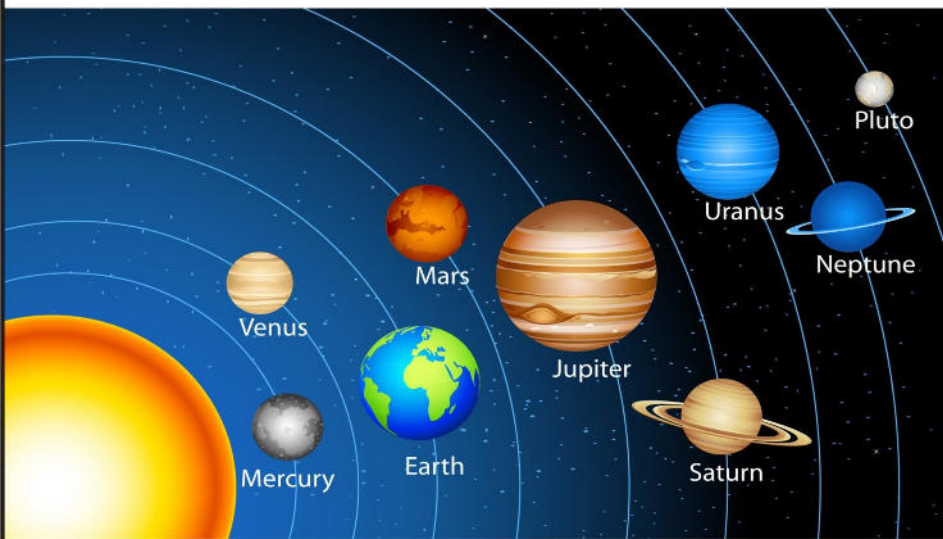




# WOODS LAMP

USER MANUAL - 2021



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make Woods Lamp Portable Model comes with Twin Ultra Violet tubes to induce fluorescence in Dermatoses and an additional extra White tube for Magnification. Both the Lights can be operated separately.

Examination of the Skin or Hair with Woods Lamp is a time-trusted technique to aid in the clinical diagnosis of some cutaneous disorders. Following are the indications in Dermatology.

1. Dermatoses in the intertriginous areas
2. Patches on the scalp with scaling or partial hair loss (especially with broken hairs)
3. Pigmentary alterations
4. Diagnosis of burrows in scabies
5. Blisters and punctate erosions on the dorsum of hands, forearms
6. Tinea versicolor

Woods Lamp is an inexpensive and essential laboratory equipment. Woods Light examination should be performed in a dark room, and total darkness is also satisfactory.

The UV light tubes are commercially available and the emitted Light is of lesser intensity (Longer Wave Length) than the light absorbed.

### TECHNIQUE:

The patient should be assured of the usefulness and non-invasive nature of the examination. Since ointments, exudates, cosmetics and soap may fluoresce, the skin should be well cleansed before examination. The Lamp should be on for at least a minute to attain optimum intensity. This duration also helps the investigator for darkness adaptation. The light source should be four to five inches from the lesion.

### OPERATING INSTRUCTIONS:

Connect the Mains plug in the 3-pin socket. Switch on the Mains button to the ON position. Then push the choke button once for instant glow. The on-off switch is selected by switching to the upward position for Ultra Violet and downward for the White tube.

### IMPORTANT:

1. Choke button should be pressed only once – not for several times because it may reduce the life of the UV bulbs.
2. Mains bulb power supply should be 230 volts AC.
3. After usage, Woods Lamp should be kept in the carrying case provided, to avoid lens scratches and safeguard the bulbs.

Note: We give below a special study on WOODS LIGHT EXAMINATION for your ready reference, by Dr. Narendra K. Kamath, M.D., D.V.D., Dr. Ganesh Pai, M.D., D.V.D., and Dr. Jerome Pinto, M.D., D.V.D.,

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## Woods Light Examination – by

Dr. Narendra K. Kamath, M.D., D.V.D., Dr. Ganesh Pai, M.D., D.V.D., and Dr. Jerome Pinto, M.D., D.V.D.

