IS 13688 – Packaged Pasteurized Milk

Milk is an **essential food** in every household, providing vital nutrients such as carbohydrates, proteins, lipids, minerals, and vitamins. However, it is also an ideal medium for microbial growth, which can degrade its quality and make it unfit for consumption. To ensure safety, milk is **pasteurized at specific temperatures for a certain time**, eliminating pathogenic microbes while preserving its nutritional value.

Indian Standards outline the **requirements for pasteurized milk** to maintain safety and quality. Milk is defined as the **normal mammary secretion from healthy milch animals**, free of colostrum. The standard applies to various types of pasteurized milk, including cow milk, buffalo milk, mixed milk (a blend of cow and buffalo milk), toned milk (reduced fat), double-toned milk (lower fat), and skimmed milk (fat-free). Apart from fat, milk contains nutrients like proteins and lactose, collectively known as solids-not-fat (SNF). The milk must be **free from harmful bacteria, toxins, and chemical residues.**

Milk must be processed and packaged under **hygienic conditions** to prevent contamination. Proper packaging should protect against air, bacteria, and other contaminants. The microbial quality of milk is assessed through two key tests: the **Methylene Blue Reduction Test (MBRT)**, which evaluates bacterial activity and milk freshness, and the **phosphatase test**, which ensures adequate pasteurization by detecting alkaline phosphatase (ALP), an enzyme in raw milk that is inactivated by pasteurization.

Indian Standards specify that pasteurized milk must be **stored below 5°C** to maintain quality and prevent spoilage. Milk should be consumed within the **"best before" date** to ensure freshness and safety.