

Artificial tanning (Sunless tan)



* هائي التراكيز حسب كل دولة في regulation قد
 كل دولة تسمح فيها تراكيز من هائي اطواد
 * تراكيز مختلفة معناها اني shades مختلفة من Bronze

Artificial tanning (sunless tan):

- Artificial sun tanning preparation contain a substance called **dihydroxyacetone** in concentrations of **2.5 – 10%**.

This substance reacts with amino acids in horny layer of the epidermis. Within a few hours a suntan-like color appears in the skin which may last for three to five days

The color resulting from this substance disappears gradually as the cells of the outer layers of the epidermis proceeds towards the surface of the skin and are shed naturally

Dihydroxyacetone does not protect the skin from the sun's rays.
 So an effective sunscreen must be used during exposure to the sun

* ليتحتوي مواد تفاعل مع ال a.a الموجودة
 بار SC ويتعطي ال Brown shades المختلفة

* هاد اللون الي نتج من التفاعل حاله خلافة بانه ريمي الحبله من
 اشعة الشمس يعني حصولك على اللون حافتي حماية اكثر

DHA

prodye = هو نفسه ما الة لون
زي ما حكتنا لازم يتفاعل مع
ال amine group يا انا حتى يتحول للون
الأكسدة
للأكسدة

Maillard reaction بسوّه = Sugar (DHA) + amine group
* تفاعل ال

- DHA is a prodye
- About three to four hours a tan color begins to appear
- The reaction is complete in about 24 hours
- Areas of thicker skin react more with DHA so areas around fingernails, palms and soles react to produce a stronger color
- Apply the product with gloves
- DHA reacts with protein in the SC the outermost surface of the skin forming a brown color
- The color stays until the skin is sloughed off
- One problem with DHA tan is the odor during the development of the brown color
- The odor is a sign that tanning reaction is occurring
- This is the same reaction that causes carmelization of food such as sugar and the browning of the outside of breads

* بعض عنا تفاعل
لمدة 24 ساعة لحد
ما يعطيك اللون
كامل

المناطق الي فيها Thicker SC
زي حولين الأنف ، palm ، Sole of feet
بكون اللون فيها اغمق

عشان
تحمي كف

اليد من انه

يعطي لون

خافق لازم

نلبس gloves

تنتبه حايجي

ال odor عا

ال palm

of your hand

لانه اللون رح

يهر كثير خافق

لما يصير عنا تفاعل يتطلع ريحة فوكتير مقبوله
هاي ال odor معنا صار عنا reaction

نفس DHA تفاعل
مع الـ α, α تكونه البروتين
الكيراتين الموجود بالـ SC

Erythrulose

- Erythrulose is a natural keto-sugar which reacts with the amino acids of keratin in the epidermis of the skin to produce a brownish coloration, similar to how DHA reacts

الـ Tan الي بطلع بختفي او بروج اسرع فتره-بار DHA
* الفرق بين وبين DHA انه به وقت اكبر ليعطي اللون و مكان

- Applied by itself, erythrulose takes longer to produce a tan, and the resulting tan fades quicker. The tan produced is also more red than brown in appearance. However, when combined with DHA, the tan reportedly lasts longer, fades better, and provides a more attractive tone. Erythrulose, however, has also been shown to increase production of free radicals similar to the effect seen with DHA

بذات نفسه انه
صاد التفاعل
DHA + α, α
او الـ Erythrulose + α, α
ينتج عنه
Free radicals
اي بغيري تأثيرهم
الضار على
الجلد

احتماله تاني
انه لون
التاني الي
بيطلع بيفيل
الي الاحمر
اكثر من البني
بالمقارنه مع
DHA

* عادة الـ product الموجوده تكون عبارة عن Combination
من الـ (Erythrulose + DHA) حتى يحصلوا على الاختصاص
تأثيرات المادتين

Precautions:

بده يمنع عن الاستخدام اطي على المنطقة الي بده يحط عليها ال Tan لساعة او اكثر
مق يشتغل لانه لو كان في مي خارج يشتغل هاد التفاعل

- Care should be taken to avoid wetting the body for about an hour after applying the preparation since this would prevent the appearance of artificial tan

- The preparation should not be allowed to get onto the scalp hair or the eyebrows since it may change the color of the hair
وين
عائى a.a
الكيرح يتفاعل

- The substance should be kept away from clothing since it may leave stains
ومو حلو
قشرة الردس يكون
لونها بني - برتقالي
او مقى قمر الحوايج
مق الاوعى تبعه لوفيتها بقايا من العرق و a.a
رج يصير عليها صبغة فبده ينسبه انه ببعد ال product عن الاوعى مقى ما
يصير علفها

