Assignment 6 – interpretation of IR spectra

IR spectra of various compounds along with molecular formula of the compounds is given below. Identify the functional groups present in these molecules based on the IR interpretation of major peaks.

(Do not attempt to interpret every little peak in the spectrum, only the prominent peaks needs interpretation. Based on the elements present in the molecular formula one can make a guess on the kind of functional group to look for in the spectrum).

1. Molecular formula : C_{10}H_{9}NO_{4}Br_{2}

![IR spectrum (CHCl₃ solution)](image1)

2. Molecular formula: C₄H₇OCl

![IR spectrum (liquid film)](image2)
3. Molecular formula $C_9H_8O$

![TR spectrum](image1)

4. Molecular formula $C_{12}H_{14}O$

![IR spectrum](image2)
5. Molecular formula $C_{14}H_{22}O$

6. Molecular formula: $C_6H_5NBr_2$
7. Molecular formula $C_6H_8N_2O_2S$

![IR spectrum (nujol mull)]

8. Molecular formula: $C_6H_{10}O_4$

![IR spectrum (liquid film)]

END