

Solutions

2.1 B Anaerobic processes allow ATP production when oxygen supply cannot support the required aerobic rate, but give less ATP per glucose. In humans lactate can accumulate; yeast can produce ethanol and carbon dioxide.

2.2 $\text{rate} = \text{volume} / (\text{time} \times \text{mass}) = 0.60 / (3.0 \times 2.0) = 0.10 \text{ cm}^3 / (\text{min g})$.

2.3 False. Breathing ventilates the lungs; respiration consists of chemical reactions in cells. A moving respirometer marker can also reflect temperature or pressure changes.

2.4 respiration. respiration means Cell reactions that transfer energy from substrates.

3.1 0.10 and 0.20 $\text{cm}^3 / (\text{min g})$. The second is twice as high after normalization. Control temperature and pressure changes with a suitable comparison; uptake is not the same measurement as breathing rate.