- Before using the preparation it should be tried out first on a concealed area to check that there is no adverse reaction and to confirm that the skin color is the desired shade

تنصحه يستخدم المستحضر على جزء مخفي من جلده
مق يتأكد انه هاد اللون الي بده اياه بعددين على المناطق الثانية



Precautions:

- A thin, even layer of the preparation should be applied so as to avoid the appearance of uneven blotchy color of different shades
- The hands should be washed after using the preparation to avoid staining the palms
- A soap with basic pH should not be used to wash the body before applying the preparation since the resulting color will tend to be more yellow rather than the desired brown shade
- If a single application of the preparation does not produce a dark enough tan, it may be reapplied a few hours later

انه عشان ما يطالع اماكن
التان فيها غافق واحاكن فاتح

ازا استخدمه
حره وعا كان
اللون المناسب

اله عادي
يستخدمه مكان
دور ليحصل ع
اللون المطلوب.

بس طبعاً به يستوي
عرة ساعات ليتأكد انه
اللون ثبت ویشوف بعدين
نقام او لا

* ما يستخدم صابون ال pH ساعته قاعده زي الصابونه
النابلسية قبل ما يستخدم ال Tanning product لانه استخدمها
قبل رح يخلي اللون يميل للأصفر اكثر من ال Brown shade

ليس غالباً هو موجود بالاردن هباد
رش على الجسم هادي الرشاه هو عواقب عليها
بار FDA . لساترش هباد ال spray على جسد رح يوصل لماكن هوه فالخزم يومها

What does this mean for DHA spray "tanning" booths?

As noted above, the use of DHA in "tanning" booths as an all-over spray has not been approved by the FDA, since safety data to support this use has not been submitted to the Agency for review and evaluation, When using DHA-containing products as an all-over spray or mist in a commercial spray "tanning" booth, it may be difficult to avoid exposure in a manner for which DHA is not approved, including the area of the eyes, lips, or mucous membrane, or even internally.

Consequently, FDA advises asking the following questions when considering commercial facilities where DHA is applied by spraying or misting:

- Are consumers protected from exposure in the entire area of the eyes, in addition to the eyes themselves?
- Are consumers protected from exposure on the lips and all parts of the body covered by mucous membrane?
- Are consumers protected from internal exposure caused by inhaling or ingesting the product?

If the answer to any of these questions is "no," the consumer is not protected from the unapproved use of this color additive. Consumers should request measures to protect their eyes and mucous membranes and prevent inhalation.

Has FDA received reports of adverse reactions associated with sunless tanners?

FDA has received reports from consumers stating that they have experienced adverse events associated with sunless tanning, including rashes and, primarily in the case of spray tanning booths, coughing, dizziness, and fainting. It is uncertain what, if any, ingredient or combination of ingredients in the sunless tanning products might have caused these adverse events, whether an individual's allergic reaction might have played a part, or whether factors unrelated to the sunless tanning products may have been involved, such as pre-existing medical conditions.

Under the authority of the Fair Packaging and Labeling Act (FPLA), FDA requires ingredient declarations on cosmetics sold on a retail basis to consumers. In this way, consumers can know what ingredients are contained in the products they purchase and avoid ingredients to which they may be sensitive. However, the FPLA does not apply to products used exclusively by professionals, such as those used in spray tanning booths.

Accelerators:

cosmetics that enhance tanning

- One method to enhance the tanning process is to alter the biophysical properties of the skin allowing more UV radiation to penetrate to the melanocyte layer of the epidermis
- Oils permit greater amounts of UV radiation to enter the skin
- They have SPF of less than 1
- Meaning that a burn develops faster in the presence of oil on the skin than in the absence of the oil on the skin. some lotions may have a similar effect

* زيوت قبل ما تقعد تحت الشمس هاي اسرها Tanning accelerators
مبدأ عملها انه لما تخطها على الجلد انت تفتير
ال Biophysical properties تلتج الجلد عشان تخلي
More UV radiation يصير له penetration للـ skin

* الـ SPF لبعض الزيوت
Minimal erythema dose
وجود الزيت على بشرتك رح تكون
اقل من الـ MED لما ما يكون
الزيت • معناها بيصير البشرة
تتأثر بالشمس اسرع ويمكن
يصير Burning اسرع.

