

FB: @LOUISEWALSHPLASMAPEN
INSTA: @PLASMAPEN\_OFFICIAL
TWEET: @PLASMAPEN

VIMEO: PLASMAPEN





### INTRODUCTION

It's a minefield choosing the right plasma device which is why we release our exclusive Buyers Guide to Plasma Unfortunately; a lot of the information about plasma you will see is either regurgitated and outdated content stolen from us (and others like us) or, frequently, just plain wrong. You will see the same repeated claim from a dozen different "providers" that "plasma is the fourth state of matter" which is simply bad science! Plasma is a gas - albeit a gas in transition that's different to ordinary neutral gases.

One reason for all the bad content and bad science is that 96% of the people/businesses selling plasma devices (or devices claiming to be plasma) don't manufacture anything themselves and have little or no real experience or knowledge of what plasma really is. They certainly have no idea what's actually occurring within the device they sell. There are probably less than 10 genuine and reputable companies in the world who both manufacture and sell their own plasma devices to professional technicians. If the rest knew what they were talking about then they'd be able to write their own original content.

As the recognized authority in plasma and the creator of most of the original and quality content in this space we have to endure a great deal of copyright/intellectual property theft from small parasitic "providers" (as do the other two or three top manufacturers like us). As flattering as it is these tiny outfits steal our content (because it's the best) it's actually dangerous to you because they are using a combination of (a) outdated material, (b) content they've incorrectly embellished, (c) content and information they have incorrectly combined from multiple sources and/or (d) content which provides guidance completely unsuitable for their device.

Recently, an insurer in the USA sent us a Plasma Consultation Form that they'd received from another company. Turned out it was one of our own documents from about two years ago - they'd simply stolen it and copied it, verbatim, before adding their logo, deleting the copyright warning and passing it off as their own. Problem is that, since then, best practice has moved on dramatically and we had updated those forms dozens of times in line with our tens and tens of thousands of consultations and treatments worldwide. What was then a 6 page document is now an 18 page document. Even where other "providers" make changes to content they have taken from us (usually to avoid lawsuits for copyright theft and trademark infringement), they often end up corrupting and confusing critical technical, technician and patient information and this puts technicians and clients at significant risk!

We'll see how long it takes before the unique and proprietary content written here is stolen, watered down and badly repackaged by the opportunists but, in the meantime, we're happy to brief you definitively on the *real* science behind Plasma, especially in regard to our own worldwide #1 cosmetic plasma device. We want to educate you on what plasma really is, what it does, how and why. Not all plasma is the same and we can only speak for our device. We'll arm you with the facts and thought leadership and, as a companion piece to our Buyers Guide To Plasma, you can make your own decisions.

**Dylan Pemberton** 

**Group Managing Director** 

Plasma Pen by Louise Walsh International

## **INDEX**

THE REAL SCIENCE BEHIND PLASMA		PAGE 04
(1)	WHY DO WE NEED PLASMA?	PAGE 04
(2)	WHAT DOES OUR PLASMA PEN DELIVER?	PAGE 04
(3)	WHAT IS PLASMA?	PAGE 05
(4)	HOW DOES OUR DEVICE CREATE PLASMA?	PAGE 06
(5)	WHAT DOES THE PLASMA ACTUALLY DO?	PAGE 06
(6)	WHAT ARE FIBROBLASTS?	PAGE 06
(7)	WHAT'S INVOLVED IN THE HEALING PROCESS?	PAGE 07
(8)	WHAT ELSE OCCURS DURING HEALING?	PAGE 07
(9)	HOW IS PLASMA PEN DIFFERENT TO LASER?	PAGE 07
(10)	WHAT ARE THE MAIN CLINICAL OUTCOMES OF PLASMA PEN?	PAGE 08
(11)	ARE THERE ANY NEGATIVES?	PAGE 08
(12)	HOW DOES PLASMA PEN COMPARE TO BOTH COSMETIC SURGERY &	
	OTHER MEDI-ESTHETIC TREATMENTS??	PAGE 08
THE	PROOF IS IN THE PLASMA: A QUICK SELECTION OF	
		DACE 40
SUIV	IE OF OUR "BEFORE & AFTERS":	PAGE 10
(1)	UPPER FACIAL	PAGE 10
(2)	MID FACIAL	PAGE 12
(3)	LOWER FACIAL	PAGE 13
(4)	OTHER	PAGE 15
EU [	DECLARATION OF CONFORMITY	PAGE 16
CONTACT US		PAGE 17

### DISCLAIMER

We have overseen tens of thousands of treatments over the last year, trained over 1,250 technicians over the last 12 months and we have an expert panel of medical professionals in place to advise us and our Master Trainers. We have thus done our level best to provide factual and accurate information it has been created free for your benefit. We are however not responsible for what stock you may or may not place in this information nor do we accept any responsibility or liability for its accuracy, completeness, or for any errors or omissions herein. Any views, thoughts and opinions expressed in this document largely derive from the author and do not necessarily always reflect those of the organisation.

