VOLUMIZING BIODEGRADABLE INJECTABLE IMPLANT
ON THE CUTTING EDGE OF SCIENCE

Algeness®
100% NATURAL
INTRODUCTION

While the demand for minimally invasive procedure treatments increases, the fillers’ market is experiencing a growing number of publications of immediate or latent reactions associated with Hyaluronic Acid (HA) fillers or other chemically based fillers. Patients and the scientific community are trending to natural and biocompatible dermal fillers without chemicals for a safe and effective solution for consistently excellent outcomes.

In response to the physician and patient needs, Advanced Aesthetic Technologies, Inc. (AAT), a Boston, MA USA based company, employing bio-technologies in the aesthetic medical field, has launched Algeness®, the 100% natural and biodegradable injectable implant, the culmination of 10 years of scientific and clinical research.

WHAT IS ALGENESS®?

Algeness® is a biomaterial resulting from a sophisticated manufacturing process consisting of a purified agarose gel (polysaccharide), derived from the purification of Agar-Agar processed from red algae. Totally biocompatible to the human body and absorbable, Algeness®, does not contain cross-linked synthetic chemicals (BBDE or PEG) associated with Hyaluronic acid (HA) fillers and thus is 100% natural. The molecular and biophysical properties of Algeness® make it a breakthrough in the filler’s injection technology. For the first time in aesthetic medicine history, a 100% natural, biodegradable and mouldable filler is available to the aesthetic market for a more defined youthful look.
Algeness® is the culmination of 10 years of scientific and clinical research to find the most natural, biocompatible material to fill wrinkles and compensate for volume loss in facial soft tissues. Extensive research has been conducted to master the correlation of the agarose structure and the physiological response; in fact, utilizing different concentrations of agarose, it was possible to obtain various three dimensional structures that interact differently with the vital and functional parameters of the cell.

Agarose which is highly purified is free of any protein, a source for most bacteria, making it highly biocompatible. Formulations of agarose form stable gels with small amounts of material (1% of agarose and 99% saline water) and does not require any added chemicals for cross linking. Chemically, agarose is a polysaccharide being free from toxicity to micro-organisms and free from impurities, Algeness® is well tolerated within the human body. This production process is only achieved by a limited number of highly specialized facilities. They have the rights to international patents to produce highly purified, high quality agarose under rigid physical-chemical, and bacteriological controls, as well as quality standards of ISO 13485 and ISO 9001.

WHAT ARE THE BENEFITS OF ALGENESS® ALL NATURAL VOLUMIZING BIODEGRADABLE IMPLANT?

- Hydrocolloid gel 100% biocompatible and biodegradable.
- Immediate volumizing: “What you see is what you get” The physician and the patient can see and evaluate the result of the injection immediately after the procedure.
- No need to wait to see the hydrophilic reaction associated with all HA fillers that can take 2-4 weeks for the full effect to be realized.
- Free of solvents and chemicals; all natural.
- Long lasting results remaining over 12 months proven by clinical studies.
- Non allergenic; Algeness® offers excellent tolerability and biocompatibility with a negligible immunological reaction.
- Minimal irritation & inflammation due to the absence of foreign body reactions.
- Extremely low migration, the product stays where it has been injected with excellent persistence.

WHAT IS THE SCIENCE BEHIND ALGENESS® ALL NATURAL BIODEGRADABLE IMPLANT?

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Currently there are several studies that were published and there are a number of ongoing and unpublished studies executed on the new Algeness® injectable implant.

Wake Forest University in the United States performed animal studies which were completed in 2013 and 2014 with the 2.5% Algeness VL and the 3.5% Algeness DF compared to HA fillers. The Wake Forest comparative study showed that after 6 months 2.5% and 3.5% performed better compared to the other fillers, showing Algeness® lasted longer, did not show unpredictable changes due to inflammatory reactions or water absorption, and exhibited less migration.

Four clinical studies were conducted in Italy and Denmark in 2006/2007 where Algeness® performed well with minimal side effects and no complication were reported. These studies demonstrated the safety and efficacy of Algeness® fillers.

Dr. Giovanni Montealegre, Professor of Plastic Surgery at the National University of Colombia, in Bogota, completed a 50 subjects study to evaluate the safety and efficacy of Algeness® for the correction of nasolabial folds in comparison to Juvederm®. Both Juvederm® and Algeness® have similar and comparable effects on safety and duration. Algeness® offers excellent tolerability and biocompatibility, is safe, natural and has a negligible immunological reaction. Over the first six months of observations, the results are comparable with Juvederm®.

In 2017, a histological study to evaluate the biocompatibility and the interactions between Algeness Agarose Gel and human skin tissues utilizing skin biopsies taken from human volunteers has been conducted by Prof. Alessio Pirino and Dr. Giorgio Maullu in the department of biomedical science at the University of Sassari (Italy). The study demonstrates a homogeneous integration of the filler into the hypodermis, with a minimal physiological inflammatory reaction and no granulomatous activity, accompanied by an increase in collagen formation.

