

# TATTOO



Cover-Up · Lightening · Refinement & Removal by Laser



# SkinClear<sup>®</sup> TA-2

*Q-Switched Nd:YAG Laser*

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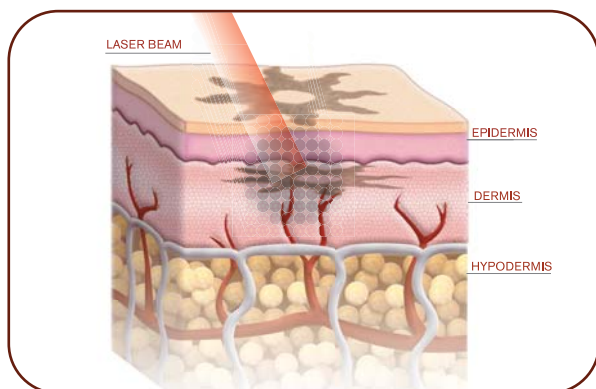


photos courtesy of Thomas Barrows, MD - Minneapolis, MN

## The Science of Tattoo Removal

During the process of tattooing, the tattoo pigment ("ink") is driven into the skin and deposited within the skin's dermal layer. Left untouched, the majority of the entrapped pigment will remain intact indefinitely.

Through a process known as selective photothermolysis, **SkinClear TA-2** selectively targets and fragments most tattoo pigments while leaving surrounding tissues unharmed and intact. The body then eliminates the resulting smaller tattoo ink particles by phagocytosis.



## Technical Specifications

- Type of Laser:** Nd:YAG Laser
- Pulse Energy:** Variable, 200 mJ, 400 mJ
- Fluence:** Variable, up to 50 J/cm<sup>2</sup> with 1 mm spot size
- Pulse Width:** 10 ns
- Pulse Rate:** 1-5 Hz
- Laser Beam Delivery:** Direct-delivery beam
- Cooling:** Water cooled
- Weight:** 31 lbs (14 Kg)
- Power Supply:** 220 V, (1.5 A/60 Hz)

## Dual Wavelengths (1064 nm or 532 nm)

**SkinClear TA-2** incorporates a KTP crystal frequency doubling dual wavelength feature to allow the user to easily change from a 1064 nm to a 532 nm single-wavelength laser beam. The frequency doubling dual wavelength feature allows you to treat multiple indications and several different tattoo colors and pigments.

## Super "Q" Passive Organic Crystals for Optimal Performance

Most lasers use active/mechanical means to accomplish Q-Switching. These mechanical methods can include electrical switches (utilizing the "Pockel's effect"), rotating prisms and acousto-optic Q-Switching. Mechanical Q-Switching methods require periodic maintenance and calibration to retain optimal efficiency.

**SkinClear TA-2** utilizes a proprietary, organic saturable absorber for its method of Q-Switching inside the laser cavity. When the passive crystals become fully saturated with the 1064 nm energized photons, they quickly release the stored photons in a nanosecond burst of pure 1064 nm energy. The passive crystal method of Q-Switching, by design, offers the same high-speed release of energy as devices utilizing mechanical switching, but with improved reliability, economy and longevity. **SkinClear TA-2** also requires less maintenance due to having fewer optical elements inside the laser cavity.



## Self Contained Laser Handpiece

No more cumbersome, delicate articulated arm and mirror systems. **SkinClear TA-2** features a high-performance optical cavity contained within an easy-to-hold laser handpiece.

The direct delivery laser handpiece replaces the high maintenance articulated arm and multiple mirror systems used in many other lasers. The laser handpiece is low-maintenance, requires no alignment and requires only an annual re-calibration. The short optical cavity produces a higher "Q" (i.e., quality of the cavity relative to loss of energy) with lower energy loss and a desirable high powered laser pulse. The compact, self-contained cavity produces a direct delivery output pulse with a flat ("top-hat") beam profile. 'Direct Delivery' provides even distribution of laser energy to the target, with minimal risk of collateral damage to the tissue.



## Contact Information

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