The diagnosis of several disorders is complemented by office procedures and laboratory data. Woods Light examination is a good example of a simple, effective but neglected office procedure. Considering the variety of cutaneous disorders examined on an outpatient basis, the Woods Lamp is an inexpensive, essential laboratory equipment. The simple procedure of Woods Light examination and interpretation is detailed here.

The invisible, long-wave UV radiation (365 nm) produced from a Woods Lamp is used to induce fluorescence in dermatoses. This was earlier called long-wave ultraviolet, near-ultraviolet or black light. Its regular use in the field of medicine was initiated only about three decades ago.

Robert W. Wood (1903) developed a filtered UV light system by passing high pressure mercury arc radiation through a nickel oxide phosphor filter for application in various military problems.

Over the years there have been modifications regarding the source of Woods light. They are UV light filtered through Barium Silicate with 9% Nickel oxide, Hot quartz therapy machines, and Carbon arc machines, where UVB is eliminated by window glass. All sources generate light of 365 nm; they also produce some amount of visible blue-white light that is usually reflected and masks the pastel shades of fluorescence essential to the diagnoses of diseases. Hence, Woods Lamp is best used in a dark room, though interpretation in near total darkness is also satisfactory. Commercially available UV light tubes that emit light of 365 nm specifically eliminate this error.

### Principle:

When a substance fluoresces, some energy is dissipated in the process, and the emitted light is of lesser energy (longer wavelength) than the light absorbed. With Woods Lamp, black light (340 - 400 nm) is absorbed and light in the visible spectrum (400 - 700 nm) is emitted. This secondary light emitted after interaction with the skin of dyes is characteristic of a clinical condition.

### Indications:

Next, Examination of the Skin or Hair with Woods Lamp is a time-tested technique to aid in the clinical diagnosis of some cutaneous disorders. Following are the indications in Dermatology.

1. Dermatoses in the intertriginous areas
2. Patches on the scalp with scaling or partial hair loss (especially with broken hairs)
3. Pigmentary alterations
4. Diagnosis of burrows in scabies.
5. Blisters and punctate erosions on the dorsum of hands, forearms.
6. Tinea Versicolor

### Materials:

Woods Lamp and a dark room are the basic pre-requisites.

### Technique:

The patient should be assured of the usefulness and non-invasive nature of the examination. Since ointments, exdates, cosmetics and soap may fluoresce, the skin should be well cleansed before examination. The Lamp should be on for atleast a minute to attain optimum intensity. This time also helps the investigator for dark adaptation. The light source should be four to five inches from the lesion.

### MEDICAL USES

These can be broadly classified into diagnostic, therapeutic and investigational uses.

#### Diagnostic Uses:

1. **Tinea Captis** : Woods Light has served its best-known and most frequent use in this condition. Fluores-



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cence occurs in ectothrix infections and is due to pteridine that is produced when fungi invade and interact with superficial layers of the hair shaft. The fluorescent substance is produced only in actively growing fully invaded hair shafts.

Hairs infected with *M. Audouinii* or *M. Canis* fluoresce a bright blue green; while *T. Schoenleinii*, a pale green. Infections due to other dermatophytes fluoresce poorly or not at all. Fluorescence of infected hairs extends well beyond the symptomatic areas.

The fluorescent hair can be epilated for direct microscopy and culture to confirm the diagnosis. Fluorescence is used to screen extent of subclinical involvement, and contact tracing in the family or community. Detection of cure is ascertained by non-fluorescing emerging hair shafts.

Bits of lint, keratin debris and topical medicaments also do fluoresce, but weakly and blue violet. The nits of pediculosis, fluoresce white. The investigator must be aware of these to avoid misinterpretation.

Woods light is important to rule out *Tinea Capitis* in the diagnostic dilemma of scalp infections and alopecia. The recent emergence of *T. tonsurans* as the common cause of *Tinea Capitis* has limited the usefulness of Woods Lamp examination, as it is non-fluorescent.

