

Question	Marking Guidance	Mark	Comments
02.1	1. In phospholipid, one fatty acid replaced by a phosphate;	1	Ignore references to saturated and unsaturated 1. Accept $\text{Pi}/\text{PO}_4^{3-}$ / (P) 1. Reject P/Phosphorus Accept annotated diagrams
02.2	1. Add ethanol, then add water; 2. White (emulsion shows lipid);	2	1. Reject ethanal/ethonal Accept 'Alcohol/named alcohol' 2. Accept milky – Ignore 'cloudy' Sequence must be correct If heated then DQ point 1 Reject precipitate
02.3	Saturated single/no double bonds (between carbons) OR Unsaturated has (at least one) double bond (between carbons);	1	Accept hydrocarbon chain/R group for 'between carbons' for either Accept Sat = max number of H atoms bound 'It' refers to saturated
02.4	1. (Fat substitute) is a different/wrong shape/not complementary; OR Bond between glycerol/fatty acid and propylene glycol different (to that between glycerol and fatty acid)/no ester bond; 2. Unable to fit/bind to (active site of) lipase/no ES complex formed;	2	If wrong bond name given (e.g. peptide/glycosidic), then penalise once
02.5	It is hydrophilic/is polar/is too large/is too big;	1	Ignore 'Is not lipid soluble'