

2. Is it safe and suitable for the intended purpose?

As a prophylactic against rickets, the dose of Cod Liver Oil is not more than 10 ml/day, allowance being made for vitamin D obtained from other sources (*British Pharmaceutical Codex* 1973, p 124). The dose of this product on the prescription is 10 ml three times a day, giving a total daily dose of 30 ml. As the product will contain 30% cod liver oil, this gives a dose of $(30 \div 100) \times 30 = 9$ ml cod liver oil per day. Therefore the dose is safe and suitable.

3. Calculation of formula for preparation

Prepare 200 ml of Cod Liver Oil 30% emulsion.

Product formula

	Master	200 ml
Cod Liver Oil BP	30 ml	60 ml
Acacia BP	qs	qs
Double Strength Chloroform Water BP	50 ml	100 ml
Freshly boiled and cooled purified water	to 100 ml	to 200 ml

The quantity of emulsifying agent (Acacia BP) required to produce 200 ml of the emulsion must be calculated.

Formula for primary emulsion

Cod Liver Oil BP is a fixed oil. Therefore the primary emulsion ratio is:

Oil	:	Water	:	Gum
4	:	2	:	1

60 ml of Cod Liver Oil BP is required, therefore 4 parts = 60 ml.
1 part will therefore be $60 \div 4 = 15$.

Therefore:

The amount of freshly boiled and cooled purified water needed
= 2×15 ml = 30 ml.

The amount of Acacia BP required = 15 g.

Therefore the product formula for 200 ml of Cod Liver Oil 30% emulsion is:

	200 ml
Cod Liver Oil BP	60 ml
Acacia BP	15 g
Double Strength Chloroform Water BP	100 ml
Freshly boiled and cooled purified water	to 200 ml

Interim formula for Double Strength Chloroform Water BP

Concentrated Chloroform Water BPC 1959	5 ml
Freshly boiled and cooled purified water	to 100 ml