**[Chemical](javascript:void(0);) [modification](javascript:void(0);) of montan resin by peracetic acid and agricultural application of its** **modified products**

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**Supporting Information**

**Table S1.** The levels of each factor.

|  |  |  |  |
| --- | --- | --- | --- |
| Factor | Level | | |
| -1 | 0 | 1 |
| X1 (reaction temperature) | 85 | 105 | 125 |
| X2 (reaction time) | 30 | 80 | 130 |
| X3 (ROM) | 20 | 30 | 40 |

**Table S2.** Scheme and test results of the response surface design.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Factor | | | |
| Run | X1 | X2 | X3 | Y (OR) |
| 1 | 1 | 0 | -1 | 36.26 |
| 2 | -1 | 1 | 0 | 30.11 |
| 3 | 0 | 1 | 1 | 48.84 |
| 4 | 0 | -1 | 1 | 26.52 |
| 5 | 0 | 0 | 0 | 46.98 |
| 6 | -1 | 0 | -1 | 25.78 |
| 7 | -1 | -1 | 0 | 15.36 |
| 8 | 0 | 0 | 0 | 48.34 |
| 9 | 1 | 0 | 1 | 48.84 |
| 10 | 0 | 0 | 0 | 44.73 |
| 11 | 0 | 0 | 0 | 45.29 |
| 12 | 1 | 1 | 0 | 43.18 |
| 13 | 0 | 1 | -1 | 34.81 |
| 14 | 0 | 0 | 0 | 44.46 |
| 15 | 0 | -1 | -1 | 28.06 |
| 16 | -1 | 0 | 1 | 26.06 |
| 17 | 1 | -1 | 0 | 34.44 |

**Table S3.** The analysis of the variance regression model of Y.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Source | Sum of squares | df | Mean squares | F value | p-value | Significance |
| Model | 1678.84 | 9 | 186.54 | 87.17 | < 0.0001 | \*\*\* |
| A-X1 | 534.81 | 1 | 534.81 | 249.91 | < 0.0001 | \*\*\* |
| B-X2 | 345.32 | 1 | 345.32 | 161.37 | < 0.0001 | \*\*\* |
| C-X3 | 80.33 | 1 | 80.33 | 37.54 | 0.0005 | \*\* |
| AB | 9.03 | 1 | 9.03 | 4.22 | 0.079 |  |
| AC | 37.82 | 1 | 37.82 | 17.67 | 0.004 | \* |
| BC | 60.61 | 1 | 60.61 | 28.32 | 0.0011 | \* |
| A^2 | 253.22 | 1 | 253.22 | 118.33 | < 0.0001 | \*\*\* |
| B^2 | 232.6 | 1 | 232.6 | 108.69 | < 0.0001 | \*\*\* |
| C^2 | 66.36 | 1 | 66.36 | 31.01 | 0.0008 | \*\* |
| Residual | 14.98 | 7 | 2.14 |  |  |  |
| Lack of Fit | 4.06 | 3 | 1.35 | 0.5 | 0.7043 |  |
| Pure Error | 10.92 | 4 | 2.73 |  |  |  |
| Cor Total | 1693.82 | 16 |  |  |  |  |

\* Correlation is significant at the 0.05 level

\*\* Correlation is significant at the 0.01 level

\*\*\*Correlation is significant at the 0.001 level