### COPYRIGHT NOTICE

Plasma Pen by Louise Walsh International are the copyright owners of all content and information contained herein. This document contains privileged and proprietary information, terms and unique content which has been specifically contemplated, researched and written by Plasma Pen by Louise Walsh International and provided to you and/or downloaded by you for individual use only. It is not to be placed in the public domain by you or others or used commercially in any way without our express written consent and any form of reproduction, dissemination, copying, disclosure, modification, distribution or publication of this material is strictly prohibited.





# THE REAL SCIENCE BEHIND PLASMA:

### (1) WHY DO WE NEED PLASMA PEN?



Just like the scaffolding of a building then, over time, it will begin to weaken and rust, it will loses its flexibility and strength and, increasingly it will become unable to bear the load it was originally designed to support. It will eventually buckle, sag and collapse. This is similar to what occurs in our skin.

As we age, the scaffolding of our skin deteriorates which causes it to wrinkle and sag. Our dermal layer thins, we produce less and less collagen, we lose laxity and texture and the elastin that underpins our skins elasticity (not least by cross-linking with collagen just like the brackets on a scaffold) begin to wear out, deform, and 'slide' over the collagen fibrils. This prevents them from maintaining a solid structure.

### (2) WHAT DOES OUR PLASMA PEN DELIVER?

Our worldwide #1 cosmetic device and plasma solution delivers completely natural soft-surgery plasma fibroblasting with stunning, long lasting results. It is entirely designed to dramatically repair, reverse and mitigate the negative effects of ageing by using our state-of-the-art nitrogen plasma technology, hard science, sophisticated technique, best practice training and support plus all the best pre and post treatment and care which we manufacture and supply all over the world.

With 3 decades in beauty; Plasma Pen by Louise Walsh International is able to significantly tighten, lift, resurface, rejuvenate and regenerate practically any area of the skin. It is a cost-effective and highly compelling alternative to all other medi-esthetic procedures you may know - including injectables, fillers, microneedling, laser, mesotherapy and chemical peels and compliments and even competes with most (if not all) cosmetic surgery procedures.



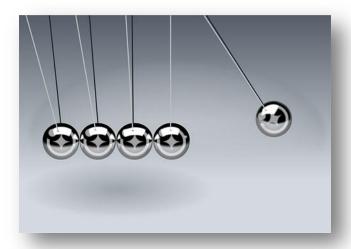




### (3) WHAT IS PLASMA?

Plasma is often incorrectly described as the fourth state of matter after solids, liquids and gases but it is actually a gas (albeit a gas in transition and thus a phase of the gaseous state). Unlike ordinary neutral gases though; plasma gas is made up of positively charged and ionized atoms/molecules which are able to roam freely and fast. For plasma to exist; ionization of molecules is necessary.

Plasma gas is able to do things that ordinary gases simply cannot do such as **conduct electricity**, **create magnetic fields and enable electrostatic interactions**. Plasma gases exhibit coherent, collective qualities that neutral gases don't which makes them dynamic yet very controllable.



As the pre-eminent plasma device manufacturer then this is of course very appealing to us since we can artificially generate plasma with our device by heating and subjecting neutral atmospheric gases (like nitrogen) to electromagnetism to create an ionized cloud of gas that is electrically conductive. We simply deliver enough AC energy to liberate the electrons from their atoms so what we are doing, roughly speaking, is applying energy to a gas to break atoms and molecules.

You may not realize it but **we see plasma all the time** - fluorescent light bulbs and neon signs are both good examples of plasma gas in action. Even the interior of the sun is effectively made up of ionized plasma.

Plasma televisions are another good example and, in their case, a gas such as argon is injected between two glass panels and an electrical current is then passed through that gas enabling it to glow and emit specific colors. Plasma globes use an electric current to ionize the gas inside and produce colored lightning. Even lightning itself is plasma.



The science behind plasma goes back well over a century to scientists, inventors and physicists like **Nikola Tesla** and **Ernst Werner von Siemens** so we neither discovered it nor invented it. We weren't the first ones to commercialize it either. We have however perfected it.





