

# UVA and UVB Rays from the Sun

- **Both UVA and UVB rays contribute to skin cancer!**
- **UVB** → These rays cause sunburn! They are strongest in summer, and from 10am to 4pm.
  - Most sunscreens and sunblocks of SPF 30 or higher protect well against sunburn.
  - UVB burning rays cannot penetrate glass, so most people don't get sunburned inside their car or near a window in their home.
- **UVA** → These rays cause premature aging and wrinkling! Unlike UVB, UVA rays are strong all day long, all year long. There is also no way for the human eye to detect exposure.
  - **SPF tells you nothing about UVA protection.**
  - UVA rays DO penetrate glass, so they shine on you while you're in a car or inside your house near a window. Watch the Blue Lizard bottle turn blue inside your car or house! That proves the presence of UVA radiation.
  - Although most sunscreens of SPF 30 or higher protect against UVB rays, they often do not offer optimum protection against UVA rays.
  - Look for **zinc oxide** or **z-cote** (transparent zinc oxide) -ideally, 5% or more- in your sunscreen products. Zinc oxide offers the best broad spectrum protection against both UVA and UVB rays.
  - These ingredients also block a portion of the UVA spectrum, but many do not protect against the longer UVA wavelengths like zinc oxide does:
    - Titanium Dioxide - choose a sunscreen with 5% or more. This product is almost as good as zinc oxide in UV protection.
    - Avobenzone - also called Parsol 1789 -3% is better than 2% - but when combined with certain ingredients (e.g. titanium dioxide) it may degrade upon UV exposure. It has been proven effective, though, in combination with oxybenzone.
    - Oxybenzone - a common UVA absorber found in most sunscreens, blocks a small portion of the UVA spectrum. The label may claim UVA & UVB protection, but oxybenzone alone does not offer optimum UVA protection.
    - Mexoryl SX (water soluble) & Mexoryl XL (oil soluble) - New product in the U.S.A. produced by L'Oreal. Both products block part, but not all, of the UVA & UVB spectrums. They are more effective in combination with each other and/or zinc oxide. The advantage of these products is that they may be more cosmetically elegant than pure zinc oxide and titanium dioxide products.

**You can find products that contain  
zinc oxide or z-cote at the following locations:**

Blue Lizard SPF 30+ Regular, Baby, Faces, Sensitive, or Sport formulas	<u>Huntsman Cancer Hospital Pharmacy</u> , 2000 Circle of Hope, SLC <u>University Pharmacy</u> , 1320 E. 200 S., SLC <u>Jolley's Pharmacy</u> , 1702 S. 1100 E., SLC
Vanicream SPF 30, Sport 35	<u>Huntsman Cancer Hospital Pharmacy</u> , 2000 Circle of Hope, SLC <u>University Pharmacy</u> , 1320 E. 200 S., SLC <u>Jolley's Pharmacy</u> , 1702 S. 1100 E., SLC
Solbar Zinc SPF 38	<u>Huntsman Cancer Hospital Pharmacy</u> , 2000 Circle of Hope, SLC <u>University Pharmacy</u> , 1320 E. 200 S., SLC <u>Jolley's Pharmacy</u> , 1702 S. 1100 E., SLC
Ocean Potion SPF 45 Clear Zinc for faces	<u>University Pharmacy</u> , 1320 E. 200 S., SLC
All Terrain Terra Sport SPF 30+, Aqua Sport SPF 30+	<u>Wild Oats</u> , 1131 E. Wilmington Ave., SLC (other locations across SL Valley)
Nature's Gate Aqua Block SPF 30	<u>Wild Oats</u> , 1131 E. Wilmington Ave., SLC (other locations across SL Valley)
Dermatone SPF 36 with z-cote, SPF 30 with z-cote for lips & face	<u>REI</u> , 3285 E. 3300 S., SLC
Walgreen's sunblock with zinc oxide SPF 45+ for face, nose, & ears	<u>Walgreen Drug Stores</u> , 909 E. 2100 S., SLC (other locations across Utah)

\*These and other products that contain zinc oxide or z-cote are also available online. Many pharmacies will order products upon request if not in stock.