

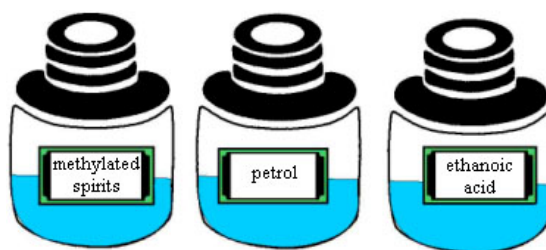
# Freezing and melting points

**This task is about freezing and melting points of some liquids.**

Not everything will freeze when left in a freezer! The temperature inside a freezer is  $-4^{\circ}\text{C}$ . Below is a table of the melting points for three substances which are all liquids at room temperature.

Substance	Melting point ( $^{\circ}\text{C}$ )
methyated spirits (meths) (mostly ethanol)	$-114$
petrol (mostly octane)	$-56.8$
ethanoic acid (used to make vinegar)	$16.7$

Three 500 mL bottles are each half-filled with the liquids and were placed in a freezer overnight.



a) Which liquid(s) would be frozen the next day?

- ☐ Methyated spirits ☐ Petrol ☐ Ethanoic acid

b) Explain, in terms of particles, what has happened when a liquid has frozen.

c) Will the level in the frozen bottle(s) be higher or lower than before?

*Higher/ Lower*

Explain your answer in terms of the particles.