Patient:	Mr Gary Murray, 12 Bishop Road, Astonbury
Age:	49
Prescription:	Potassium Permanganate Solution 0.2%
Directions:	Dilute 1 in 20 and use as a wet dressing alt die
Mitte:	150 ml

1. **Use of the product**
   Used for cleansing wounds and deodorising suppurating eczematous reactions and wounds (*British National Formulary* 51st edn, p 608).
2. **Is it safe and suitable for the intended purpose?**
   It is commonly used as a solution at a strength of 1 in 10 000 (*British National Formulary* 51st edn, p 608). When the prepared solution is diluted as indicated it will provide a 1 in 10 000 solution.
   0.2% w/v solution is the same as a 1 in 500 solution which, when diluted 20 times, becomes a 1 in 10 000 solution.
3. **Calculation of formula for preparation**
   Prepare 150 ml of Potassium Permanganate Solution 0.2% w/v.
   0.2% w/v is equal to 0.2 g in 100 ml. Therefore there is 200 mg of Potassium Permanganate BP in every 100 ml of solution.

Product formula

	Master	50 ml	150 ml
Potassium Permanganate BP	200 mg	100 mg	300 mg
Freshly boiled and cooled purified water	to 100 ml	to 50 ml	to 150 ml

4. **Method of preparation**

a. Solubility where applicable
Potassium Permanganate BP is soluble 1 in 16 in cold water and freely soluble in boiling water (*British Pharmacopoeia* 1988, p 455).

b. Vehicle/diluent
Freshly boiled and cooled purified water would be used as the vehicle, as no preservative will be added and the solution is intended for application to a wound.

c. Preservative
No preservative is to be added to this product.

d. Flavouring when appropriate
Not applicable as the solution is for external use.

Tips

Rather than attempt the above conversion in one stage, it may be simpler to take the calculation through a number of stages. In the example given above, the quantities in the master formula are first divided by 2 to give a product with a final volume of 50 ml. The quantities in the 100 ml product and 50 ml product are then added together to give the quantities of ingredients in a product with a final volume of 150 ml. Using this method, the compounder is less likely to make a calculation error.