

(Alcohols (properties, uses, reactions))

Q1.(2018)

ferment(ation)

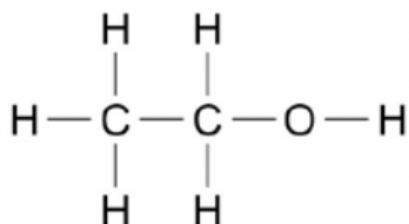
add yeast

anaerobic (conditions)

or

warm

Q2.(2018)



Q3.(2018)

hydrogen

Q4.(2018)

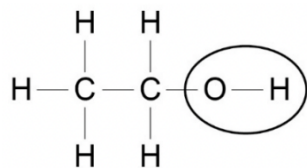
oxidising (agent)

Q5.(2019)

$$\frac{7 \times 21}{3}$$

$$= 49 \text{ (g)}$$

Q6.a)(2020)



Q6.b)(2020)

Name of element	Symbol for element	Number of atoms in one molecule of ethanol
carbon	C	2
hydrogen	H	6
oxygen	O	1

Q7.(2020)

a solvent

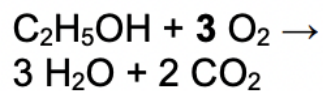
Q8.(2020)

sugar

Q9.(2020)

yeast

Q10.(2021)



Q11.(2021)

(advantages)

(fermentation) low energy usage

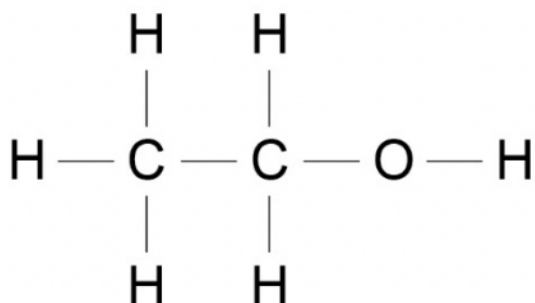
(fermentation) uses renewable raw materials

(disadvantages)

(fermentation) produces impure ethanol

(fermentation) slow rate of reaction

Q12.(2022)



Q13.(2022)

in hand gel to kill microbes

Q14.(2022)

yeast

Q15.a)(2023)

$$\frac{39.8}{29.6} (\times 1)$$

$$= 1.34 \text{ (g)}$$

Q15.b)(2023)

all six points plotted correctly

Q15.c)(2023)

40.6 (kJ)

Q15.d)(2023)

calcium hydroxide

Q15.e)(2023)

(limewater turns) milky / cloudy