### (4) HOW DOES OUR DEVICE CREATE PLASMA?



The **external intermediary** we use to convert electric energy from within our device is what is known as gaseous "**diatomic molecular nitrogen**". Diatomic molecules are composed of only two atoms which, in our case, are oxygen and nitrogen. We administer that energy in its gaseous form (nitrogen plasma) and **we transmit that energized plasma gas in a non-contact way to the skins surface** from above.

The internal intermediary that we use to create the plasma is our German made Plasma Pen handpiece. Our handpiece converts electrical energy into an electrostatic energy by way of a "dielectric barrier discharge". An electrical discharge is made by introducing voltage between two electrodes separated by an insulating dielectric barrier. This electrical discharge is transmitted to our **0.2mm and 0.4mm nano-probes** (the worlds' finest) by impulse. As the charges collect on the surface of the dielectric barrier; a gaseous flash/arc of

ionized plasma is safely released about 0.5mm to 1mm above the skin. This all occurs within millionths of a second in a **highly controlled and on-demand** fashion. We can sustain the discharge of **energetic photons** for as long as we like thanks both to our continuous **direct energy source** (which provides the required degree of ionization — enough to overcome the "recombination process") and our devices fingertip control. Naturally (and for safety), when we stop providing energy to our device (i.e. when we take our finger off the button) or if we either touch the skin or are too far from the skin then **the creation and delivery of plasma immediately ceases**.

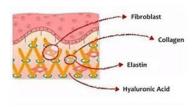
### (5) WHAT DOES THE PLASMA ACTUALLY DO?

The nitrogen plasma energy that we create transfers rapidly to the skins epidermal layer whilst, simultaneously, heating and disrupting the deeper dermal structure via thermal conduction.

In doing so, we intentionally create a **dual zone of micro-trauma** which comprises of a superficial zone of **outer thermal micro-damage to the epidermis** and then, simultaneously, a deeper zone of **inner thermal modification in the dermis** – especially to the **fibroblasts**. That's why we often call the treatment "fibroblasting".



### (6) WHAT ARE FIBROBLASTS?



Fibroblasts are the most common cells of connective tissue in the body and the only cells that can make Type III collagen. Type III collagen synthesis into tougher Type I collagen over a period of about 3 months. Type I collagen is what provides the strength in our skins dense connective tissues and it is the end product of our tissue healing by repair.

Most **fibroblasts are inactive and are actually called fibrocytes**. Fibrocytes will rarely undergo cell division and will not produce collagen unless they are specifically **re-activated by a wound healing process or inflammatory response**. We do precisely that.





### (7) WHAT'S INVOLVED IN THE HEALING PROCESS?



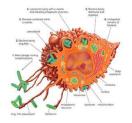
"Neoepithelialisation" (the formation of new epithelial tissue) becomes visible as tiny carbon crusts which desquamate (flake off) within the framework of aftercare. This occurs rapidly after a Plasma Pen treatment and is usually complete 3 to 7 days post-procedure. These carbon crusts serve as a natural and protective biological dressing and flake off naturally as the newly formed and rejuvenated "neoepidermis" appears.

Plasma Pen is the gift that keeps giving because, parallel to the rapid formation of new epithelial tissue (which constitutes the superficial healing process), our nitrogen plasma treatment initiates a comprehensive healing response over the coming 12 weeks. This healing process is best characterized by extensive dermal remodeling that includes neocollagenesis (new collagen synthesis), neoelastogenesis (the production of elastin), cross-linking between collagen and elastin

fibrils and the reversal of elastotic change (the premature degeneration of dermal elastic tissue).

### (8) WHAT ELSE OCCURS DURING HEALING?

The **inflammatory response** which occurs during the healing process that we stimulate during fibroblasting also **activates "M2 Macrophages"**. These are white blood cells that engulf and digest cellular debris and decrease the inflammation we cause. We also stimulate the **migration of "basal keratinocytes"** to the surface of the skin. Wounds to our skin are repaired, in part, by the migration of keratinocytes from the basal layer of the skin and they help fill in the gaps created by the micro-trauma we create.



Many other exciting things happen parallel to all of this such as "neovascularisation" which is the formation of new blood vessels and the release of growth factors. These growth factors include "cytokines" which are small proteins that are very important in cell signaling and which help modulate our immune response, cell aging and the growth of new cells. They're particularly important in directing our bodies' response to the inflammation that we intentionally cause with Plasma Pen by stimulating cell repair and new cell production.

### (9) HOW IS PLASMA PEN DIFFERENT TO LASER?



Unlike laser treatment, the interaction of our nitrogen plasma with tissue is non-chromophore dependent. This means that it is not reliant on interacting with chromophores (the parts of our molecules responsible for color). Instead, we deliver completely predictable and fully controlled energy to the skin's architecture and we thus avoid the excessive collateral thermal injury which is often associated with ablative and chromophore dependent laser tissue interaction.





