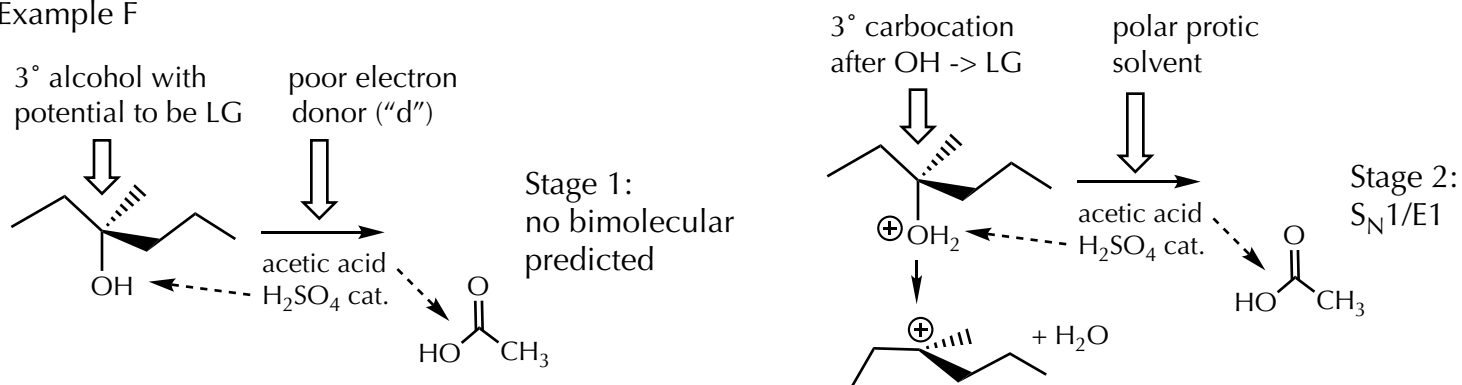


Example F



i. Is there (or is there the potential for) an sp³ carbon-leaving group?

yes	yes, potential	no
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ii. If so, what is the structural category for the carbon atom?

1°	2°	3°	heteroatom-substituted
allylic		benzylic	propargylic

iii. If there is a Lewis base, what is its classification?

anion, conj. acid pK _a < 15 uncharged sp ³ N, S, or P	anion, conj. acid pK _a 15-30	conj. acid pK _a > 30, hindered base conj. acid pK _a > 10	poor electron donor (not in the other categories)
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iv. Is a bimolecular reaction predicted? If so, which one?

S _N 2	E2	no bimolecular
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v. If no bimolecular, then is there:

good carbocation possible	polar solvent
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vi. Is S_N1/E1 predicted?

yes	no
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	<u>category a</u> good e donor weak base	<u>category b</u> good e donor moderate base	<u>category c</u> good e donor strong base	<u>category d</u> poor e donor weak base
Lewis base	anion, c.a. pK _a < 15	anion, c.a. pK _a ~15-30	c.a. pK _a > 30	
sp ³ C-LG	uncharged sp ³ N/S/P		hindered: c.a. pK _a > 10	
1°C	S _N 2	S _N 2	E2 (no β-H: S _N 2)	no bimolecular predicted
2°C	S _N 2	E2 (no β-H: S _N 2)	E2 (β-H)	
3°C	no S _N 2; no E2	E2 (β-H)	E2 (β-H)	