

Oxybenzone

* An active chemical sunscreen ingredient * Also known as [Benzophenone-3](#)

Oxybenzone primarily functions as a photostabilizer and sunscreen. Among the vast selection of sunscreen active ingredients, Oxybenzone is classified as a "chemical" sunscreen agent. Inadequate when used alone, Oxybenzone absorbs UVB and short UVA rays but is a relatively weak chemical UV absorber. It also helps preserve the integrity of other cosmetic ingredients, preventing their deterioration under the sun. For this reason, Oxybenzone is most often used in conjunction with other sunscreen agents. Besides sunscreen, it can be found in a variety of personal care products such as nail polish, lotions, and lipstick.

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Safety Measures/Side Effects:

According to the [Environmental Working Group](#), there are several suspected dangers associated with Oxybenzone. Despite its sun protective abilities, it has been shown to penetrate the skin and cause photo-sensitivity. As a photocarcinogen, it has demonstrated an increase in the production of harmful free radicals and an ability to attack DNA cells; for this reason, it is believed to be a contributing factor in the recent rise of [Melanoma](#) cases with sunscreen users. Some studies have shown it to behave similarly to the hormone estrogen, suggesting that it may cause breast cancer. It has also been linked to contact eczema and allergies.

In addition, there exist many concerns regarding the human body's percutaneous absorption of Oxybenzone. In one study, individuals applied a sunscreen with 4% Oxybenzone and submitted urine samples 5 days after topical application. All the subjects' urine secretions were found to contain Oxybenzone, suggesting the body's ability to store the substance ([Source](#)). In 2008, the US Centers for Disease Control & Prevention conducted a similar experiment on a national scale, and found the chemical compound to be present in 96.8% of the human urine samples surveyed ([Source](#)). As a result, it is recommended that parents keep their small children from using products containing the ingredient. This is based on the assertion that children under the age of 2 have not fully developed the enzymes that are required to break down derivatives of Oxybenzone.

Though a fair amount of scientific evidence points to the adverse effects of Oxybenzone, additional tests are required before making any definite conclusions. It must be noted that this ingredient still possesses less severe risks than those associated with [PABA](#). Furthermore, many dermatologists insist that, because dermal absorption of Oxybenzone appears to be low and still exists as one of the few substances to effectively protect against UV rays, this ingredient should not be ruled out entirely.

Recent research (2016) out of King's College, London has found high levels of oxybenzone in coral reefs. It causes the reefs to be susceptible to bleaching and lose their protective algae. Furthermore, oxybenzone is also alleged to be an endocrine disrupter that causes baby coral to encase itself in its own skeleton and die.

The [FDA](#) has approved the use of Oxybenzone as a safe and effective OTC sunscreen ingredient, but only in concentrations up to 6%. The [EU Cosmetics Directive](#) has also assessed the sunscreen ingredient as safe at up to concentrations of 10%, and requires products that contain more than .5% of the ingredient to be labeled "contains Oxybenzone." Sweden has banned the use of this ingredient. A ban in Hawaii will take effect in 2021.