

Respiration (aerobic, anaerobic)

Q1. (2020)

01.3	glucose + oxygen → carbon dioxide + water		1	AO1 4.4.2.1
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Q2. (2020)

01.8		word takes precedence		AO1 4.4.2.1
	oxygen	allow O ₂ ignore O / O ²	1	4.4.2.2
	lactic acid		1	

Q3. (2021)

03.1	no oxygen (reacting with the glucose)	ignore there is no air	1	AO2 4.4.2.1
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Q4. (2021)

A)

03.2	produces ethanol / alcohol		1	AO1 4.4.2.1
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B)

03.3	produces carbon dioxide / gas		1	AO1
	(which) makes the bread / dough rise	allow idea related to making the bread lighter or affecting its texture	1	AO2 4.4.2.1

Q5. (2021)

A)

03.4	45 (cm ³)		1	AO2 4.4.2.1
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B)

03.5	to allow time for the mixture to reach 35 °C		1	AO3 4.4.2.1
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C)

03.6	Part of the graph	Description of the reaction		
	A	Carbon dioxide is not being produced	1	AO3 4.4.2.1
	B	Carbon dioxide production is fastest		
		Carbon dioxide production is slowing down	1	
do not accept more than one line from a box on the left				

Q5. (2021)

03.7	any one from: • glucose / sugar / food ran out • ethanol / alcohol killed the cells / yeast	ignore yeast / cells died unqualified ignore produced ethanol / alcohol unqualified	1	AO2 4.4.2.1
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Q6. (2021)

03.8	(2 °C) too cold (for enzymes / yeast to work)	allow yeast / enzyme was inactive ignore yeast killed allow no / few successful collisions do not accept enzymes are denatured	1	AO2 4.2.2.1 4.4.2.1
	(75 °C) enzymes denatured	allow enzymes destroyed allow description eg change in shape of active site or of enzyme allow yeast killed do not accept enzymes killed ignore references to collisions unqualified	1	

Q7. (2021)

03.9	glucose → lactic acid	1 mark for each chemical must be in this order ignore formulae	2	AO1 4.4.2.1
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