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## Monophasic Liquid Dosage Form

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### ABSTRACT

The resulting chemical water solubility forms contain a combination of active chemical compounds and illicit substances (reduced substances) that are soluble or soluble in solvent or suitable solvents mixtures. It is a prescription drug design designed to provide a superior treatment response to targeted individuals with difficulty swallowing solid dosage forms and / or to produce immediate treatment results.

Water level forms can be provided as ready-to-drink beverages or reconstructed powders. They are administered orally by the parent (by injection, inhalation, ophthalmic, optic, nasal, and topical) routes. Oral fluids do not pass, while fluid-administered fluid is available as a sterile and inactive formulation.

This article describes the various classification of water metering forms, the materials used in the construction of liquid metering forms, the installation and labelling of liquid volume forms, quality control and verification of water metering forms and the pros and cons of water volume forms.

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### Introduction

Monophasic equilibrium form refers to a liquid preparation consisting of two or more substances in a single phase system, represented by a real solution. The actual solution is a clear, single-compound solution prepared by dissolving solute in a suitable solvent. It is, therefore, one of the four basic elements of matter (some solid, gas, and plasma), and the end of the earth with a definite volume but no fixed form. Like gas, a liquid can flow and take the shape of a container. Many beverages are resistant to pressure, although some may be compressed. of liquid surface elevation, leading to wet conditions. Water, by far, is the most common liquid on Earth. Therefore, fluids and solids are both called abbreviated substances. On the other hand, since liquids and gases share the energy of flow, both are called liquids. Although water is permeable on Earth, this phenomenon is actually not very common in the known universe, because liquids require a small temperature / pressure range. Most known objects in the universe are in the form of gases (with traces of solid matter available) such as clouds in the stars or plasma from within the stars.

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### Advantage

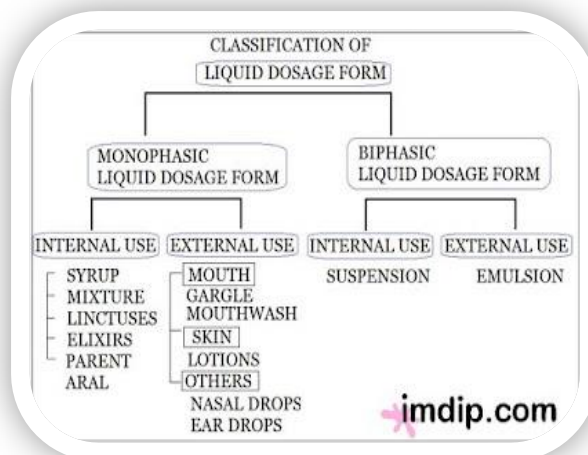
It is easy to swallow, so it is easy for children and the elderly.

- Prepare the absorption of the drug faster than the dosage form as the drug is already in the form of a solution.
- It is compact so give the same dosage than suspension or emulsion that needs to be shaken.
- Easy and fast to build
- It can be controlled by various Oral lines, Parenteral (injection), enema use of arches, optic (ear), nose correction and eye shape

### Disadvantage

- Water is common to use a car, which tends to grow germs. Therefore additional storage is required.
- When exposed to sunlight it may undergo hydrolysis, so you need to keep it in a cool, dark place.
- Drug stability is reduced by hydrolysis or oxidation. Therefore, they have a shorter expiration date than a solid form.
- Another major symptom of drug instability is discoloration, diminution, bacterial growth, etc.

## Classification of Liquid Dosage Form



### Liquids meant for internal administrations

- Syrup: Water-based preparations of 60% to 85% sucrose with flavouring or non-flavouring agents. e.g. Chlorpheniramine Maleate hydrate, Chloral hydrate. Elixirs: Sharp, fragrant, aromatic, hydro-sweetened solutions with or without preservatives, designed for oral use. Ex: Dexamethasone elixir.
- Linctuses: Viscous, liquid and oral preparations are usually given to relieve cough. Eg: Codeine Linctus.

### Liquids meant for internal administration used in the mouth

- Gargles: Aqueous solutions containing antiseptics or antibiotics used to treat throat infections. It is available in an enclosed form with a guide for mixing warm water before use. eg.: Povidone Iodine gargle.
- Mouthwash: A water-flavoured and fragrant water solution used to clean and remove a buccal tube. Have antiseptic and astringent activity: Antiseptics-phenol derivatives.
- Throat paint: Preparation of a lot of fluids used for mouth and throat infections. Eg: Phenol glycerine, Compound Iodine.