In further contrast to lasers and ablation; our treatment is completely uniform, it does not damage surrounding tissue and the architecture of the skin remains fully intact immediately after our nitrogen plasma treatment is delivered. There's also no open wound.

### (10) WHAT ARE THE MAIN CLINICAL OUTCOMES OF PLASMA PEN?



**The main clinical outcomes** of a Plasma Pen by Louise Walsh International treatment are:

- (1) A dramatic reduction of photoageing and superficial wrinkles (rhytids)
- (2) The partial-to-complete elimination of medium-depth wrinkles
- (3) Spectacular skin tightening, skin lifting and skin rejuvenation
- (4) A marked improvement and softening of deep wrinkles.

All the **positive changes** we make with our device underpin future tissue stability (**homeostasis**) and help prevent/mitigate/slow down future negative effects.

### (11) ARE THERE ANY NEGATIVES?

Ultimately, our Plasma Pen treatment is supremely effective and consistent. There are little or no untoward effects, minimal pain and we are able to provide a huge array of treatment applications on top of facial rejuvenation procedures (including the safe and easy removal of skin blemishes and skin tags, the ability to reduce or soften scars, techniques for improving existing pigmentation and much more).



Unlike treatments such as microneedling; there is **no blood**, there are **no open wounds** and we benefit from a unique ability to **always work at a predictable depth of tissue injury**. Dovetailing this with **our exclusive 0.2mm and 0.4mm nano-probes** and our **consistent**, **on-demand plasma delivery** helps underscore a **rapid healing process** with **minimal downtime**, **rapid recovery** and **long-lasting results of around 3 years** (with many effects permanent).

# (12) HOW DOES PLASMA PEN COMPARE TO BOTH COSMETIC SURGERY & OTHER MEDI-AESTHETIC TREATMENTS?



Plasma Pen is arguably the only treatment outside of plastic surgery which can be safely performed on the eyelids (non-surgical blepharoplasty). With our device, our technicians are actually able to perform most cosmetic surgery procedures with similar effects (including facelifts, jawline augmentations, neck lifts, non-surgical rhinoplasty, tummy tucks, breast lifts and beyond) - but all in a completely non-surgical and non-invasive way.





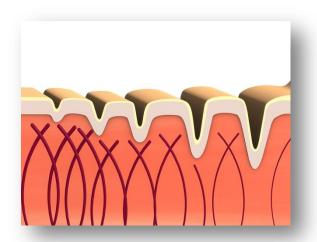




Many cosmetic surgeons and esthetic dentists now use our device - especially our new Plasma Pen Ultra - as it is a highly complementary treatment/tool. We have studied many clinical trials directed by plastic surgeons who all agree that combining plasma treatment with full aesthetic facial surgery dramatically enhances their own surgical procedures especially for the forehead, periorbital, midface, perioral and lowerface regions. Plasma Pen often mitigates the need for invasive surgery at all.

With our nitrogen plasma device/treatment there is **no blood**, **no scalpels**, **no cutting** of the skin, no stitches and suturing, no scars or pitting, no heavy ablation, no excessive collateral thermal injury and no injectable anesthetic required. It is an incredibly low-risk, multi-faceted and highly versatile procedure with no risk of surgical complications, minimal side-effects, little or no pain, very short downtimes, rapid recovery and high-impact, natural looking results that last for around 3 vears.





In using plasma there is **no thinning of the skin**. it is much more uniform than ablative resurfacing using lasers, it injures tissue precisely and in a far more predictable manner than dermabrasion or chemabrasion and there are **no asymmetries or over-corrections**. Unlike laser (where the orientation of new collagen is parallel to the surface of the skin), the collagen fibers formed by plasma line up perpendicular to the skins surface which is their normal and most optimal orientation. Plasma Pen is also non-chromophore dependent.

Most medi-esthetic treatments only target either the muscle or epidermal tissue whereas Plasma Pen treats both the epidermal and dermal tissue in combination to dramatic effect. It leaves very natural and younger looking skin compared to laser treatments and chemical peels (as they can often leave the skin thinner, very light, pigmented and/or too shiny).









Best of all, with average treatment price of £500 per area (e.g. upper eyelids) versus a results shelf life of around three years, Plasma Pen treatment delivers enormous cost savings and a raft of tangible, unique and highly desirable benefits compared to all the other alternatives.

Worst case? It's hugely complimentary to all other treatments. Best case? It's potentially life changing and it blows the other treatments out of the water.

