Student Worksheet on FTIR Interpretation

Date: 07/27/2016

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Sample ID: C006a
Name of the chemical compound: Cyclohexane

Draw the chemical structure below:

![Chemical Structure](image)

Write down the IR peak wavenumbers, their corresponding functional group and bond vibrations. In particular, the characteristic bond vibrations are used for the identification of compounds in the laboratory.

<table>
<thead>
<tr>
<th>IR absorption (wave number, cm⁻¹)</th>
<th>Functional Group</th>
<th>Types of bond vibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850.53</td>
<td>-C-H</td>
<td>Stretch</td>
</tr>
<tr>
<td>1498.87</td>
<td></td>
<td>Bond</td>
</tr>
<tr>
<td>1498.87</td>
<td></td>
<td>Stretch</td>
</tr>
</tbody>
</table>

Please write it clearly and legibly with black ink pen or pencil.
Sun Jul 24 20:11:00 2016 (GMT-05:00)

FIND PEAKS:
Spectrum: Sun Jul 24 20:11:00 2016 (GMT-05:00)
Region: 4000.19 525.03
Absolute threshold: 97.143
Sensitivity: 58
Peak list:
Position: 861.07  Intensity: 86.366
Position: 903.17  Intensity: 86.414
Position: 1038.72  Intensity: 95.950
Position: 1256.91  Intensity: 94.392
Position: 1448.87  Intensity: 62.438
Position: 2659.73  Intensity: 95.887
Position: 2792.96  Intensity: 96.301
Position: 2850.53  Intensity: 45.172