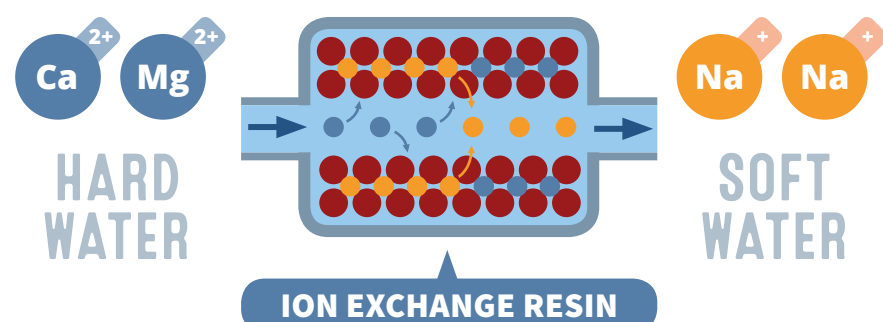


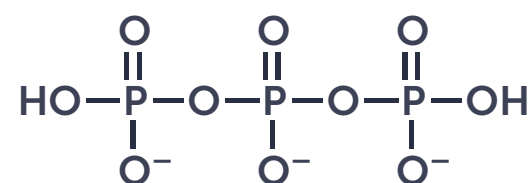
THE CHEMISTRY OF DISHWASHERS

SALT & WATER SOFTENING

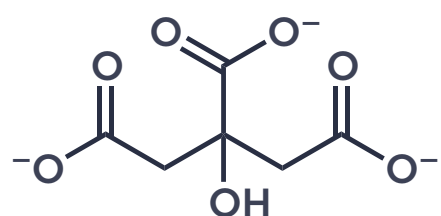
Salt prevents limescale from building up inside your dishwasher. It provides sodium ions for the dishwasher's ion exchange resin, which traps the calcium and magnesium ions in hard water that lead to limescale.



Compounds known as builders remove calcium and magnesium ions during the wash. Phosphates, citrates, and polycarboxylates are used; use of phosphates is limited due to concerns about their ecological effects.



PHOSPHATE

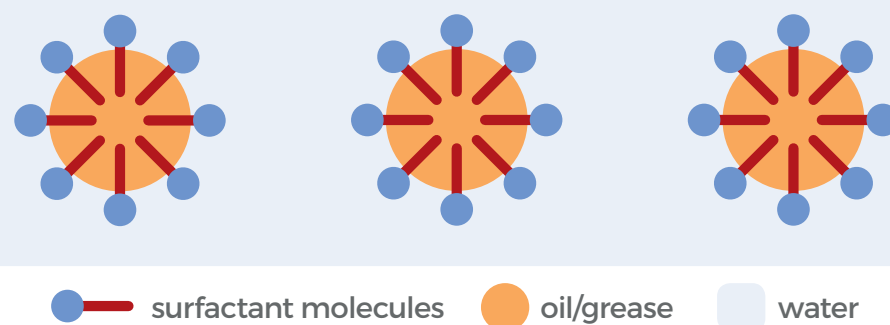


CITRATE



DETERGENTS & CLEANING

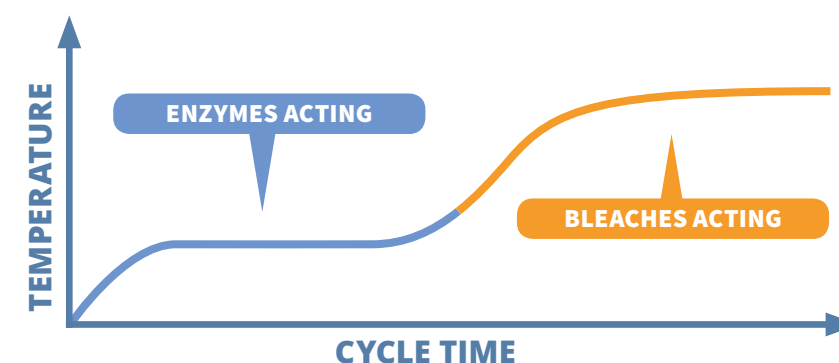
Anionic and nonionic surfactants help remove grease and soiling from dishes. One end of these molecules dissolves in water, while the other end dissolves in oils and greases, helping to remove them.



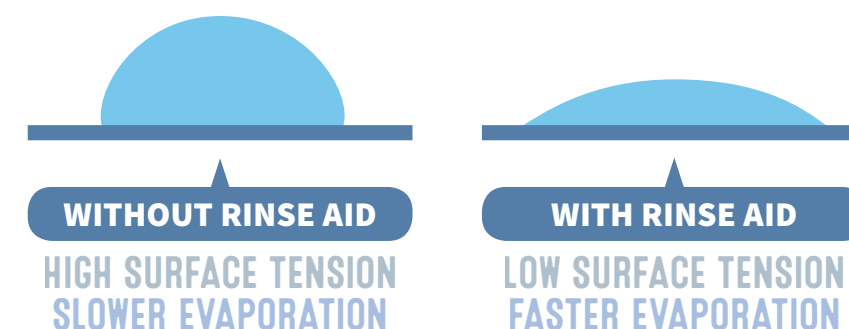
Alkalis react with grease to form soluble compounds that can be washed away. They also protect the metal parts of the dishwasher from acid corrosion.

ENZYMES, BLEACH & RINSE AID

Enzymes help break down starch and protein in food remnants. They are denatured and stop working at higher temperatures, so they act first in the dishwasher's wash cycle.



Bleaches oxidise coloured substances, rendering them colourless. Peroxide-releasing compounds are commonly used. Activators help bleaches work at lower temperatures.



Rinse aid contains surfactants which reduce the surface tension of water, letting it drain and dry quicker at the end of the wash cycle.

