

| Peak Position | Peak Intensity | Mineral Form    |
|---------------|----------------|-----------------|
| 10.767        | 202.578        | Hydroxylapatite |
| 22.959        | 245.07         | Calcite         |
| 24.178        | 82.342         | Kalcanite       |
| 25.776        | 457.372        | Hydroxylapatite |
| 28.833        | 160.632        | Hydroxylapatite |
| 29.303        | 1562.754       | Calcite         |
| 30.314        | 379.947        | Kalcanite       |
| 31.64         | 1906.377       | Hydroxylapatite |
| 32.082        | 744.38         | Hydroxylapatite |
| 32.767        | 750.094        | Hydroxylapatite |
| 33.954        | 309.787        | Hydroxylapatite |
| 38.107        | 75.415         | Hydroxylapatite |
| 39.333        | 264            | Calcite         |
| 39.666        | 237.138        | Hydroxylapatite |
| 43.064        | 234.498        | Calcite         |
| 44.263        | 127.316        | Kalcanite       |
| 46.578        | 304.19         | Hydroxylapatite |
| 47.392        | 160.475        | Calcite         |
| 48.425        | 256.86         | Calcite         |
| 49.371        | 407.789        | Hydroxylapatite |
| 50.345        | 127.41         | Hydroxylapatite |
| 53.131        | 111.245        | Hydroxylapatite |
| 56.435        | 65.076         | Calcite         |
| 57.347        | 76.356         | Calcite         |

SI 2 - XRD peaks and intensities of hydroxylapatite, calcite and kalcanite for larch biochar sintered with wood ash (WAS)