

Laboratory 4 - Formation and stability of suspension

Laboratory results

What role does each ingredient play in the paracetamol suspension formulation?
(circle any/all that apply)

Paracetamol	API	Solvent/cosolvent	Viscosity	Density	Sweetener	Preservative
Carboxymethylcellulose	API	Solvent/cosolvent	Viscosity	Density	Sweetener	Preservative
Syrup	API	Solvent/cosolvent	Viscosity	Density	Sweetener	Preservative
Hydroxy benzoate	API	Solvent/cosolvent	Viscosity	Density	Sweetener	Preservative
Water	API	Solvent/cosolvent	Viscosity	Density	Sweetener	Preservative

In the table below record the UV absorbance for each time sample

Time point	Standard formulation (A)	Formulation - no syrup (B)	Formulation – no CMC (C)
0			
1			
5			
10			

At 1, 5, and 10 minutes how much as a percentage has the concentration of paracetamol dropped in each formulation.

$$\text{Percentage drop} = 1 - \left(\frac{\text{UV absorbance at } x \text{ min}}{\text{UV absorbance at 0 min}} \right) \times 100$$

	1 minute	5 minutes	10 minutes
Standard formulation (A)	_____ %	_____ %	_____ %
Formulation – no CMC (B)	_____ %	_____ %	_____ %
Formulation – no syrup (C)	_____ %	_____ %	_____ %

Visually, which formulation performed best? _____

What would be the consequence of not adding either the CMC or syrup to the formulation during manufacturing?

What is the maximum amount of time you would recommend to a parent that they can leave a bottle of the formulation after they have shaken it, before it needs shaking again?

Counselling and supply role playing

Introduced themselves	Yes	No
Who for	Yes	No
Age of the baby	Yes	No
Symptoms/reason for buying	Yes	No
Medical conditions	Yes	No
Allergies	Yes	No
Other medicines	Yes	No
Supplied correct medicine	Yes	No
Provided advice about shaking before use	Yes	No

Recall role playing

Explained why the product was being recalled	Yes	No
Explained the impact of the missing ingredient	Yes	No
Recommended a different product	Yes	No

Completed lab, counselling and supply & recall components

Satisfactory

Unsatisfactory

Tutor name/signature: _____

Date: _____