

Table 24.3 Traditional terms for different pharmaceutical solutions

Traditional term	Description
Aromatic Waters	Saturated aqueous solutions of volatile oils or other aromatic or volatile substances.
Elixirs	Many oral solutions that contain alcohol as a cosolvent have traditionally been designated as elixirs. However, many other oral solutions containing significant amounts of alcohol are not designated as elixirs.
Spirits	Alcoholic or hydro-alcoholic solutions of volatile substances. Some spirits are used as flavouring agents, others are medicinal.
Syrups	Oral aqueous solutions containing high concentrations of sucrose or other sugars. 'Syrup BP' is a solution of sucrose (66.7%) in purified water; it promotes dental decay and is unsuitable for diabetic patients. 'Sugar-free' syrups are obtained by replacing sucrose with hydrogenated glucose, mannitol, sorbitol, xylitol, etc.
Tinctures	Alcoholic or hydro-alcoholic solutions prepared from vegetable materials or chemical substances. Due to the variability in the vegetable materials, drug concentration can vary.

Table 24.4 Requirements of pharmaceutical solutions, with respect to their route of administration

Route of administration	Requirements of the solution
<p>Oral</p> <p>Oral solutions are swallowed, in which case, the drug may exert a local effect on the gastrointestinal tract or be absorbed into the blood and exert a systemic action.</p>	<p>Liquid oral solutions are aqueous formulations. To be acceptable to patients, these must be palatable. Flavouring, colouring and sweetening agents are therefore added to enhance their appearance and taste.</p> <p>Solution pH is usually 7.0, although a range of pH 2–9 can be tolerated.</p> <p>For convenience, the dose is usually in multiples of 5 mL, and the patient is given a 5 mL spoon with the solution. When smaller volumes are required, oral syringes are used.</p> <p>Viscosity should be appropriate for palatability and pourability. Solutions have a higher viscosity than water.</p>
<p>Oral Cavity</p> <p>Mouthwashes and gargles are used to treat local infection and inflammation in the oral cavity. Gingival solutions are applied to the gingivae. These are not intended to be swallowed and the drug exerts a local effect in the mouth.</p>	<p>Solutions are aqueous formulations. They must be palatable and acceptable to patients. Flavouring, colouring and sweetening agents are often added. As far as possible, the pH should be around neutral.</p>
<p>Topical Skin/Nail/Hair</p> <p>Solutions are applied to the skin for local and/or systemic effect.</p> <p>Solutions are also applied to the nail or hair for local effect.</p>	<p>The vehicle may be aqueous or non-aqueous, and different types of formulations are available.</p> <p>An application frequently contains parasiticides.</p> <p>A lotion is aqueous-based, and is intended for application without friction.</p> <p>A liniment is an alcoholic or oily solution (or emulsion) designed to be rubbed into the skin.</p> <p>Paints and tinctures are concentrated aqueous or alcoholic antimicrobial solutions.</p>

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