### Liquids meant for external administration Liquids instill into body cavity

- Eye drops: Sterile, aqueous / oily solutions designed for the eye. Eg: Timolol maleate eye drops.
- Narrow drops are applied to the nose to determine local function. It is used during nasal congestion and for high respiratory problems. Eg: Drops of Oxymetazolin Hydrochloride.
  - Enemas: A liquid or oily solution infused into the rectum and colon with anus for cleansing, treatment or diagnosis.

### Liquids meant for external administration Liquid meant for skin

- Liniments: Preparations of oily liquids, designed for external use by rubbing the affected area. Use sensitivity to pain and stiffness, such as muscle spasms and arthritis.
- Lotions: Preparing articles with low to medium viscosity. Use to moisturize dry skin. Eg: Calamine Lotion, baby lotion
- Paint: Solutions used to prevent skin. Eg. Betadine is an antiseptic paint, paint Magenta

### Pharmaceutical Elegance

- Viscosity modifiers
- Sweetening agents
- Flavouring agents
- Colouring agents

Enhance viscosity. Eg: Povidone, hydroxyethyl cellulose To enhance palatability and mask the taste of the drugs. Eg: Sucrose, saccharin, aspartame Taste Sensation Recommended flavour Salt Butter scotch, maple, apricot, peach, vanilla, Bitter Wild cherry, walnut, chocolate, mint. Sweet Fruit and berry, vanilla. Sour Citrus flavours, liquorice, raspberry.

To enhance the appearance of the vehicle; which matches well with the flavor employed in the preparation. Eg: green with mint, brown with chocolate flavor etc.

## Preservative

Preservatives must have following criteria:

- Effective against broad spectrum of microorganisms.
- Physically, chemical and microbiologically stable for lifetime of the product.
- Non toxic, non sensitizing, soluble, compatible and with acceptable taste and odour.

## Types of Preservatives

- Acidic : phenol, benzoic acid, sorbic acid
- Neutral preservatives : chlorobutanol, benzyl alcohol
- Quaternary ammonium compounds : Benzalkoniumchloride

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## Additives

### 1 .Vehicles/ Solvents

In liquid formulas, cars are the primary means used as a basis for drug or other disposal. They act as a bond breaker and reduce the effective charge on ions and therefore, increase the gravitational force used in the end to be greater than the gravitational force. Vehicles used in the formulation of water balance forms can be aqueous (e.g., water, polyhydric alcohol, hydro-alcohol solutions and buffers) or oily (e.g., vegetable or mineral oil, organic oil foundations, foundations emulsified etc). The choice of vehicle used depends on the nature and physical properties of the active ingredient of the active ingredient (API) and the intended use of construction

### 2 .Co-solvents

Co-solvents are mainly liquid solvents commonly used to increase the water solubility of non-group (s) drugs that can be identified and their solubility can not be increased by pH adjustment. They work by reducing tension between highly concentrated solutions and hydrophobic solutions.

Co-solvents are part of the polar system due to the presence of hydrogen bond sponsors and / or receivers, thus ensuring water resistance. The choice of co-solvent depends on a number of factors, including the melting and solidification of the drug in the vehicle and the toxicity of the vehicle. Many organic liquids are toxic but only a few are used as co-solvents in pharmaceutical solutions.

### 3.Surfactants

Surfactants or surface-active agents are molecules with well-defined polar (hydrophilic) and non-polar (hydrophobic) areas that combine in aqueous sources to form dynamic aggregates, known as micelles. Non-polar drugs can break down these micelles and dissolve them.

Depending on the type of polar surface, surfactants can be anionic (e.g., sodium dodecyl sulphate), cationic (e.g. among these, the most commonly used are anionic and non-ionic surfactants.

Nonionic surfactants, rather than ionic agents, are generally considered to be more suitable for pharmaceutical use, not only because of their low toxicity but also because the surfactant shell can provide micelle, preventing exposure to macrophages by the reticular endothelial system. (RES), therefore, extend their lifespan in blood circulation.

### 4 Stabilizers:

Stabilizers are those materials used to increase the stability of material or formulation by preventing degradation of the product. According to the material, it varies.

### 5 Preservatives:

Preservatives are those ingredients used for the preservation or for the protection of the formulation from the attack of microorganisms

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## Conclusion

Liquid dosage forms are formulated to release the active principle immediately after oral administration to obtain rapid and complete systemic drug absorption when compared to oral route. Liquid state forms are meant for internal, parental or external use.

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