

|  |  |
| --- | --- |
| Reagent | Dosage |
| Yeast extract | 0.1% (w/v) |
| NH4SO4 | 0.1% (w/v) |
| Glycerol | 0.5% (v/v) |
| MgSO4 | 1mM (0.12g/L) |
| Polygalacturonic acid (sodium salt) | 0.5% (w/v) |
| Phosphate Buffer (15g Na2HPO4+0.7gNaH2PO4·H2O+1LH2O,pH8.0） | 20% (v/v) |
| Bacterial agar | 1.6% (w/v) |

Note: Pure water was used as the solvent. Sterilization was carried out at 121℃ for 20min.

**Table S3:** Preparation of protease assay medium (1000mL)

|  |  |
| --- | --- |
| Reagent | Dosage |
| Yeast extract | 1% (w/v) |
| skim milk | 1% (w/v) |
| Bacterial agar | 1.6% (w/v) |

Note: Pure water was used as the solvent. Sterilization was carried out at 121℃ for 20min.

**Table S4:** Results of extracellular enzyme assays

|  |  |  |
| --- | --- | --- |
| Tested strains | Average hydrolytic circle diameter of pectinase assay/mm | Standard deviation |
| Sichuan144 | 3.99  | 0.94  |
| Sichuan106 | 3.77  | 0.19  |
| Sichuan62 | 2.77  | 0.38  |
| Sichuan126 | 2.03  | 0.30  |
| Sichuan51 | 1.99  | 0.08  |
| Sichuan43 | 1.44  | 0.18  |
| Sichuan66 | 1.20  | 0.62  |
|  |  |  |
| Tested strains | Average hydrolytic circle diameter of protease assay assay/mm | Standard deviation |
| Sichuan106 | 8.84  | 0.95  |
| Sichuan51 | 7.29  | 1.06  |
| Sichuan126 | 6.90  | 0.57  |
| Sichuan62 | 6.54  | 0.61  |
| Sichuan144 | 6.44  | 2.26  |
| Sichuan66 | 1.10  | 0.37  |
| Sichuan43 | 0.18  | 0.15  |
|  |  |  |
| Tested strains | Average hydrolytic circle diameter of cellulase assay/mm | Standard deviation |
| Sichuan51 | 3.01  | 0.89  |
| Sichuan106 | 2.86  | 0.55  |
| Sichuan43 | 2.82  | 0.57  |
| Sichuan66 | 2.79  | 0.49  |
| Sichuan144 | 2.71  | 0.39  |
| Sichuan62 | 2.14  | 0.11  |
| Sichuan126 | 1.83  | 0.53  |

**Table S5:** All results of the biochemical reactions of the Mérieux automatic identifier VITEK

|  |  |
| --- | --- |
| Items | Tested strains |
| Sichuan43 | Sichuan51 | Sichuan62 | Sichuan66 | Sichuan106 | Sichuan126 | Sichuan144 |
| Alanine-phenylalanine proline aromatase(APPA) | − | − | − | − | − | − | − |
| Adonitol(ADO) | + | + | + | + | + | + | + |
| 1. pyrrolidone aromatase

(PyrA) | + | + | + | + | + | + | + |
| L-arabinol(IARL) | − | − | − | − | − | − | − |
| 1. Cellobiose

(dCEL) | + | + | + | + | + | + | + |
| β-Galactosidase(BGAL) | + | + | + | + | + | + | + |
| Generation of H2S (H2S) | − | − | − | − | − | − | − |
| β-N-acetylamino glucosidase(BNAG) | − | − | − | − | − | − | − |
| Glutamyl araminase pNA(AGLTp) | − | − | − | − | − | − | − |
| D-Glucose(dGLU) | + | + | + | + | + | + | + |
| γ-Glutamyltransferase(GGT) | + | + | + | + | + | + | + |
| Oxidative fermentation of glucose(OFF) | + | + | + | + | + | + | + |
| β-Glucosidase(BGLU) | + | + | + | + | + | + | + |
| D-Maltose(dMAL) | + | + | + | + | + | + | + |
| D-Mannitol(dMAN) | + | + | + | + | + | + | + |
| D-Mannose(dMNE) | + | + | + | + | + | + | + |
| β-Xylosidase(BXYL) | + | + | + | + | + | + | + |
| β-alanine aromatase pNA(BAIap) | − | − | − | − | − | − | − |
|
|
| L-proline arylaminase(ProA) | + | + | + | + | + | + | + |
| Lipase(LIP) | − | − | − | − | − | − | − |
| Tyrosine aromatase(TyrA)  | + | + | + | + | + | + | + |
| Urease(URE)  | + | + | + | + | + | + | + |
| D-Sorbitol(dSOR) | + | + | + | + | + | + | + |
| α-Glucosidase(AGLU) | − | − | − | − | − | − | − |
| Succinate alkalinization(SUCT) | + | + | + | + | + | + | + |
| β-N-acetylgalactosidase(NAGA) | − | − | − | − | − | − | − |
| α-Galactosidase(AGAL) | + | + | + | + | + | + | + |
| Phosphatase(PHOS) | + | + | + | + | + | + | + |
| Glycine aromatase(GlyA) | − | − | − | − | − | − | − |
| Ornithine decarboxylase(ODC) | − | − | − | − | − | − | − |
| Lysine decarboxylase(LDC) | + | + | + | + | + | + | + |
| L-histidine assimilation(IHISa) | + | + | + | + | + | + | + |
| Coumaric acid(CMT) | − | − | − | − | − | − | − |
| β-Glucuronidase(BGUR ) | − | − | − | − | − | − | − |
| O/129 drug resistance(O129R) | + | + | + | + | + | + | + |
| Glutamate-glycine-arginine aromatase(GGAA) | − | − | − | − | − | − | − |
|
|
|
| L-malate assimilation(IMLTa) | + | + | + | + | + | + | + |
| ELLMAN(ELLM) | − | − | − | − | − | − | − |
| L-lactate assimilation(ILATa) | + | + | + | + | + | + | + |