|  |  |  |
| --- | --- | --- |
| Before adsorption(cm-1) | After adsorption (cm-1) | Functional group |
|  |  |  |
| 3400 | 3300 | Alcohol,H-bonded O-H stretching (broad) |
| 2853 | 2849 | Methyne C-H stretching |
| 1630 | 1629 | Alkenyl C=C stretching,1ᵒamine N-H bending,2ᵒamine N-H bending |
| 1429 | 1410 | tert-alcohol (C-OH) |
| 1005 | 1000 | C-O stretch (-COOH) |
| 1368 | 1319 | Phenol or 3ᵒ alcohol,aromatic nitro compounds |
| 812 | 800 | Stretch of alkyl halides |

**Eucalyptus Leaf Powder as an Efficient Scavenger for Congo Red from Water: Comprehensive Batch and Column Investigation**

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**Supporting information**

**Table S1.** FTIR Frequencies for various functional groups on the surface of EL before and after adsorption.

**Table S2.** Small scale column study data.

|  |  |  |
| --- | --- | --- |
| Parameters (Column mode of biosorption) | Value |  |
| Initial concentration  Initial pH (input)  Final pH (output)  Dose  Bed height  Column diameter | 1mg/L  7.33  7.08  1g  5cm  1.7cm |  |
| Bed volume | 11.35ml |
| Volume detoxified | 1700ml |

**Table S3.** Semi-pilot scale column study data.

|  |  |
| --- | --- |
| Efficiency of EL | Volume detoxified (ml) |
| Cycle 1 | 1700 |
| Cycle 2 | 1360 |
| Cycle 3 | 1088 |
| Cycle 4 | 988 |
| Total volume | 5136 |