# The Chemistry of Laundry Pods

## What's in Laundry Pods?
The outside of laundry pods is made of a water-soluble polymer (PVA). Inside the laundry pods is concentrated detergent, composed of surfactants that help remove dirt from clothes.

![Surfactant structure](image)

Surfactant molecules have an end that dissolves in water (hydrophilic) and an end that dissolves in oily substances (hydrophobic). During washing these molecules help remove grease and dirt.

## Why Shouldn't You Eat Them?
Laundry pod surfactants, including ethoxylated alcohols and alkylbenzene sulfonates, are at higher concentrations than in liquid detergent. The liquid is highly alkaline – swallowing it can cause burns to the throat, stomach, and airway.

![Surfactant structures](image)

C12-15 ETHOXYLATED ALCOHOLS

ALKYLBENZENE SULFONATES

To stop small children eating them, many laundry pod manufacturers started adding a bietering agent, denatonium benzoate, to the plastic film.

![Denatonium benzoate structure](image)

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