

Biodegradable Inks Make Tattoo Removal Easy, Affordable

Massachusetts General Hospital



People get tattoos for lots of reasons that seem great at the time — but as life and love change, tattoos, especially if they are highly visible, may cause problems. Removing a tattoo can be painful and expensive and may lead to permanent skin damage and scarring. But that doesn't have to be the case.

“*Massachusetts General Hospital in Boston has developed a safe, removable ink that is both biodegradable and bioabsorbable.*”

Rox Anderson, M.D., of Massachusetts General Hospital's Wellman Center of Photomedicine, became interested in the chemistry of tattoo ink when one of his patients developed a severe reaction to a permanent tattoo. After several years of research, Anderson invented microencapsulated biodegradable and bio-absorbable dyes within safe, colorless polymer beads. The dyes are made from natural pigments and enclosed in tiny beads several microns in diameter, which are injected under the skin. To remove the tattoo, a laser is passed over the tattoo, which ruptures the beads and releases the inks, which are then safely absorbed by the body.

This technology is licensed to Freedom-2 Inc., a startup company founded in 1999 by Anderson to commercialize biodegradable Freedom-2™ tattoo inks. The company is continuing to research and develop new engineered ink products using well-established, safe, biocompatible materials that provide both high-quality art and easy removability.

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