# THE PROOF IS IN THE PLASMA: A QUICK SELECTION OF **SOME OF OUR "BEFORE & AFTERS":**

### (1) UPPER FACIAL







































# (2) MID FACIAL











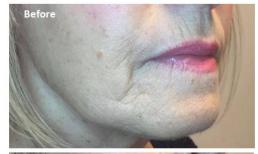
## (3) LOWER FACIAL



























# (4) OTHER



















### (5) EU Declaration of Conformity



CLARATION OF CONFORMITY



# By Louise Walsh International

The Manufacturer: Address. Name of Product: Model:

Plasma Pen by Louise Walsh International™ Plasma Pen / Plasma Pen Ultra

The manufacturer, declares herewith that Plasma Pen by Louise Walsh International™ meets all EU regulations and directives which are applicable to CE. This declaration is issued under the sole responsibility of the manufacturer.

Directives:

The object of the declaration described above is that Plasma Pen by Louise Walsh International™ is in conformity with the relevant Union harmonisation legislation:

EMC-Directive 2014/30/EU

Low Voltage Directive 2014/35/EU RoHS Directive: 2011/65 / EC EU Waste Electrical and Electronic Equipment 2012/19/EU

Standards:

References to the relevant harmonised standards used or references to other technical specifications in relation to which conformity is declared include:

EN 55014-1:2006 +A1:2009 +A2:2011 Electromagnetic compatibility - Emission EN 55014-2:2015 Electromagnetic compatibility - Immunity EN 60335-1:2012-10 Household & similar electrical appliances - Safety EN 60335-2-23 Household and similar electrical appliances - Safety

EN 82079-1: 2013-06 Preparation of instructions for use EN 12100: 2011-03 Safety of machinery - General principles for design EN 14118:2018 Safety of machinery - Prevention of unexpected start-up

Independent UKAS Testing:

The manufacturer has also had Plasma Pen by Louise Walsh International independently tested, measured as compliant and passed by a government approved UKAS testing station against the following standards:

(1) European Tested/Passed:

Electromagnetic Compatibility - Emissions and Immunity EN 55014-1:2006 +A1:2009 +A2:2011

EN 55014-2:2015

### Normative References (EN 55014-1):

Normative References (EN 55014-2):

IEC 60050-161:1990 IEC 60598-2-4:1997 IEC 61000-4-20:2003 CISPR 16-1-1:2003 CISPR 16-1-3:2004 CISPR 16-2-2:2003 CISPR 16-1-4:2007 CISPR 16-4-2:2003

IEC 60335-2-76:2002 IEC 60598-2-10:2003 CISPR 15:2000 CISPR 16-1-2:2003 CISPR 16-2-1:2003 CISPR 22:2005 CISPR 16-2-3:2006

IEC 60050-161 IEC 61000-4-3:2006 IEC 61000-4-5:2014 IEC 61000-4-11:2004 CISPR 14-1:2005

IEC61000-4-2:2009 IEC 61000-4-4:2012 IEC 61000-4-6:2013 IEC 61000-4-22:2010

### (2) FCC Tested/Passed:

FCC Rules CFR 47:1st October 2018 Part 15.107 and 15.109 Class B -Electromagneti Compatibility - Emissions ICES-003 Issue 6 - Interference Technology - Radiated & Conducted Emissions

### Normative References (FCC Rules CFR 47):

ANSI C63 4-2014 Radiated Emissions & Conducted Emissions ANSI C63.17-2013 Measurement of Electromagnetic and Operational Compatibility

CEO

Technical File

The technical file is available from the manufacturer at the address provided.



Date of issue: Position:

Signed on behalf of: Plasma Pen by Louise Walsh International™ Signature: Place of issue: Southport 13th February 2019 Louise Walsh

Louise Walsh

## **CONTACT US**

If you would like to learn more about Plasma Pen, how to book training, how to become a distributor/agent, be a model or if you have any other questions at all then please contact us directly below, we're always happy to help:

### **INTERNATIONAL HEAD OFFICE:**

### Plasma Pen by Louise Walsh International ™

Global HQ & Flagship Training Academy 42-46 Station Road Ainsdale Southport PR8 3HW United Kingdom

Telephone: +44 (0)1704 579 800

Email: <a href="mailto:info@plasmapenuk.com">info@plasmapenuk.com</a>
Web: <a href="mailto:www.plasmapenuk.com">www.plasmapenuk.com</a>

Facebook: www.facebook.com/LouiseWalshPlasmaPen

Tweet: <u>@PlasmaPen</u>

LinkedIn: <u>LouiseWalshOfficial</u>
Instagram: <u>PlasmaPen\_Official</u>

Vimeo: <u>PlasmaPen</u>

Company No: 10439998 VAT No: 254213335

