



## WOOD'S LIGHT

The Wood's light, sometimes called a black light, was invented in 1903 by Robert W. Wood, a Baltimore physicist. It was first used in dermatology by Margarot and Deveze to detect fungal infection in hair.

To achieve the emission of long-wave UV radiation (black light), a high pressure mercury arc is covered by a compound filter made of barium silicate with 9% nickel oxide. This compound filter is referred to as a "Wood's filter". The Wood's filter only permits the emission of radiation between 320 and 400 nm with a peak at 365 nm. Initially, the skin absorbs the long-wave UV radiation (black light) and then emits radiation  $>400$  nm which is visible.

The Wood's light is useful in a variety of skin conditions:

1. Vitiligo. Depigmented, as opposed to hypopigmented skin, glows white
2. Tinea versicolor. *Malassezia furfur*, a yeast causing tinea versicolor, emits a yellowish-white or copper-orange fluorescence
3. Pseudomonas infection. This bacteria can create a green fluorescence.
4. Erythrasma. *Corynebacterium minutissimum*, the bacteria that causes, erythrasma, an infection involving interdigital web spaces and intertriginous areas, gives a coral red fluorescence
5. Porphyrria. When shined on the urine of patients with certain types of porphyria, the Wood's light creates reddish fluorescence

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