

# What Happens When We Mix Different Substances?

Mixing substances is a fun and interesting way to learn about chemistry! Let's break it down step by step:

## Step 1: What is a Substance?

A substance is something that has mass and takes up space. For example, water, sugar, salt, and air are all substances.

## Step 2: Mixing Substances

When we mix two or more substances together, interesting things can happen! Here are some types of mixtures:

- **Solutions:** When substances dissolve in each other, like sugar in water, they create a solution. This means you can't see the sugar anymore, but it's still there!
- **Suspensions:** When substances mix but don't fully dissolve, like sand in water, they create a suspension. If you let it sit, the sand will sink to the bottom and you can see the difference.
- **Emulsions:** Sometimes, when two liquids mix that usually do not mix well, like oil and water, they create an emulsion. You can see this in salad dressings!

## Step 3: Changes in Properties

When we mix substances, the new mixture can have different properties from the individual substances. For example:

- The color might change. **Example:** Mixing blue and yellow paint makes green!
- The taste can be different. **Example:** Adding sugar to lemonade makes it sweeter.
- The texture may vary. **Example:** Mixing flour and water makes dough for cookies!

## Step 4: Chemical Reactions

Sometimes, when we mix substances, they can actually change into something new. This is called a chemical reaction. For example:

- When baking soda (a powder) mixes with vinegar (a liquid), bubbles form and they create a new gas called carbon dioxide. This is why it fizzes!

## Conclusion

Mixing different substances can create mixtures that look, taste, and behave differently! So the next time you mix things together, pay attention to what happens. You might discover something exciting!