

Table S1. Composition of controls and red bean sourdough bread.

| Ingredient (s) | Sample | | | | |
|------------------------|--------|--------|-----|-------|-----|
| | WR | EWR | CR | AWR | CW |
| Wheat flour (g) | 90 | 89.81 | 90 | 90 | 100 |
| Water (mL) | 66 | 66 | 66 | 66 ** | 66 |
| Red bean flour (g) | - | 10 | 10 | 10 | - |
| Red bean sourdough (g) | 10 | - | - | - | - |
| EPS (g) | - | 0.19 * | - | - | - |
| Yeast (g) | 2 | 2 | 2 | 2 | 2 |
| Butter (g) | 8 | 8 | 8 | 8 | 8 |
| Sugar (g) | 10 | 10 | 10 | 10 | 10 |
| Salt (g) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

WR: Red bean sourdough dough. EWR: Red bean flour dough, containing EPS extracted from red bean sourdough fermented by *W. confusa* QS813. CR: Red bean flour dough. AWR: Red kidney bean flour dough, chemically acidified to similar pH as WR. CW: Wheat flour dough. * EPS was extracted from red bean sourdough fermented by *W. confusa* QS813 as described by Tang et al. [20]. ** Chemically acidified using acetic acid and lactic acid at a molar ratio of 0.66:0.33.