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**News: Water Purification Process**

- In recent years, **Reverse Osmosis (RO)** has gained popularity for its ability not only to eliminate impurities and pathogens from water but also to reduce TDS (Total Dissolved Solids) levels; however, concerns arise due to the loss of essential minerals such as calcium and magnesium.

**RO Water Purification Method**

- Reverse Osmosis (RO) is a water purification process that removes contaminants from water by utilising a semi-permeable membrane.
- A typical RO system consists of a semi-permeable membrane, with pores 0.0001 to 0.001 microns in size.
- In this method, water is forced through the membrane under pressure, while contaminants such as dissolved solids, chemicals, microorganisms, and other impurities are left behind.
- The membrane allows water molecules to pass through while blocking larger molecules and ions.

- The RO process effectively removes a wide range of impurities, including salts, heavy metals, bacteria, viruses, and organic compounds, producing clean and purified water.
- This technology is widely used in both residential and industrial settings to improve water quality for drinking, cooking, and various other applications.