**Table S2.** Total phenolic contents and antioxidant activities of yellow mustard bran extracts during solid-state fermentation by various microbes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Fermentation time (h) | TPC  (mg GAE/g) | FRAP  (µmol AAE/g) | DPPH  (µmol TE/g) | ORAC  (µmol TE/g) |
| *A. awamori* | | | | |
| 0 | 5.14 ± 0.08a | 25.57 ± 0.48a | 20.23 ± 0.44a | 279.56 ± 31.84c |
| 24 | 5.34 ± 0.12a | 28.82 ± 0.29ab | 25.10 ± 0.85b | 207.83 ± 7.96ab |
| 48 | 5.49 ± 0.08a | 26.45 ± 0.94ab | 24.34 ± 0.45ab | 244.97 ± 14.34bc |
| 72 | 5.32 ± 0.18a | 28.57 ± 1.62ab | 26.60 ± 1.99b | 223.12 ± 14.79bc |
| 96 | 5.39 ± 0.30a | 30.91 ± 3.47b | 27.87 ± 2.53b | 155.74 ± 12.69a |
| 168 | 5.14 ± 0.24a | 26.6 ± 1.43ab | 25.21 ± 0.81b | 251.04 ± 9.31bc |
| *A. niger* | | | | |
| 0 | 5.57 ± 0.06bc | 25.79 ± 0.40a | 21.16 ± 0.42a | 345.25 ± 2.05c |
| 24 | 5.75 ± 0.08c | 28.43 ± 0.19ab | 29.92 ± 2.34b | 210.19 ± 10.03b |
| 48 | 5.72 ± 0.30bc | 29.80 ± 1.47ab | 31.85 ± 0.88b | 157.07 ± 30.69ab |
| 72 | 5.34 ± 0.10abc | 30.56 ± 3.00ab | 33.34 ± 2.46bc | 149.52 ± 33.37a |
| 96 | 5.29 ± 0.02ab | 32.91 ± 4.98bc | 32.22 ± 5.29b | 153.33 ± 43.07ab |
| 168 | 5.02 ± 0.33a | 37.56 ± 4.20c | 37.05 ± 3.11c | 121.73 ± 18.340a |
| *A. oryzae* | | | | |
| 0 | 5.39 ± 0.13b | 24.69 ± 1.10a | 20.5 ± 0.86a | 297.94 ± 25.77d |
| 24 | 5.19 ± 0.32b | 39.41 ± 1.42b | 29.8 ± 1.17b | 306.5 ± 12.35d |
| 48 | 4.54 ± 0.12a | 41.44 ± 1.16b | 31.58 ± 1.95b | 168.29 ± 18.26a |
| 72 | 4.96 ± 0.14ab | 38.48 ± 1.09b | 27.54 ± 0.91b | 253.24 ± 6.41cd |
| 96 | 5.26 ± 0.15b | 41.37 ± 0.86b | 29.41 ± 0.57b | 235.01 ± 27.75bc |
| 168 | 4.98 ± 0.48b | 39.60 ± 2.10b | 28.08 ± 1.82b | 184.83 ± 42.87ab |
| *R. oligosporus* | | | | |
| 0 | 5.31 ± 0.04a | 23.81 ± 0.63a | 19.48 ± 0.39a | 226.56 ± 4.50bc |
| 24 | 5.78 ± 0.08bc | 33.58 ± 1.85b | 26.62 ± 1.04b | 238.97 ± 11.57c |
| 48 | 6.13 ± 0.09c | 36.92 ± 0.91b | 29.94 ± 1.41bc | 272.42 ± 45.24c |
| 72 | 6.18 ± 0.16c | 37.13 ± 1.70b | 32.12 ± 1.64cd | 219.18 ± 12.56bc |
| 96 | 5.83 ± 0.18bc | 36.30 ± 0.99b | 32.94 ± 1.11cd | 176.91 ± 21.78ab |
| 168 | 5.44 ± 0.05ab | 37.91 ± 0.42b | 34.58 ± 0.32d | 158.46 ± 9.72a |
| *R. oryzae* | | | | |
| 0 | 5.35 ± 0.04a | 23.57 ± 0.21a | 20.31 ± 0.11a | 239.67 ± 15.26a |
| 24 | 6.18 ± 0.12b | 37.43 ± 1.21b | 31.61 ± 1.77b | 300.41 ± 39.18b |
| 48 | 6.32 ± 0.20b | 38.55 ± 1.37bc | 32.61 ± 0.72b | 318.3 ± 16.69b |
| 72 | 6.57 ± 0.10b | 42.28 ± 4.28bc | 34.52 ± 0.35bc | 330.06 ± 21.69b |
| 96 | 6.42 ± 0.11b | 39.23 ± 0.15bc | 34.16 ± 2.50bc | 302.13 ± 20.18b |
| 168 | 6.29 ± 0.32b | 42.87 ± 6.91c | 37.80 ± 6.94c | 226.01 ± 44.90a |
| *B. subtilis* | | | | |
| 0 | 5.50 ± 0.06b | 22.65 ± 0.89a | 17.82 ± 0.47a | 238.40 ± 20.31a |
| 24 | 5.04 ± 0.15a | 33.17 ± 0.90b | 39.46 ± 0.80b | 308.82 ± 27.53b |
| 48 | 5.12 ± 0.08ab | 33.58 ± 1.36b | 42.23 ± 0.30b | 341.10 ± 7.42b |
| 72 | 5.29 ± 0.07ab | 34.09 ± 1.92b | 40.65 ± 1.16b | 343.75 ± 11.92b |
| 96 | 5.27 ± 0.15ab | 34.82 ± 1.62b | 40.34 ± 1.05b | 303.98 ± 19.54b |
| 168 | 5.39 ± 0.03ab | 31.82 ± 0.59b | 39.19 ± 0.92b | 358.80 ± 8.69b |
| S. cerevisiae | | | | |
| 0 | 5.62 ± 0.18a | 23.62 ± 0.77ab | 18.40 ± 0.52a | 229.56 ± 12.62a |
| 24 | 5.56 ± 0.10a | 28.30 ± 0.94b | 29.11 ± 1.19b | 295.38 ± 29.16b |
| 48 | 5.72 ± 0.06a | 25.47 ± 1.14ab | 31.68 ± 2.18b | 341.38 ± 18.36b |
| 72 | 5.62 ± 0.12a | 24.52 ± 1.32ab | 32.4 ± 0.48b | 340.19 ± 13.86b |
| 96 | 5.52 ± 0.11a | 22.09 ± 0.15a | 32.97 ± 1.47b | 335.72 ± 33.49b |
| 168 | 5.51 ± 0.40a | 20.73 ± 2.78a | 30.77 ± 1.94b | 340.16 ± 50.35b |

TPC – total phenolic contents; FRAP – ferric reducing antioxidant power; DPPH – 2,2-diphenyl-1-picrylhydrazyl; ORAC – oxygen radical absorption capacity; GAE – gallic acid equivalents; AAE – ascorbic acid equivalents; TE – Trolox equivalents. Results are expressed as mean ± standard deviation (n = 3) on a dry weight basis. Means followed by a common letter within the same column per microbial group are not significantly different by the Tukey’s HSD test at the 5% level of significance.