

1. Kaolin ($\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$)

Molecular weight: 258.16 g/mol

Synonym: Native hydrated aluminum silicate

Upon drying; it gets free from impurities

Properties:

- **Appearance:** It is light, white powder free from gritty particles.
- **Odour:** Odourless
- **Taste:** Tasteless and having greasy or soapy to the touch.

Preparation: It is prepared from natural clay by powdering and separating particles by sedimentation. It must be purified from gritty particles and other impurities.

Uses:

It is used in the mixtures which are intended for dysentery, diarrhoea and for symptomatic treatment of cholitis, cholera.

It is used in the treatment of food and alkaloid poisoning, as it adsorbs toxins.

It is used in dusting powders, cosmetic preparations etc.

Dose: 150 - 75 g/mol

2. Bentonite: ($\text{Al}_2\text{O}_3 \cdot 4 \text{SiO}_2 \cdot \text{H}_2\text{O}$)

Molecular weight: 422.29 g/mol

Synonym: Colloidal hydrated aluminum silicate that occurs naturally

Properties:

- **Appearance & Color:** A very fine, pale or cream coloured powder.
- **Odor:** Odourless, free from grit
- **Taste:** Slightly earthy taste.
- **Solubility:** It is almost insoluble in water but swells to about 12 times its volume after neutralisation.

Uses:

- It is a good pharmaceutical aid and is used as a protective colloid to stabilise emulsions. Mainly it is used to suspend other insoluble powders.
- It finds use as an emulsifier for oil in water emulsions.

- It is also used as a base for many pharmaceutical preparations including plasters and ointments.
- It is an ingredient of calamine lotion which is used as a protective.