

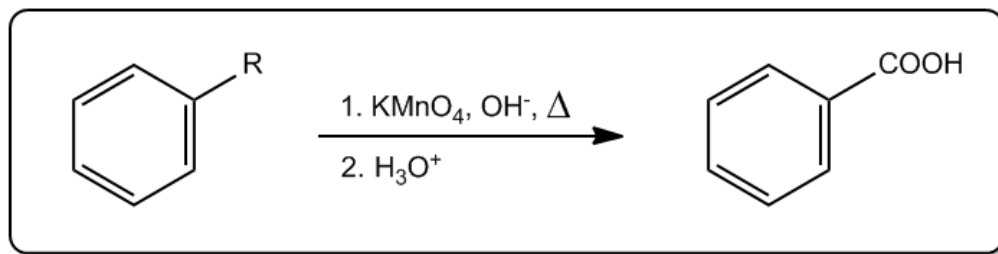
CONCEPT: SIDE-CHAIN OXIDATION

The alkyl group directly attached to benzene is known as an **alkyl side-chain**.

Regardless of the length of an alkylbenzene side-chain, it can be oxidized to **benzoic acid** using hot KMnO_4 .

- However, there must be at least one benzylic hydrogen present for oxidation to occur.

Benzylic Oxidation



EXAMPLE: Which of the following alkylbenzenes would not yield benzoic acid when treated with hot KMnO_4 ?

