

**Editor's comment :**

I could not find FTIR confirmation of CO group.

Polymer Engineering & Science 54 (1), 24-32, 2014.

Journal of applied polymer science 104 (1), 81-88, 2007.

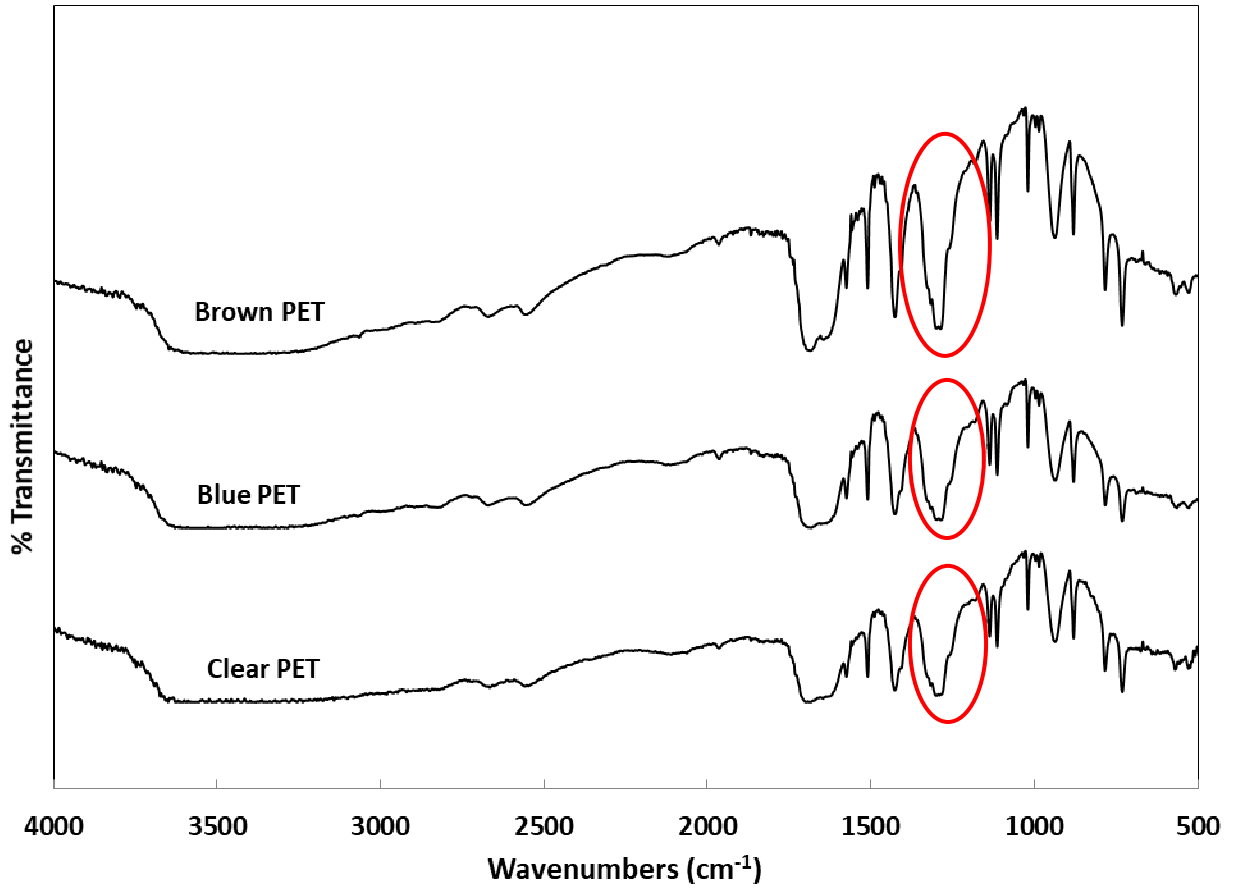
Journal of applied polymer science 106 (1), 299-308, 2007.

**Author's feedback :**

Thank you for the observation. The bands around  $1300\text{ cm}^{-1}$  are indications of the  $\text{-C-O}$  bond. These bands occur around  $1280\text{ cm}^{-1}$  on the figure inserted below (as indicated by the red circled bands).

The table below shows typical vibrational frequencies for selected functional groups (obtained from <https://nptel.ac.in/courses/102103044/module2/lec10/6.html> ).

| <b>Table 10.1 Typical vibrational frequencies of functional groups</b> |  |   |
|--|--|---|
| <b>Bond</b>  | <b>Molecule</b>                                  | <b>Wavenumber (<math>\text{cm}^{-1}</math>)</b> |
| C–O  | Alcohols, ethers, esters, carboxylic acids, etc. | 1300 – 1000                                     |
| C=O  | Aldehydes, ketones, esters, carboxylic acids     | 1750 – 1680                                     |
| C–O  | Amides   | 1680 – 1630                                     |
| N–H (Stretching)   | Amines and amides                                | 3500 – 3100                                     |
| –N–H (Bending)   | Amines and amides                                | 1640 – 1550                                     |
| O–H  | Alcohols   | 3650 – 3200                                     |
| C–N  | Amines   | 1350 – 1000                                     |
| S–H  | Mercaptans                                       | 2550  |



The circled regions represent  $\text{-C-O}$  functional groups