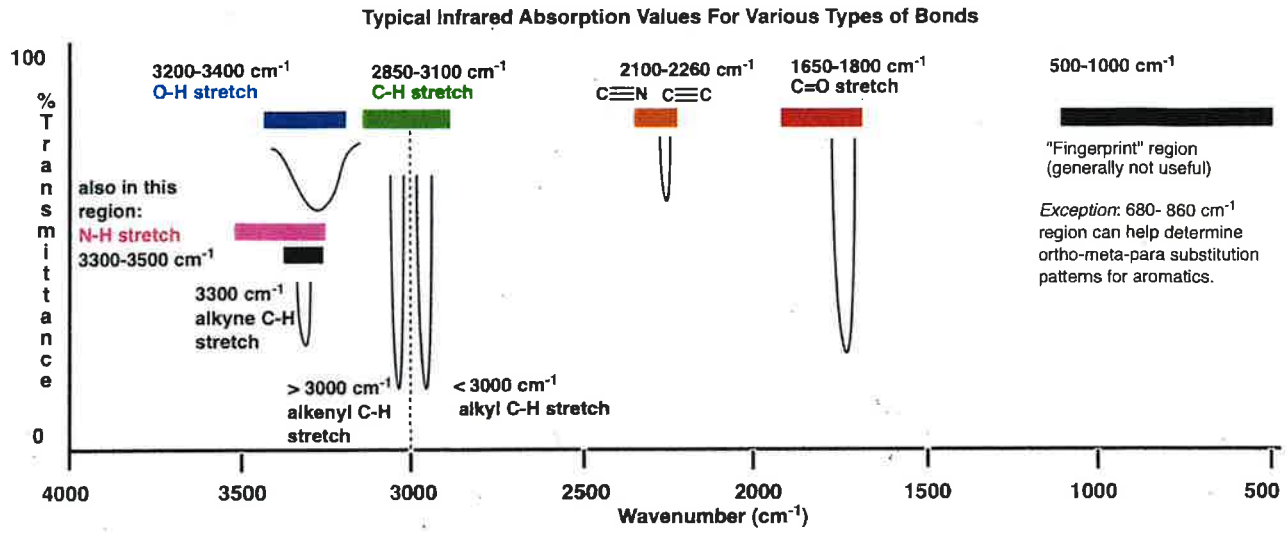
CSUSM
STEM Success Center

Infrared Spectroscopy (IR)



Source: Mastering Organic Chemistry.com

IR ranges

Functional Group	Range (cm^{-1})	Characteristics (This may be helpful for identifying the trends of some Functional groups)
Alkane (C-H)	2850-3000	See image above
Alkene (C-H))	3000-3100	See image above
Alkyne (C-H)	3200-3320	sharp
Aromatics (C-C)	1600-2000	Busy region (with lots of signal)
Alcohols (O-H)	3200-3400	Broad curve
Amines (N-H)	3250-3550	Small to medium
Carboxylic Acids (O-H)	2500-3200	Broad curve
Carbonyl (C=O)	1600-1800	Strong
Aldehyde (CO-H)	2720	-
Nitriles (CN)	2100-2260	Weak
Ether (C-O)	1050-1150	Strong
Ketones (C=O)	1730-1755	Sharp and strong