

**Table S1.** Proposed factors and levels for polyphenol extraction by ultrasound-assisted extraction (UAE) using MSR by Draper-Lin

| <b>Factors</b>             | <b>Units</b> | <b>Minimum value</b> | <b>Maximum value</b> |
|----------------------------|--------------|----------------------|----------------------|
| Proportion of PDCF/solvent | %            | 0.05                 | 0.10                 |
| Ethanol                    | %            | 60.00                | 80.00                |
| Time                       | min          | 10.00                | 30.00                |
| Emulsifier                 | %            | 0.04                 | 0.15                 |

**Table S2.** Proposed factors and levels for polyphenol extraction by microwave-assisted extraction (MAE) using MSR by Draper-Lin

| <b>Factors</b>             | <b>Units</b> | <b>Minimum value</b> | <b>Maximum value</b> |
|----------------------------|--------------|----------------------|----------------------|
| Proportion of PDCF/solvent | %            | 0.03                 | 0.05                 |
| Ethanol                    | %            | 50.00                | 70.00                |
| Temperature                | °C           | 40.00                | 80.00                |
| Time                       | min          | 2.00                 | 5.00                 |