**2. Erythrasma :** Coral red or pink fluorescence is seen. A water soluble coproporphyrin III produced by *Corynebacterium minutissimum* is the cause. Fluorescence is not present if the area has been washed recently. The fluorescence suggests *Erythrasma* but is not necessarily an indicator of disease activity.

The same bacterium may cause follicular fluorescence in *acne vulgaris* and of the normal gums when they are a part of the flora.

Pink fluorescence may also be seen on normal tongue, *acanthosis nigricans* and normal skin of upper trunk if there is a heavy colonization by *coryneforms*.

**3. T. Versicolor :** Shows Golden yellow fluorescence or may appear lighter than adjacent skin. It is useful to detect the extent of infection, and also early lesions. Woods Light may show patchy fluorescence in incompletely treated lesions and hence helps detect relapse at an early stage. *Pityrosporon* sps. can cause yellow fluorescence in *Pityriasis capitis* and cradle cap in infants.

**4. Pseudomonas infections :** *Pyoverdin* of *fluorescin* is responsible for the aqua green or white green or rarely yellow green fluorescence.

The concentration of organisms in the tissue required to produce visible fluorescence is much less than the concentration that causes invasive sepsis. Woods Lamp Light detects early insidious infection in ulcers, burns and bullous disorders. Examination at regular intervals can be used to monitor therapy.

**5. Pigmentary alterations :** These are best explained by the optical properties of the skin. In any layer of skin, light may be reflected towards the surface, scattered or absorbed by the tissues. Some light is transmitted to deeper tissues. The longer the wave length, the deeper is the penetration of photons into the skin (Fig. 1). Scatter of light is inversely proportional to the wavelength, so that photons of slightly shorter wavelengths are scattered much more, as they penetrate less. Fluorescence then occurs only at depths to which the light has penetrated.

Melanin is the major light absorber in the skin. The colour in an area of melanized skin is made up of those wavelengths which are reflected to the eye from the layers in the skin superficial to the melanin pigment.

It melanin is superficial, most of the light is absorbed, some is reflected and thus skin appears black. Amount of fluorescence observed under Woods Light is dependent on the depth of melanin.

The Woods Lamp cannot be used to distinguish between epidermal and dermal hyperpigmentation in type V skin. In skin types I to IV the extent and level of pigmentary change can be defined by the Woods Lamp.

Applying these criteria, the following observations may be made.



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Epidermal pigmentation e.g., ephelides appears accentuated. This is because of a major portion of UV light being absorbed in the epidermis.

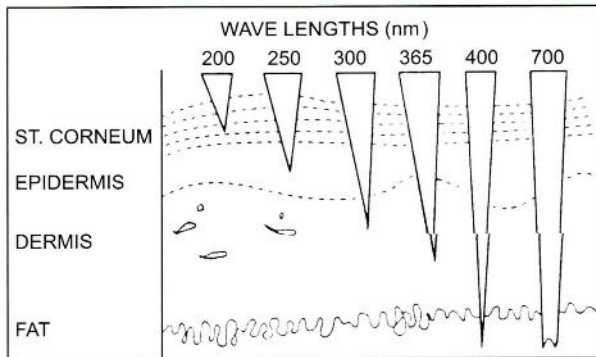


Fig. 1. Schematic Representation of Depth of Penetration of Light

Dermal pigmentation e.g., Mongolian spots appears less evident on comparison. The dermal reflected and scattered light makes the pigmentation inapparent.

Absence of epidermal pigmentation causes all light to be scattered and reflected e.g., vitiligo.

Hypopigmented conditions show blue white colour because of minimal melanin and reflection of blue spectrum of light in visible range e.g., Hansen's disease, pityriasis alba, ash leaf macule of tuberous sclerosis, pre-vitiligo.

Woods Lamp helps to estimate the following: the depth of cutaneous hyperpigmentation; differentiation of epidermal from dermal hyperpigmentation; differentiation of epidermal from dermal hyperpigmentation; and differentiation of hypo-pigmentation from depigmentation. In vitiligo, the size of the patch and extent of depigmentation can be assessed. Prognostically pre-vitiligo can also be detected so as to initiate therapy with psoralens.

