Product formula

	Master	50 ml
Castor Oil BP	30 ml	15 ml
Acacia BP	qs	qs
Double Strength Chloroform Water BP	50 ml	25 ml
Freshly boiled and cooled purified water	to 100 ml	to 50 ml

Need to calculate the quantity of emulsifying agent (Acacia BP) required to produce 50 ml of the emulsion.

Formula for primary emulsion

Castor oil is a fixed oil. Therefore the primary emulsion ratio is:

Oil	:	Water	:	Gum
4	:	2	:	1

15 ml of Castor Oil BP is required, therefore 4 parts = 15 ml.
1 part will therefore be 15 ÷ 4 = 3.75.

Therefore:
The amount of freshly boiled and cooled purified water needed = 2 × 3.75 ml = 7.5 ml.
The amount of acacia required = 3.75 g.

Therefore the product formula for 50 ml of castor oil 30% emulsion is:

	50 ml
Castor Oil BP	15 ml
Acacia BP	3.75 g
Double Strength Chloroform Water BP	25 ml
Freshly boiled and cooled purified water	to 50 ml

Interim formula for Double Strength Chloroform Water BP

Concentrated Chloroform Water BPC 1959	2.5 ml
Freshly boiled and cooled purified water	to 50 ml

4.

a. No solids will need to be dissolved during the preparation of this product.

b. As emulsions are particularly susceptible to microbial contamination, Double Strength Chloroform Water BP will be used as the vehicle at a concentration of 50%. Freshly boiled and cooled purified water will be used as the remainder of the vehicle. As freshly boiled and cooled purified water is used in the product, it will also be used to make the Double Strength Chloroform Water BP.

c. Double Strength Chloroform Water BP is included in this product as the preservative as per the product formula.

d. No extra flavouring is required. In addition to preservative action Double Strength Chloroform Water BP will give some flavouring.

The following method would be used to prepare 50 ml of castor oil 30% v/v emulsion from the formula above:

1. Calculate the composition of a convenient quantity of Double Strength