

We cannot weigh 25 mg. 150 mg is the minimum weight. Therefore to make mix X the same concentration we must multiply both parts of the fraction by the same number, i.e.:

$$8 \times 25 \text{ mg} = 200 \text{ mg}$$

$$8 \times 200 \text{ mg} = 1600 \text{ mg}$$

Mix X must therefore contain 200 mg/1600 mg. As we must weigh exact quantities, the formula for mix X is:

Bendroflumethiazide BP	200 mg
Lactose BP	to 1600 mg (i.e. 1400 mg)

Now each 200 mg of mix X contains 25 mg of Bendroflumethiazide BP, therefore in our original formula we can substitute 200 mg of mix X for 25 mg of Bendroflumethiazide BP.

#### Formula for mix Y

Mix X	200 mg (containing 25 mg Bendroflumethiazide BP)
Lactose BP	1800 mg (to 2000 mg)

4.
  - a. Not applicable.
  - b. Lactose BP is used as a diluent (so long as the patient is not lactose-intolerant).
  - c. No preservative is included in the preparation.
  - d. Oral powders are swallowed with a draught of water and, as such, do not require flavouring.

The following method would be used to prepare 5 bendroflumethiazide 2.5 mg powders from the formula above:

1. Weigh 200 mg Bendroflumethiazide BP on a Class II or electronic balance.
  2. Transfer to a porcelain mortar.
  3. Weigh 1400 mg Lactose BP on a Class II or electronic balance.
  4. Add the Lactose BP to the Bendroflumethiazide BP in the mortar using the 'doubling-up' method.
  5. This is mix X.
  6. Weigh 200 mg mix X and transfer to a clean porcelain mortar.
  7. Weigh 1800 mg Lactose BP on a Class II or electronic balance.
  8. Add the Lactose BP to mix X in the mortar using the 'doubling-up' method.
  9. This is mix Y.
  10. Weigh 200 mg aliquots of mix Y and wrap as individual powders.
  11. Pack powders flap to flap and fasten together with a rubber band.
  12. Pack into a cardboard box and label.
5. Once manufactured, the powders should be packaged flap to flap and enclosed with a rubber band. They can then be placed in a cardboard carton.
  6.
    - a. The product is unofficial, therefore the following title would be suitable: 'Bendroflumethiazide Powders 2.5 mg'.