



- 1 a Name these molecules
b Tick to show whether they are alcohols, aldehydes, ketones or carboxylic acids
c For alcohols, state whether they are primary, secondary or tertiary.

Structure	$\text{CH}_3\text{-CH}_2\text{-C}\begin{array}{c} \text{O} \\ \parallel \\ \text{H} \end{array}$	$(\text{CH}_3)_3\text{CCH}_2\text{OH}$		$\text{CH}_3\text{CH}_2\text{COCH}_3$	$\text{H}\text{-}\begin{array}{c} \text{O} \\ \parallel \\ \text{C} \\ \parallel \\ \text{OH} \end{array}$
Name	propanal	2,2-dimethylpropan-1-ol	butan-2-ol	butanone	methanoic acid
Alcohol (1 ^y , 2 ^y , 3 ^y)		✓ 1 ^y	✓ 2 ^y		
Aldehyde	✓				
Ketone				✓	
Carboxylic acid					✓

- 2 Write an equation for each of these reactions **and** name the reaction type. Write *no reaction* if there is no reaction. [as always with organic reaction, show structural formulae]

a ethanal + Tollen's reagent



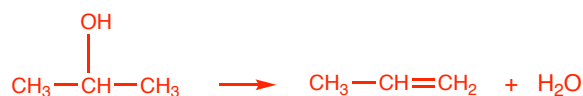
oxidation

b butan-2-ol + acidified potassium dichromate(VI) (reflux)



oxidation

c propan-2-ol + hot concentrated sulfuric acid



elimination

d 2-methylpropan-2-ol + acidified potassium dichromate(VI) (reflux)

no reaction

e Propan-1-ol + acidified potassium dichromate(VI) (distill product)

