

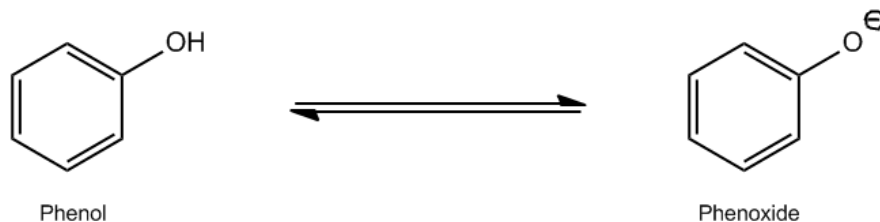
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CONCEPT: ACIDITY OF PHENOLS

Phenols are substantially more acidic than typical alcohols due to the _____ effect.

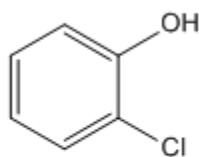
- Recall, the more we can stabilize the conjugate base, the more acidic a compound will be.



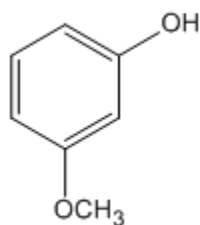
Donating and Withdrawing Groups:



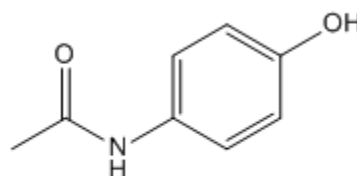
EXAMPLE: Predict which of the following would be the most acidic phenol.



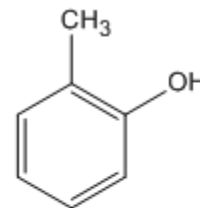
a.



b.



c.

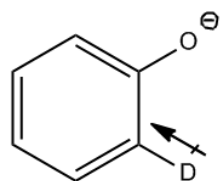


d.

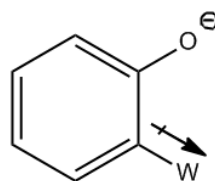
O,P-Directors vs. Meta-Directors

The _____ position has a ***much lessor effect*** on acidity than the _____ and _____ positions.

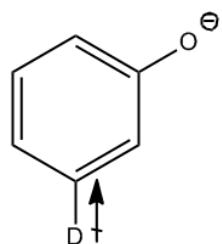
- This is due to the resonance structures that are able to be produced by different positions



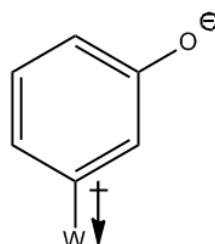
_____ acidic



_____ acidic

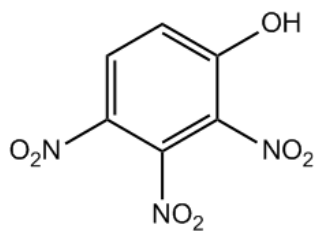


_____ less acidic

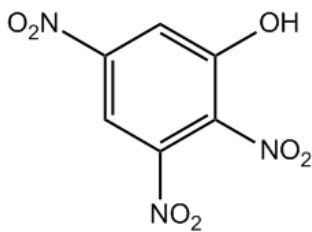


_____ more acidic

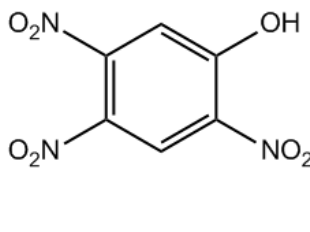
EXAMPLE: Predict which of the following would be the most acidic phenol.



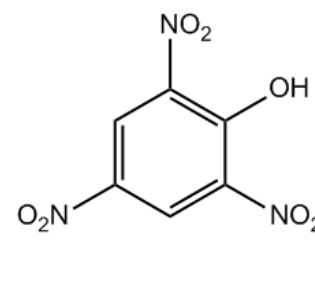
a.



b.

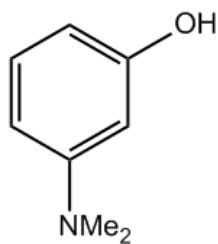


c.

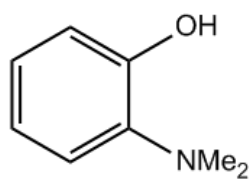


d.

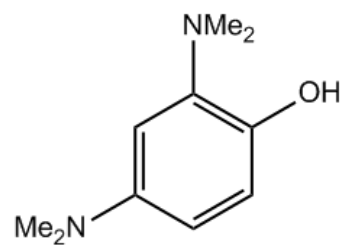
EXAMPLE: Predict which of the following would be the most acidic phenol.



a.

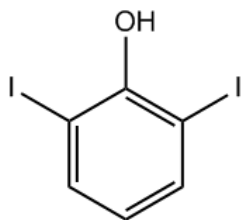


b.

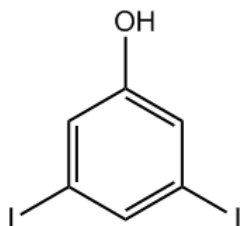


c.

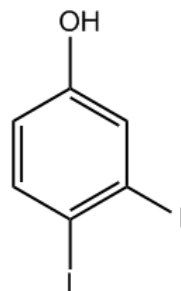
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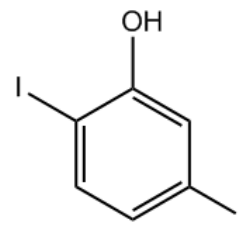
a.



b.



c.



d.

PRACTICE: Rank the following phenols in order of increasing acidity.

