

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Sun tanning

آخر محاضرة الاربعاء ١٤ كانون اول ٢٠٢٢

+محاضرة الاثنين ١٩ كانون اول

Artificial tanning (Sunless tan)



عملية ال tanning من غير التعرض لاشعة الشمس .

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

هاي المستحضرات mainly بتعتمد على مكون اسمه Dihydroxyacetone واختصاره DHA والتراكيز المختلفة هي اللي بتعكس التدرجات المختلفة افتح او اغمق وهكذا ويتكون من ٢.٥-١٠ % .

لما تحطها ع سطح الجلد تبعدك بتتفاعل من ال amino acids الل موجودة بال stratum corneum في الجلد وخلال ساعات بتعطيك ال suntan like color وممكن يضل من ٣ ل ٥ ايام ، وهذا ال color رح يختفي مع الوقت كل ما صار عندك desquamation .

وبدك تعرف انه ال sun tanning ما بيعمللك sunscreen او اي protection زيادة من اشعة الشمس لانه هاد مش ميلانين عزيزي هاد بس لزن تكون من التفاعل اللي صار على سطح الجلد .

DHA

- 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
- طبعاً ال DHA هي عبارة عن prodye لانه هي بطبيعتها مافيه لون بس لما تحطها عالجـلد وبتتفاعل مع ال amino acid of keratinocyte بالجلـد بيتكون اللون .
- المناطق اللي فيها thicker skin بيكون التفاعل فيها اقوى ف بتعطيك لون اغمق بهاي الاماكن فلازم تنتبه وانها بتحطها وتلبس gloves برضه .
- بدك تنتبه انه التفاعل اللي بيصير بين ال DHA and amino acids في اله رائحة فهـاي وحدة من المشاكل بس هي علامة انه بلش التفاعل .

Precautions:

- 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
- The substance should be kept away from clothing since it may leave stains
- 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

ما لازم تغسل بعد ما تحط ال DHA لانه رح يروح اللون ومش رح يثبت .

ما لازم ينحط عالشعر او الحواجب لانه برضه بيصبغهم .

اواعيك لو كان فيه عرق او اي AMINOACID برضو رح توخذ اللون .

جرب المستحضر على منطقة مخفيه من جلدك اول شي لانه ممكن ما يعجبك وتندم انك حطيت منه .

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

لازم تحط طبقة رقيقة لانه كل ما زدت الطبقة كل ما تغير اللون وصار اغمق .

والايدين لازم ينغسلوا منيح لانه رح يعطي لون قوي جدا عليهم .

انتبه من استخدام الصابون خصوصا النابلسي لانه قاعدية قبل ما تحط ال DHA لانه رح يصير يعطيك لون رايح ع اصفر بدل اللون البرتقالي اللي المفروض يصير .

اذا اول مرة حطيته وما اعطاك اللون اللي بدك اياه ممكن تحط كمان مرة عادي .
هيك خلصت المحاضرة الاولى .

حكينا المرة الماضية عن الDHA وانه اهم المكونات بمستحضرات الtanning عشان تشتغل بتنحط عالجذ وبتتفاعل مع الamino acids الموجودة بال keratinocyte بالجلد وبتعملك لون طبعاً بتركه ٢٤ ساعة وكل ما حطيت كمية اكبر كل ما صار اللون اغمق وبدك تنتبه ما تحطه عالاظافر ولا المنطقة المحيطة لانه كل ما كانت طبقة الجلد thicker كل ما كان تاثير اللون اغمق .

اللون بضله يخف شوي طالما عندك desquamation وبدك تنتبه انه بتطلع رائحة اثناء التفاعل ولازم تنتبه لما تعمل wetting for body لحوالي ساعة بعد ما تستخدم المستحضر ولا ببيجي عالشعر او الاواعي لانه كله بياخذ لون وجرب على مكان مخفي قبل ما تحطه على كل جسمك .

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
- 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

هاي مادة ثنائية غير ال DHA بتلاقوها بالمستحضرات نفس المبدأ بيتفاعل مع ال amino acids اللي موجودة بال keratinocytes بس بدك تعرف انه صح بيتفاعل وبيعطيك اللون بس بيطول ليهيك المستحضرات ما بتعتمد عليه كمادة اساسية لل tanning ف بيعملوا combination with DHA .

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
- هون رجعت حكت على موضوع ال soap وانك ما لازم تستخدمها قبل ما تحط ال tanning product رح يصير لونه اصفر ومثال على الصابون ال high PH

هي الصابونة النابلسية والمصنعة بالطريقة التقليدية والتي يعتمد تصنيعها على القواعد مع الأحماض الدهنية فال PH لالها يبطلع عالي .

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.

Activate V

(مش راضي يطلع الخط بالصورة اكبر من هيك معلش)

بذكّم تعرفوا انه في هسا حاليا DHA Spray هاد مش موافق عليه من ال FDA لانهم بيعتبروا انه ممكن يدخل بالنفس وما بنعرف قديه ال Safety تبعته .