Ash leaf macules, the earliest indicators of epiloia can be easily detected in infants and an early diagnosis can thus be made. Mild form of hyperpigmentation is xeroderma pigmentation and Von Recklinghausen's disease can be highlighted using the Woods Light.

**6. Scabies:** Use is in detection of burrows. Suspected papules are painted with colourless, commercial dye fluorescein and then washed with water. When seen under Woods Light, the dye in the burrows fluoresce in grey whites in a distinct linear configurations. Any unwashed or retained dye in adjacent areas show a green yellow fluorescence.

**7. Drug ingestion:** Tetracyclines cause a yellow fluorescence. Woods Light is useful to detect patient compliance using urine stains on garments. Urine absorbed on filter paper may be used for the same purpose. Nail plates, bone and teeth fluoresce yellow, while lunula fluoresces pink. If tetracycline was ingested in the formative stages, Nail staining can also be seen with mepacrine.

**8. Abnormalities of porphyrin metabolism:** Presence of fluorescent porphyrins in tissue or body fluids is detected here. Uroporphyrins are responsible for the fluorescence in PCT. Urinary ejections of porphyrins should be at least 1mg / 1ltr / day for a test to be positive, and negative tests occur with random samples. To avoid false positive tests, anion-exchange resins are used. 24 hours urine collection is always advised for the test. Pinkish red or orange hydrochloric acid, Liver biopsy specimen faeces, blister fluid also fluoresce.

Congenital porphyrins can be detected by the pink-orange fluorescence of the teeth, reddish urine and the bone marrow. Though Watson Schwartz test is adequate in AIP to detect urinary porphobilinogen, UV light is used for quantitative estimation.

**9. Dermatoses seen poorly in visible light:** Woods Light can be used to display subtle accumulations of melanin in the oral mucosa or slight disturbances in the arrangement of vascular patterns or keratinized surface layer. This can be used to diagnose the early stages of fading eruptions like LE, drug reactions, syphilides and other exanthems.

**10. Elucidation of contact dermatitis:** When the cause is unknown, fluorescence can be used as a guide to detect allergens e.g., cosmetics.



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11. Detection of the still persistent mineral oil on skin even after washing can be used as a test for barrier creams.

12. Fluorescent markers can be used in medications to determine cutaneous penetration of various medicaments.

13. Former uses:

- Woods Light was used for photopatch testing. Advent of better sources has made this use only of historic interest.
- Oestrogenic activity in the reproductive age produces a purple fluorescence of the vulva. This fluorescence was used as an indicator of oestrogenic activity.
- Detection of application of topical medicaments e.g., Tetracyclines.
- Fluorescein dye can be used to mark sites of patch testing. Since demarcation is visible only under Woods Light, there is no interference with results.
- Corneal abrasions can also be detected after instillation of fluorescein drops.

### Therapeutic uses:

Woods Light was used in treatment of vitiligo earlier in combination with psoralens. PUVA chambers have replaced Woods Light. As a placebo it was used in treating multiple warts in children. Woods Light has been found to affect the development of tumors induced by artificial carcinogenesis.

### Investigational uses:

To help identify the phototoxicity of cosmetics.

Malignant neoplasms may fluoresce spontaneously or after imbibing a fluorescent substance like Tetracycline. This has helped in exfoliative cytology of lesions of GIT or respiratory tract and also in direct observation of malignancies.

Bright red fluorescence may be seen in squamous cell carcinoma of the skin and non-malignant leg ulcers. Proto and coproporphyrins are presumed to be the cause.

Woods Light was found to have a sterilizing effect on Staph, aureus and Mycobacteria and is used to sterilize culture media.

Fluorescein injected into blood vessels helped to locate arterial arborization in feeding areas, and to study tissue death.

The quantity of toiletries or cosmetics to persist in the skin can be assessed by repeated Woods Light examination.

