

## **History of Microdermabrasion**

Microdermabrasion machines have been in use for many years and had their beginnings in Europe, approximately 1986, long before they were brought into the U.S. Some of the first microdermabrasion systems were made by a company in Italy by the name of Mattioli Engineering and marketed under the name of Pepita, Ultra Peel, Crystal Peel and, recently, AesthiPeel, among others. Mattioli Engineering's system was the first microdermabrasion machine imported into the U.S. in early 1997 by Fred DeJacma, owner of ALI (Aesthetic Lasers, Inc.), a laser distributor, and was marketed under the name of Power Peel.

These early systems had to be cleared by the FDA because they were originally labeled as a Class 1 Medical Device, requiring each microdermabrasion machine to be issued a 510(k) clearance letter. In January of 1998, the FDA reclassified these devices as Class 1 exempt status, which does not require a 510(k) clearance letter. Due to this change in FDA classification, a few machines have 510(k) clearances while the majority of others do not. Currently, it is only necessary (but not required) to register the manufacturer and device name with the FDA. A 510(k) is no longer needed and a microdermabrasion machine that has a 510(k) clearance is not necessarily a higher qualified machine than one that does not have such a clearance.

Microdermabrasion itself, or the treatment, is actually a precision sandblasting of the skin. The original design by Mattioli Engineering utilized two motors: one that generated negative pressure (a vacuum motor) and one that generated positive pressure (a compressor motor). The crystals were shot out of the handset at the skin by the positive air pressure generated by the compressor motor and then picked up, along with the skin debris, by the vacuum generated by the vacuum motor. Since it was very difficult to balance the two powers, positive air pressure and vacuum pressure, there was a substantial mess associated with early microdermabrasion treatments. Often it would happen where more crystals were delivered to the skin by the compressor than could be picked up by the vacuum so there would be crystals spilling out all over a client's face, into eyes, ears and nose. The current technology utilizes a vacuum motor only and is a much more balanced process, resulting in much fewer microdermabrasion treatments creating a noticeable mess.

In late 1997, an engineer by the name of Al Metcalf designed and manufactured the first piece of microdermabrasion equipment made in the U.S. This system was brought to market by Derma Genesis in various forms, both for physicians and aestheticians. The physician strength microdermabrasion models were marketed under the model names of PSS, PSR and Master Millennium. The aesthetician strength microdermabrasion models were marketed under the Dermaglow and Derma Care name.

Derma Genesis became insolvent and all of the systems in stock were liquidated in the resulting dissolution of the company. Many of these actual first model systems are still being sold under various names. That design eventually resurfaced as Genesis Biosystems, which is a current manufacturer of microdermabrasion systems. When his relationship with Derma Genesis ended, Mr. Metcalf made some improvements on the original design, formed his own company with two partners and named it Excelladerm. This company marketed two microdermabrasion systems, one for aestheticians and one for physicians. Excelladerm also manufactured systems for Coherent Laser, which is now Lumenis, under the model name of Skin Scape. Mr. Metcalf and his partners had a difference of opinions so he left in 1999, made some additional improvements to his design and formed his current company, which markets three models of microdermabrasion systems under the names of Bella Micro, Belladerma and Bellamed. It is a common understanding that the majority of systems ever sold, manufactured by

some 60+ microdermabrasion companies here in the U.S. and abroad, are some variation of the original Derma Genesis design.

Over the course of time, numerous manufacturers have ventured into the competitive microdermabrasion market. In addition to the ones covered in the previous paragraph, some of the early companies are MegaPeel, Parisian Peel, SmartPeel, EuroPeel, MD Peel, ProPeel, Edge Systems (also known by their model name Delphia), to mention a few. Some other companies that are, or have been, competing in this market are: Skin-for-Life, Skin-A-Peel, PellePeel, MedicPeel, I-Peel, VitaPeel, S.T.Peel, French Peel, Micro-Peel, Rapid Peel, DermaPeel, Diamond Peel, Diamond Dermabrasion, DiamondSkin, DermaSante, Athena, SilhouetteTone, Synergie, E-Serenity, Imagederm, MicrodermX, TaBella, Reviva and Rejuvasilk. Some of those companies listed have retained their original ownership while others have gone through various forms of restructuring, optional or forced. There will most likely be more companies entering this market and many more will quietly disappear.