احيانا عشان يسرعوا عملية ال tanning بيرشوا عليك ال tanning product وبعدها بيعرضوا الشخص ل UV light هاي الالية غير موافق عليه كمان .

هون مثلا الالية في عليها questioning marks محطوطين بالسلايد بس هي بتنعمل بالمراكز و هيك (كيف لما حكينا عن ال micro needling وانهم بيحقنوا جواه سيرومات معينة ، بس ال FDA وافقت على هاد السيروم ك topical not injection ومع هيك لساته بينعمل) .

المهم انك تبعدّه عن العين وعن ال mucus membrane او انك تستنشق منه لانه ما بنعرف ال safety تبعتها .

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.

هل الFDA اجاها اي report على موضوع ال sun tan ؟

اه ، ناس صار عندهم مضاعفات مثل ال rash وغيره .

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

ال oil من ال accelerators لانه الزيوت بطبيعتها بتجمع الحرارة وال radiation وعندهم SPF اقل من ١ يعني بيزيدوا احمرار جلدك لما تتعرض للشمس مقارنة بلما ما تكون حاطط اشئ عبشرتلك او ما يكون موجود .

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

إذا اللون اللي بتحصل عليه لما تحط الزيوت هاي ما بيختلف عن اللون اللي بتحصل عليه لما تتعرض للشمس بالوضع العادي (يعني بيصير حرق شمس مش لون برونز للجلد او على برتقالي) بس بيكون اسرع .

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 sever damage from sun
- They may result in the appearance of :
 - Miliaria
 - Acne

بدك تنتبه انه ما بيحامي بشرتك من الشمس بالعكس انت بتزيد من تأثير الشمس على الجلد وفوق هيك ممكن يعملوك acne لو انت عندك acne prone skin واشي تاني اللي هو miliaria الصورة تحت بتوضحلك اياه .

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



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



هاي الصور بتوضح الفرق بين ال acne (اللي حكيئا عنه انه علاقة بال sebaceous gland المربوطة مع الشعرة وانه يصير تسكير لالها) وال Miliaria (اللي هي مربوطة بس بال sweat gland وبيصيرلها تسكير برضو وهاي مش مربوطة بخلايا الشعر).

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**.^[12] 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



Saja Hamed, Ph.D

12/24/2022

حكيئا عن دول وانهم مش approved from FDA وبالعكس هم the most damaging thing ممكن تعمله لبشرتك وانت بعز شبابك سواء تحت اشعة الشمس المباشرة او باستخدام ال tanning bed .

طبعا بال tanning bed بيكونوا عاملين تركيز لل UVA وانتو بتعرفوا انه ال UVA هي ال aging wave واللي رح نحكي عنها بال sunscreen كثير .

برأيها انه فش حدا عاقل بيروح يعرض بشرته لل UVA وبيعرف شو بتعمل لبشرته اضرار .



- 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

12/24/2022

في ناس لما بدها تعمل tanning بتروح تحط sunscreen (طبعا ال sunscreen ما بيعمل blocking لكل اشعة الشمس وبدك تعرف كمان انه حسب كل المختصين بالبشرة انه ال sunscreen its not enough to protect the skin من الشمس بالاساس ال sun glass, clothing, hats ، avoid mid day sun ، بعض لازم تعملها).

طبعا شوفوا مكونات المنتج :

Prpanediol >>> solvent like glycerin give some humectant effect
DHA>>> the main ingredient .



- Coco-Caprylate, Coco-Caprylate/Caprate, Cocoglycerides, Diethylamino Hydroxybenzoyl Hexyl Benzoate, Ethylhexyl 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

12/24/2022

هاد كمان منتج وشوفوا مكتوب عليه suncare tan طبعاً هو لا care ولا غيره بالعكس تماماً، ومحطوط عليه كمان SPF 30 وكمان UVA protection وبدك تعرف انه وجود ا sunscreen جوا ال tan مش رح يحمي بشرتك ممكن يحميها شوي بس، بس اصلاً هو لسا عنده القدرة يمتص UVB at range معين ومش رح يعمل blocking لكل اشعة الشمس .

المكونات :

Ethylhexylmethoxycinnamate >>>sunscreen .

Hydroxy benzoyl hexyl benzoate >>>sunscreen.

Ethylhexyl salicylate >>>sunscreen .

Triazine >>>sunscreen .

كل اللي مكتوب فيهم oil هم ال tanning .

في عندك b-carotene هاي اللي بتعطي اللون الاورنج وهي جاي من الجزر .

واخر شي بترجع تحكي انه وجود sunscreen فيه ما بيحمي من اشعة الشمس ،
وانه اصلا لو حطيت sunscreen عادي ورحت عالبحر وعرضت حالك للشمس
برضو رح يصيرلك skin damaging from sun light لانه ما بيعمل
blocking to whole UV range.

وسلامتكم خلص الشابتير .

اه لازم نشكر زميلتنا ديمه سرطاوي اللي وفرتلنا جزء من الريكوردات الله
يجزيها عنا كل الخير ادعولها وادعولي .

Zainab Al-zwahreh