

DHA APPLICATION SAFETY

What is DHA?

The DHA (dihydroxyacetone) used in tanning is a simple 3 carbon sugar. Unfortunately, DHA is also the abbreviation for the important omega 3 fatty acid, docosahexanoic acid, popular in health food supplements. Please don't confuse the two. DHA, tanning, reacts with amino acids in the outer layer of the skin, the stratum corneum, to produce a tan coloring.

DHA is derived from glycerol by fermentation. Glycerol may be derived from sugar beets or sugar cane processing, as a by-product from bio-fuel production, or through synthetic means. Eco-Cert DHA has become quite popular in tanning solutions and assures an organic vegetable based source for glycerol.

Cosmetic colorants are tightly regulated by the FDA. DHA is approved by the FDA for external application only. Mucous membranes are classified as internal. So, the eyes, lips, and nose should be protected. The FDA (www.FDA.gov) recommends that the following measures be taken:

1. Use protective eye wear. The FDA regards the eye area to include the orb or socket of the eye. Color on an eyelash or eyelid can be rubbed, washed or otherwise deposited in the eye after application. So, the eye area, not just the eye, must be protected.

2. Protect from inhalation risk. Supply the client with nose filters. The technician may use a nose filter or opt for a respiratory mask.

3. Seal the lips with lip balm. Moisturizers tend to block absorption of DHA solution. But products with a wax component in addition to moisturizers will tend to form a complete block. Lip balms and lip sticks in a rigid stick form get their hardness from waxes.

4. Use protective undergarments.

DHA is readily water soluble. So, if despite the above measures, some DHA were to get on a client's lips or in the eyes, have them flush the area with water.

If you apply spray tans with a handheld device, you have the opportunity to precisely adjust equipment and to accurately control application to minimize your client's exposure. But, you also need to ensure that adequate air filtration and ventilation is provided. Simple but effective extractors consisting of a box fan with attached filter and filter holder are quite inexpensive. Replacement filters should be effective at removing things like hair spray, or particles down to about 3 microns in size (minimum MERV rating of 8 for fan filters). More capable professional spray tan extractors typically cost over \$200.00 and extraction towers typically cost over \$1000.00. Both are good values for the capabilities they provide.

A good air filtration system is the single most important thing you can do to guard against inhalation risk by client and technician. This will maximize the benefit from the FDA recommendations.