**Table S1 The top 10 bacteria at the genus level in production of rice-flavor baijiu (%)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Genus** | **Xiaoqu** | **Day 0** | **Day 2** | **Day 5** | **Day 10** | **Day 13** | **SEM** | ***P* value** |
| *Lactobacillus* | 1.35c | 94.25a | 62.88b | 91.26a | 97.96a | 99.23a | 8.55 | <0.001 |
| *Weissella* | 59.53a | 3.16c | 16.14b | 5.12c | 0.62c | 0.90c | 5.12 | 0.014 |
| *Pediococcus* | 29.18a | 0.89c | 3.96b | 1.25c | 1.11c | 0.49c | 2.52 | 0.026 |
| *Lactococcus* | 0.38b | 1.00b | 9.88a | 0.69b | 0.03b | 0.01b | 0.94 | 0.014 |
| *Acetobacter* | 3.65b | 0.26c | 5.64a | 0.90c | 0.07c | 0.11c | 0.54 | 0.004 |
| Unclassified\_Lactobacillales | 1.17a | 0.29bc | 0.59b | 0.38bc | 0.11bc | 0.00c | 0.11 | 0.001 |
| Unclassified\_Lactobacillaceae | 0.65a | 0.09bc | 0.27b | 0.09bc | 0.00c | 0.00c | 0.06 | 0.007 |
| *Enterococcus* | 0.22a | 0.03cd | 0.15b | 0.02cd | 0.07c | 0.00d | 0.02 | 0.001 |
| *Bacillus* | 0.00 | 0.00 | 0.04 | 0.21 | 0.00 | 0.00 | 0.03 | 0.104 |
| *Gluconobacter* | 0.04b | 0.01b | 0.17a | 0.01b | 0.00b | 0.02b | 0.01 | 0.010 |
| Others | 0.56 | 0.01 | 0.29 | 0.07 | 0.02 | 0.04 | - | - |

n=3; SEM (standard error of the mean); a, b, c Mean values in the same row with different superscripts differ significantly (*P* < 0.05). The rank was obtained according to the average relative abundance of all samples.

**Table S2 The top 10 bacteria at the species level in production of rice-flavor baijiu (%)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Species** | **Xiaoqu** | **Day 0** | **Day 2** | **Day 5** | **Day 10** | **Day 13** | **SEM** | ***P* value** |
| *Lactobacillus\_helveticus* | 0.00d | 26.97c | 9.36d | 42.76b | 62.32a | 51.80ab | 5.57 | <0.001 |
| *Lactobacillus\_fermentum* | 0.05c | 32.42ab | 34.46a | 12.51bc | 1.13c | 7.04c | 3.96 | 0.002 |
| *Weissella\_paramesenteroides* | 23.41a | 1.22c | 8.17b | 2.54c | 0.29c | 0.07c | 2.03 | 0.009 |
| *Lactobacillus\_pontis* | 0.00c | 0.06c | 1.35bc | 2.33ab | 4.33a | 3.12ab | 0.45 | 0.001 |
| *Lactobacillus\_oris* | 0.00a | 0.02a | 0.79a | 0.94a | 0.38a | 0.47a | 0.14 | 0.005 |
| *Lactobacillus\_crispatus* | 0.00c | 0.85a | 0.18c | 0.50b | 0.15c | 0.23bc | 0.09 | 0.001 |
| *Lactobacillus\_acidophilus* | 0.00c | 0.23a | 0.02bc | 0.15ab | 0.09bc | 0.07bc | 0 | 0.001 |
| *Lactococcus\_lactis* | 0.20a | 0.01c | 0.10b | 0.01c | 0.00c | 0.00c | 0 | 0.011 |
| *Lactobacillus\_delbrueckii* | 0.00c | 0.03c | 0.08ab | 0.16a | 0.01c | 0.00c | 0 | 0.028 |
| *Enterococcus\_faecium* | 0.00b | 0.06b | 0.13a | 0.03b | 0.00b | 0.00b | 0 | 0.015 |
| Others | 76.33 | 38.13 | 45.35 | 38.09 | 31.30 | 37.19 | - | - |

n=3; SEM (standard error of the mean); a, b, c Mean values in the same row with different superscripts differ significantly (*P* < 0.05). The rank was obtained according to the average relative abundance of all samples.

