

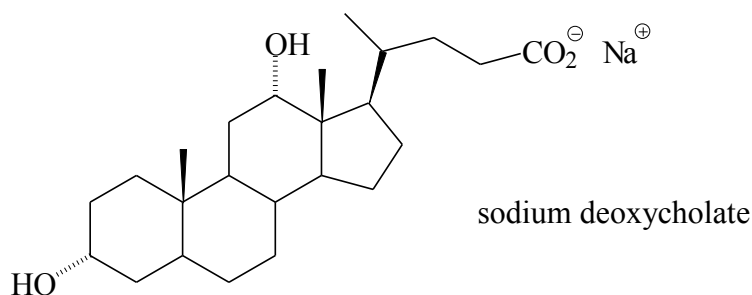
- Give three examples of colloids in biological systems, and complete the following table. Paint is given as an example of a synthetic (non-biological) system.

Marks
3

Name of colloid	Discrete phase	Continuous phase
<i>paint</i>	<i>synthetic polymer</i>	<i>water</i>
blood	red blood cells	water/plasma
milk	casein	water
cell	nucleus, ribosomes etc	cell fluid/ctyoplasm

- One of the components of bile acid is sodium deoxycholate, whose structure is given below.

3



Which one of the following terms: *electrostatic*, *electrosteric* or *steric*, best describes the way sodium deoxycholate functions to solubilise fats. Give a brief explanation.

Sodium deoxycholate is an electrostatic stabiliser.

The organic rings are hydrophobic. This part of the molecule is adsorbed onto the surface of the fat whilst the hydrophilic carboxylate group is in contact with the surrounding water. The solubilised fat is stabilised in the water by the double layer of repulsion charges that prevents coagulation.