Though Woods Light has a wide variety of applications, it is yet to be used as a routine diagnostic tool. This simple, inexpensive safe instrument is helpful if one bears in mind the basic principles behind its use. Woods Light can thus be considered as an equipment necessary in everyday office practice.

### REFERENCES:

- Captain RM. Medical uses of the Woods Lamp. JAMA 1967, 202, 11:123-126.
- Gilchrist BA, Fitzpatrick TB, Rox TA et al. Localization of melanin pigmentation in the skin with Woods Lamp. Brit. J. Dermatol. 1977, 96:245-249
- Eaglestein W, Pariser DM. Woods Light examination. In: Office Techniques in Dermatology, McGraw Hill Inc., 1982 - 40 - 52.
- Amdt. KA. Diagnostic and therapeutic techniques. In: Manual of Dermatologic Therapeutics, 4th Edn., Little Brown and Co., 1989, 182-183.
- Rippon JW. Introduction to Medical Mycology. In: Medical Mycology, 2nd Edn., WB Saunders Co., 1982, 10.
- Rook A, Wilkinson DS, Champion RH. The principles of diagnosis. In: Textbook of Dermatology (Rook A, Wilkinson DS, Ebling FJG, Champion RH. eds), 4th Edn., Blackwell Scientific Publications, 1986, 61-62.
- Ward CG, John GC, David Tetel. Woods Light fluorescence and Pseudomonas burn wound infection. JAMA 1967, 202, 11 : 127 - 128.
- Mosher DB, Fitzpatrick TB, Ortonne JP et al. Disorders of pigmentation. In: Dermatology in General Medicine (Fitzpatrick TB, Eisen AZ, Wolff K, Freedberg IM. eds.), 3rd edn., McGraw Hill Inc., 1987, 853.
- Chon M, Middlebrook G. Effect of near ultra - violet on staphylococci and Mycobacteria in droplet nuclei. Amer.Rev.Resp.Dis., 1965, 91:880 - 886.



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# Woods Light Examination

## FLUORESCENCE UNDER WOODS LAMP

Clinical Setting	Colout Observed	Fluorescent Compound
1. Normal skin	Blue White	Epidermal and dermal proteins
2. Infections:		
Fungal -		
T.Capitis	Bright Blue Green	Pteridine
Microsporum sps		
T. Schoenleini	Pale Green	
T. Versicolor	Yellow (active)	
	Pale White (treated)	
	Yellow	
Bacterial -		
Pityrosporon sps.	Yellow	
Pseudomonos sps.	Aqua or White Green	Pyoverdin or fluorescein
Erythrasma	Coral Red or Pink	Coproporphyrin III
Coryneforms (acne, tongue, acanthosis nigricans, skin of trunk, sides of toes, gums)	Yellow	
	(in heavy colonization)	
Infestations -		
Nits (Ped. Capitis)	White	
3. Pigmentary disorders:		
Hypermaelanosis -		
Epidermal	Accentuated	
	Brown Black	
Dermal	Less evident or inapparent	
Hypermelanosis	Blue White	
Amelanosis	Procelaoom White	
4. Drugs – Tetracyclines:		
Nails, bone, teeth	Yellow	
Lunula	Pink	
5. Porphyrias:		
– PCT (urine, faeces, blister fluid, liver biopsy specimen)	Pinkish Red or Orange Red	Uroporphyrins
– Congenital porphyrias (teeth, urine, bone marrow)	Pink Orange	
6. Miscellaneous:		
Vulva (Reproductive age)	Purple	Oestrogen activity
Squamous cell carcinoma,	Bright red	Proto and coproporphyrins
Non-malignant chronic leg ulcers		

### Artefacts and Fluorescence:

Lint, cotton, fibres, dust, keratin debris, creams, salicylic acid (weak blue-violet), cosmetics, fluorescent inks (colour depends on shade), soaps, perfumes, food colouring agents (reddish brown), chandan, sandalwood and turmeric paste (Yellow), gum of sticker bindi (yellow, white).



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