Tanning oils:

- These are oils that are applied to the skin
- The skin color achieved using these oils is no different from the normal color that result from exposure to the sun without these oils

* فا في شي اسمه Safe Tanning ← ال Tanning يعني انت قاعد بتعرفين
بشركك لا مدة لفترة معينة حتى تحفز هاي الخلايا ال Melanocytes
تصنع Melanin معناها إنت بلبت inflammatory reaction بجبلن. طالما ال Melanocytes
مبارت تصنع Move Melanin معناها هاد part of inflammatory process الي بعملها الجلد عشان يعني نقه

Tanning oils:

Warnings

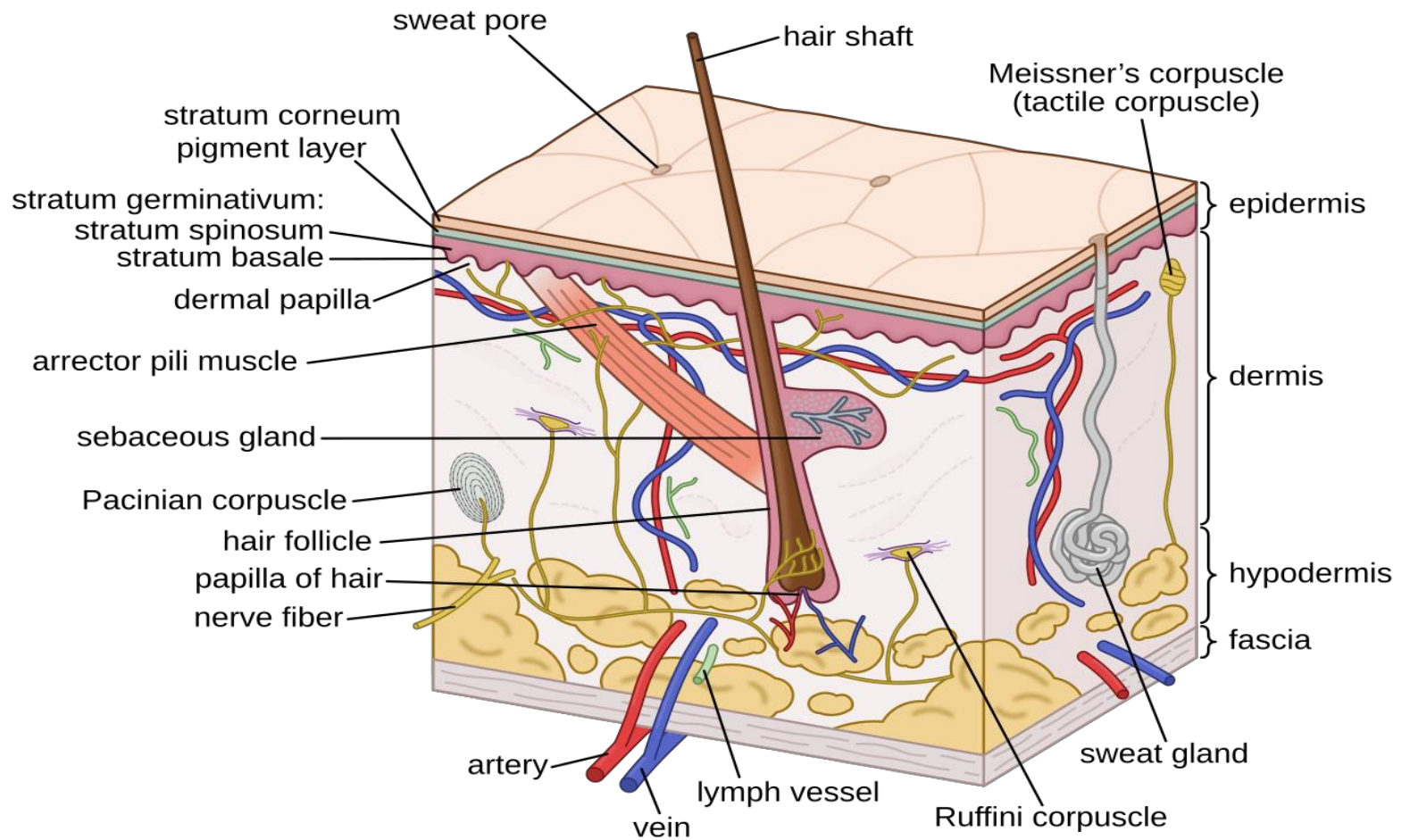
- They do not protect the skin from the sun. On the contrary, they may concentrate the sun's rays on those areas of skin covered with them and so lead to more severe damage from sun
- They may result in the appearance of :
 - Miliaria → لعل‌نازه‌های تسکری
sweat glands
 - Acne

Miliaria: results from obstruction of the sweat glands by the tanning oil



Acne: results from obstruction of sebaceous glands by the tanning oil





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Miliaria

sweat
gland تسكير
pore



Milia



<https://dermnetnz.org>

Miliaria

- Miliaria is a common skin disease caused by blockage and/or inflammation of eccrine sweat ducts.
- Miliaria is frequently seen in hot, humid, or tropical climates, in patients in hospital, and in the neonatal period.
- Miliaria is also known as heat rash, sweat rash or prickly heat

Milia

- A milium is a small cyst containing keratin (the skin protein); they are usually multiple and are then known as milia.
- These harmless cysts present as tiny pearly-white bumps just under the surface of the skin.

