

PHARMACEUTICAL INORGANIC CHEMISTRY- BP104T

UNIT: 3 (GASTROINTESTINAL AGENTS)

CLASS: 4

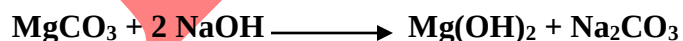
TOPIC: **ANTACIDS – MAGNESIUM HYDROXIDE MIXTURE****MAGNESIUM HYDROXIDE MIXTURE: Mg (OH)₂****Molecular weight:** 58.31 g/mol**Properties:**

- **Appearance:** White amorphous powder
- **Odor:** Odorless
- **Taste:** Tasteless
- **Density:** 2.34 g/cm³
- **Melting point:** 350⁰C
- **Solubility:** Insoluble in water
- **Refractive index:** 1.55

Preparation: Combining a solution of many magnesium salts with basic water induces precipitation of solid



On a commercial scale, Mg(OH)₂ is produced by treating seawater with lime

**Laboratory Preparation:****Uses:**

- Used as weak antacid and laxative.
- Most commonly used antacids combine aluminum hydroxide and magnesium hydroxide.
- The combination decreases the adverse effects of diarrhea (with magnesium products) and constipation (with aluminum products).

Side effects:

- Antacids with magnesium are contraindicated in renal disease because hypomagnesaemia may result
- Those with high sugar content are contraindicated in diabetes mellitus.

MILK OF MAGNESIA

- Milk of Magnesia is a suspension of Magnesium Hydroxide.
- As per USP Monographs; Milk of Magnesia, Double-Strength Milk of Magnesia, and Triple-Strength Milk of Magnesia contain not less than 90.0% and not more than 115.0% of the labeled amount of $Mg(OH)_2$, the labeled amount being 80 mg, 160 mg, and 240 mg of $Mg(OH)_2$ per mL

Packaging and storage: Preserve in tight containers, preferably at a temperature not exceeding 35°C. Avoid freezing.

Labeling:

- Double- or Triple-Strength Milk of Magnesia is so labeled, or may be labeled as 2× or 3×Concentrated Milk of Magnesia, respectively.
- “SHAKE WELL BEFORE USED”

Uses:

- Milk of Magnesia is used for a short time to treat occasional constipation, it is used as Laxative.
- Milk of Magnesia is also used to treat symptoms caused by too much stomach acid such as heartburn, upset stomach or indigestion

2 MARKS QUESTIONS

1. Write the uses of magnesium hydroxide gel

5 MARKS QUESTIONS

1. Write a note on milk of magnesia

10 MARKS QUESTIONS

1. What are antacids? Write the method of preparation, properties and uses of magnesium hydroxide mixture