



# Invisible Sunblock

What's in your sunblock?

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## Try this!

1

Use a cotton swab to put a very small dab of each sunblock onto the black paper.

2



Try rubbing it in. What happens?

Tip: Try to use the same amount of each sunblock.

One sunblock rubs in clear, but the other leaves a white film on the paper. The clear sunblock uses nano-sized ingredients that don't reflect light.

## What's going on?

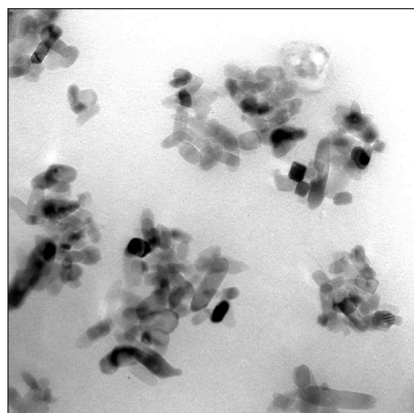
The clear sunblock rubs in better than the baby sunblock, because it contains tiny, nano-sized particles of zinc oxide. (A nanometer is a billionth of a meter.)

These nano-sized particles of zinc oxide are so small that they don't reflect visible light, making the invisible sunblock transparent. The baby sunblock also contains zinc oxide, but the particles are much bigger. The larger zinc oxide particles do reflect light, so the baby sunblock looks white.

Both products are equally effective at absorbing UV radiation and keeping it from reaching your skin, but many people prefer sunblock that rubs in clear. Research shows that sunblocks containing nanoparticles of zinc oxide and titanium dioxide are safe to use. Still, some people have concerns about the use of nanoparticles in sunblock and other products.



## How is this nano?



**Titanium dioxide nanoparticles**

Nanotechnology takes advantage of the way things behave differently at the nanoscale to make new products and applications. Sunblocks containing nanoparticles are one of the most common applications of nanotechnology. Many other health and beauty products also contain nano-sized particles, including cosmetics and toothpaste.

Labels don't have to say what size their ingredients are, so you could use a product containing nano-sized particles without knowing it. Does that surprise you?