Sodium Laureth Sulfate (SLES)

widely used surfactant and detergent found in a variety of personal care products, household cleaners, and industrial applications. It is a member of the sulfate family of surfactants and is known for its ability to produce foam and cleanse effectively

Chemical Properties

1. Appearance:

• SLES is typically a clear to slightly cloudy liquid that is either colorless or slightly yellow. It may have a mild odor depending on the formulation.

2. Solubility:

• SLES is highly soluble in water, which allows it to form stable solutions and foams. Its solubility in water is due to the presence of the sulfate group and the ethoxylated chain.

3. Boiling Point:

- SLES does not have a distinct boiling point as it decomposes before reaching boiling temperatures. It generally decomposes at temperatures above 200°C (392°F).
- 4. **pH**:
 - SLES solutions typically have a slightly acidic to neutral pH range, usually between 5 and 7, which is close to the pH of the skin.

5. Reactivity:

- SLES is relatively stable under normal conditions. It can be sensitive to high temperatures, strong acids, or strong oxidizing agents. The ethoxylation process helps improve its stability compared to SLS.
- 6. Foaming and Cleansing Properties:

• SLES is known for its effective foaming and cleansing abilities. The ethoxylation of SLES reduces its irritation potential while maintaining strong detergent properties, making it suitable for personal care products and household cleaners.