

on the tile and the base is incorporated using the 'doubling-up' technique. Liquids are usually incorporated by placing a small amount of ointment base on a tile and making a 'well' in the centre. Small quantities of liquid are then added and mixed in. Take care not to form air pockets that contain liquid, which if squeezed when using an inappropriate mixing action will spray fluid on the compounder and surrounding area.

Trituration can be successfully achieved using a mortar but this method is usually reserved for large quantities.

Levigation

This is the term applied to the incorporation into the base of insoluble coarse powders. It is often termed 'wet grinding'. It is the process where the powder is rubbed down with either the molten base or semi-solid base. A considerable shearing force is applied to avoid a gritty product.

The preparation of a cream from first principles

1. As with other types of emulsion, hygiene is extremely important and all surfaces, spatulas and other equipment must be thoroughly cleaned with industrial denatured alcohol (IDA). IDA is better than freshly boiled and cooled purified water as it will quickly evaporate, leaving no residue.
2. Always make an excess as it is never possible to transfer the entire cream into the final container.
3. Determine which of the ingredients are soluble in/miscible with the aqueous phase and which with the oily phase. Dissolve the water-soluble ingredients in the aqueous phase.
4. Melt the fatty bases in an evaporating dish over a water bath (Figure 5.1) at the lowest possible temperature. Start with the base with the highest melting point. These should then be cooled to 60°C (overheating can denature the emulsifying agent and the stability of the product can be lost).
5. Substances that are soluble/miscible with the oily phase should then be stirred into the melt.
6. The temperature of the aqueous phase should then be adjusted to 60°C.
7. The disperse phase should then be added to the continuous phase at the same temperature.
 - a. Hence, for an oil-in-water product, add oil to water.
 - b. For a water-in-oil product, add water to oil.
8. Stir the resulting emulsion vigorously without incorporating air, until the product sets. Do not hasten cooling as this produces a poor product.