**Table S3 The top 10 fungi at the genus level in production of rice-flavor baijiu (%)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Genus** | **Xiaoqu** | **Day 0** | **Day 2** | **Day 5** | **Day 10** | **Day 13** | **SEM** | ***P* value** |
| *Saccharomyces* | 88.41a | 83.50a | 33.40bc | 52.40b | 7.06d | 22.98cd | 7.69 | <0.001 |
| *Rhizopus* | 11.57c | 15.21c | 65.71ab | 41.75bc | 90.89a | 61.84ab | 7.66 | <0.001 |
| Unclassified\_Fungi | 0.00b | 0.54ab | 0.73ab | 1.99ab | 1.90ab | 2.42a | 0.3 | 0.001 |
| *Malassezia* | 0.00 | 0.22 | 0.01 | 0.65 | 0.02 | 3.88 | 0.43 | 0.08 |
| Unclassified\_Fungi | 0.00 | 0.13 | 0.00 | 1.25 | 0.00 | 2.35 | 0.3 | 0.055 |
| *Cyberlindnera* | 0.02b | 0.23ab | 0.11b | 0.52ab | 0.09b | 1.20a | 0.19 | 0.017 |
| Unidentified Malasseziales | 0.00 | 0.09 | 0.02 | 0.45 | 0.02 | 1.43 | 0.14 | 0.089 |
| *Aspergillus* | 0.00b | 0.00b | 0.00b | 0.34b | 0.01b | 0.82a | 0.09 | 0.038 |
| *Alternaria* | 0.00 | 0.01 | 0.01 | 0.07 | 0.00 | 0.43 | 0.05 | 0.098 |
| *Chaetomium* | 0.00 | 0.01 | 0.00 | 0.06 | 0.00 | 0.35 | 0.05 | 0.141 |
| Others | 0.00 | 0.07 | 0.01 | 0.52 | 0.01 | 2.31 | - | - |

n=3; SEM (standard error of the mean); a, b, c Mean values in the same row with different superscripts differ significantly (*P* < 0.05). The rank was obtained according to the average relative abundance of all samples.

**Table S4 The top 10 fungi at the species level in production of rice-flavor baijiu (%)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Species** | **Xiaoqu** | **Day 0** | **Day 2** | **Day 5** | **Day 10** | **Day 13** | **SEM** | ***P* value** |
| *Saccharomyces\_cerevisiae* | 88.39a | 83.44a | 33.37bc | 52.31b | 7.02d | 22.69cd | 7.69 | <0.001 |
| *Rhizopus\_arrhizus* | 11.52d | 15.18d | 65.46b | 30.88cd | 73.91b | 53.53bc | 6.65 | <0.001 |
| *Rhizopus\_microsporus* | 0.04b | 0.07b | 0.40b | 10.86ab | 17.00a | 8.21ab | 1.92 | 0.006 |
| *Malassezia\_restricta* | 0.00 | 0.21 | 0.01 | 0.62 | 0.02 | 3.75 | 0.41 | 0.076 |
| *Cyberlindnera\_fabianii* | 0.01b | 0.22b | 0.11b | 0.52ab | 0.08b | 1.21a | 0.14 | 0.017 |
| *Aspergillus\_flavus* | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.33 | 0.05 | 0.167 |
| *Aspergillus\_pseudodeflectus* | 0.00 | 0.00 | 0.00 | 0.12 | 0.00 | 0.12 | 0.02 | 0.061 |
| *Aspergillus\_niger* | 0.00 | 0.00 | 0.00 | 0.06 | 0.00 | 0.10 | 0.01 | 0.057 |
| *Thermoascus\_aurantiacus* | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 | 0.02 | 0.246 |
| *Aspergillus\_penicillioides* | 0.00 | 0.00 | 0.00 | 00.00 | 0.00 | 0.14 | 0.02 | 0.155 |
| Others | 0.05 | 0.87 | 0.65 | 4.54 | 2.01 | 9.76 | - | - |

n=3; SEM (standard error of the mean); a, b, c Mean values in the same row with different superscripts differ significantly (*P* < 0.05). The rank was obtained according to the average relative abundance of all samples.