Tanning bed

From Wikipedia, the free encyclopedia

"Sun lamp" redirects here. For lights used in horticulture, see [grow light](#).

A **sunbed** (British English), **tanning bed** (American English) or **sun tanning bed** is a device that emits [ultraviolet radiation](#) (typically 95% UVA and 5% UVB, +/-3%)^[*citation needed*] to produce a cosmetic [tan](#). Regular tanning beds use several [fluorescent lamps](#) that have [phosphor](#) blends designed to emit UV in a spectrum that is somewhat similar to the sun. Smaller, home tanning beds usually have 12 to 28 100 watt lamps while systems found in tanning salons can consist of 24 to 60 lamps, each of 100 to 200 watts.^[*citation needed*]

There are also "high pressure" tanning beds that generate primarily UVA with some UVB by using highly specialized quartz lamps, reflector systems and filters. These are much more expensive, thus less commonly used. A [tanning booth](#) is similar to a tanning bed, but the person stands while tanning and the typical power output of booths is higher.

Because of the adverse effects on human health of overexposure to UV radiation, including skin [cancer](#), [cataracts](#), and premature [skin aging](#), the [World Health Organization](#) does not recommend the use of UV tanning devices for cosmetic reasons. Studies have shown that tanning bed usage is associated with an increased risk of [skin cancer](#), including [melanoma](#).^{[1][2]} Misusing a sunbed by not wearing [goggles](#) may also lead to a condition known as [arc eye](#) (snow blindness). Occasional acute injuries occur where users carelessly fall asleep, as in the case of [Marty Cordova](#).^[3]



A tanning bed, with lights off



- Water
(Aqua), Propanediol, **Dihydroxyacetone**, Glycerin, Aloe Barbadensis Leaf Juice Powder*, Heptyl Undecylenate, Argan Oil Polyglyceryl-6 Esters, Centella Asiatica Meristem Cell Culture, Hydrolyzed Algin, Caprylic/Capric Glycerides Polyglycerin-10 Esters, Sodium Hyaluronate, Chlorella Vulgaris Extract, Hibiscus Sabdariffa Flower Extract*, Chamomilla Recutita (Matricaria) Flower Extract*, Ascorbyl Palmitate, Vitis Vinifera (Grape) Seed Oil*, Citrus Aurantium Bergamia (Bergamot) Fruit Oil*, Cetearyl Glucoside, Alcohol Denat, Maris Aqua, Polyglyceryl-4 Caprate, Cyamopsis Tetragonoloba (Guar) Gum, Xanthan Gum, Fragrance, Gluconolactone, Potassium Sorbate, Sodium Benzoate

يكون في SPF على اساس يعطيك شعور انه انت لما تحطه
 رح يمين شوية protection من الشمس.



- Coco-Caprylate, Coco-Caprylate/Caprate, Cocoglycerides, Diethylamino Hydroxybenzoyl Hexyl Benzoate, Ethylhexyl → Sun screen ingredient
 Methoxycinnamate, Isoamyl Laurate, Dicaprylyl Carbonate, Ethylhexyl Salicylate, Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine, Helianthus Annuus Hybrid Oil*, Undecane, Ethylhexyl Triazone, Tocopheryl Acetate, Olea Europaea Fruit Oil*, Daucus Carota Sativa Root Extract, Vitis Vinifera Seed Oil*, Lycopene, Beta-Carotene, Glycine Soja Oil, Helianthus Annuus Seed Oil*, Punica Granatum Seed Oil*, Tridecane, Brassica Campestris Seed Oil, Rosmarinus Officinalis Leaf Extract, Tocopherol, Sorbic Acid, Parfum

ال SPF لما امكن 30 معناها
 we are protecting our skin
 من نسبة معينة من ال UVB ولكن
 فا يعني انني قاعد بعمل حماية من الشمس
 بالعكس بوجود ال oil اذا قلنا زي سرعة
 تأثر خلايا الجلد بوجود اشعة الشمس

different oils from
 different plants