A recent technological development in the microdermabrasion market is the emergence (and reintroduction) of two alternative ways to mechanically exfoliate the skin. One of these options is to offer a substitute to aluminum oxide (aluminum oxide is the primary choice of crystal material for microdermabrasion treatments). Promoted as a "natural" alternative, some manufacturers offer systems that utilize only crystallized baking soda, salt or other organic materials such as walnut shells. The interesting thing is, aluminum oxide is actually a colorless sapphire and a naturally formed crystal: about as natural as possible. The other "new" microdermabrasion technology is a form of dermabrasion. Dermabrasion has been performed by skin care technicians and physicians for decades, maybe even centuries. Commonly referred to as crystal free microdermabrasion, non-crystal microdermabrasion or diamond tip microdermabrasion, these systems perform a manual scrubbing of the skin with a tool that is equipped with an abrasive surface very similar to sandpaper. Both types of technology have grown due to the spread of false information claiming that aluminum oxide crystals are dangerous (a rumor that was allegedly propagated by companies who offer the alternative technology). As the commercial demand for these "new" options have grown, most of these companies have dramatically scaled back, or discontinued altogether, their unsubstantiated claims of the "dangers" of aluminum oxide and now only hint of a possible link to illnesses associated with the natural crystal material. However, the damage has been done: a sizeable percentage of the consumer population (and the aesthetic and medical profession too) incorrectly believe that aluminum oxide crystals are harmful. Anyone who is concerned or has questions should take the time to actually read the articles and reports on the true clinical studies involving aluminum oxide and reach their own conclusions.

Examples of the companies that offer systems which use only baking soda, salt or organic particles as abrasive crystals in place of aluminum oxide are: Dermaglide, Salt-A-Peel, and maybe a couple others. The companies that offer the non-crystal microdermabrasion, also known as crystal-free microdermabrasion or diamond-tip microdermabrasion, are DiamondTome, NewAPeel, DiamondSkin, SilkPeel, Vibraderm, Multiderm and a few other lesser-known manufacturers. There are also numerous companies who market a microdermabrasion system capable of performing both types of treatments, with or without crystals.

Another form of new "microdermabrasion" options are the home microdermabrasion kits and the microdermabrasion cloth. These products offer a good way to exfoliate the skin; a step up from the abrasive scrubs that have been available in drug stores and grocery stores for many years. There are some companies that call their product a "microdermabrasion system". The product is a hand-held unit with a rotary brush

utilized in a manner where a cream comprised of a cleanser combined with micron sized particles is applied to the skin. The rotary brush and the micron particles perform an exfoliation of the epidermis. That is a pretty loose definition of a microdermabrasion system, but it does fit the description. The home microdermabrasion kit or microdermabrasion cloth are not nearly as effective as a true microdermabrasion treatment provided at a properly equipped salon, spa or medical facility, but do work well as an in-between home session.

If you are currently searching the marketplace for a quality microdermabrasion system for use in your aesthetics business or practice, do your homework. It is possible to find a machine that can utilize all types of abrasive materials (aluminum oxide, baking soda, salt, organic materials) and also perform a crystal free treatment, all rolled into one unit. However, both technologies, microdermabrasion with crystals and microdermabrasion without crystals, have some superior, but many inferior, designs so you must know how to determine what is comprised in an effective and safe machine. If we were to list the machines we felt met the strictest criteria, many of our competitors would say we are biased, leaving our information looking less informative and more of an advertisement. It is most important that you, the consumer, inform yourself and make your own observations and decisions.

You have to decide which feature or factor is most important to you. A large number of potential buyers (too many) may believe that price is the main issue when they first begin their search. Still others will believe the false information about the “dangers” of crystals and limit themselves by only looking at crystal free systems. Be open-minded and informed. If you want to succeed, you have to evaluate these machines in an educated manner. Please read the section in our web site titled Choosing Between the Different Microdermabrasion Technologies and How to Choose a System for the difference between one type to another and then read System Shopping Information for how to shop for each one. We have, arguably, the most comprehensive information on how a microdermabrasion machine works, what are the most important features and, basically, how to shop for a microdermabrasion system, that you will find anywhere on the internet.