In 2018, a 30 subjects study of the volumizing effects of Algeness® and Voluma™ will commence in Belgium with Dr. Joan Vandeputte, in Italy, Dr. Giovanni Salti, and in Germany with Dr. Tatjana Pavicic. Also started other studies in process. Please visit Algeness website www.algeness.com to download studies.
# Product Composition

**Algeness LD 1%**
- 1% Agarose (Very low density)
- 99% sterile saline

**Algeness HD 1.5%**
- 1.5% Agarose (Low density)
- 98.5% sterile saline
- 0.5% non-crossed-linked HA

**Algeness VL 2.5%**
- 2.5% Agarose (High density)
- 97% sterile saline
- 0.5% non-crossed-linked HA

**Algeness DF 3.5%**
- 3.5% Agarose (High density)
- 96.1% sterile saline
- 0.4% non-crossed-linked HA

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# Indication

**Algeness LD 1%**
- Tear trough
- Lips augmentation and contouring

**Algeness HD 1.5%**
- Marionette lines, wrinkles, and furrows
- Lip augmentation and contouring
- Oral commissure
- Oro-mandibular folds

**Algeness VL 2.5%**
- Medium-deep volumizing
- Wrinkles, furrows and folds
- Cheeks, jawline and chin
- Nasolabial folds
- Malar and Submalar
- Non-surgical rhinoplasty

**Algeness DF 3.5%**
- Deep volumetric filling
  - Cheeks, jawline and chin
  - Nasolabial folds
  - Non-surgical rhinoplasty

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# Technique

**Algeness LD 1%**
- Linear, Retrograde

**Algeness HD 1.5%**
- Linear, Retrograde

**Algeness VL 2.5%**
- Linear, Retrograde

**Algeness DF 3.5%**
- Linear, Retrograde

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# Injection depth

**Algeness LD 1%**
- Immediately Subcutaneous

**Algeness HD 1.5%**
- Immediately Subcutaneous

**Algeness VL 2.5%**
- Subcutaneous

**Algeness DF 3.5%**
- Linear, Retrograde

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# Follow up

**Algeness LD 1%**
- After 7-10 days if additional corrections are required

**Algeness HD 1.5%**
- After 7-10 days if additional corrections are required

**Algeness VL 2.5%**
- After 7-10 days if additional corrections are required

**Algeness DF 3.5%**
- After 7-10 days if additional corrections are required

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# Duration

**Algeness LD 1%**
- 3 – 4 months or more

**Algeness HD 1.5%**
- 4 – 8 months or more

**Algeness VL 2.5%**
- 8 – 12 months or more

**Algeness DF 3.5%**
- 10 – 15 months or more

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# Volume

**Algeness LD 1%**
- 1.4 ml

**Algeness HD 1.5%**
- 1.4 ml

**Algeness VL 2.5%**
- 1.4 ml

**Algeness DF 3.5%**
- 1.4 ml

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# Needle size

**Algeness LD 1%**
- 30 G

**Algeness HD 1.5%**
- 30 G

**Algeness VL 2.5%**
- 27G

**Algeness DF 3.5%**
- 27G

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# Each box contains

**Algeness LD 1%**
- 2 disposable “full-use” syringe systems, 2 needles per syringe.

**Algeness HD 1.5%**
- 2 disposable “full-use” syringe systems, 2 needles per syringe.

**Algeness VL 2.5%**
- 2 disposable “full-use” syringe systems, 2 needles per syringe.

**Algeness DF 3.5%**
- 2 disposable “full-use” syringe systems, 2 needles per syringe.

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# Shelf life

**Algeness LD 1%**
- 2 years

**Algeness HD 1.5%**
- 2 years

**Algeness VL 2.5%**
- 2 years

**Algeness DF 3.5%**
- 2 years

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**Algeness LD 1%**
- Tear trough
- Lips

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- Marionette lines, wrinkles, and furrows
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- Oral commissure
- Oro-mandibular folds

**Algeness VL 2.5%**
- Medium-deep volumizing
- Wrinkles, furrows and folds
- Cheeks, jawline and chin
- Nasolabial folds
- Malar and Submalar
- Non-surgical rhinoplasty

**Algeness DF 3.5%**
- Deep volumetric filling
  - Cheeks, jawline and chin
  - Nasolabial folds
  - Non-surgical rhinoplasty

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**Algeness LD 1%**
- Subcutaneous

**Algeness HD 1.5%**
- Subcutaneous

**Algeness VL 2.5%**
- Deep soft tissue supra-periosteal

**Algeness DF 3.5%**
- Subcutaneous

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**Algeness LD 1%**
- Depth of injection: Subdermal

**Algeness HD 1.5%**
- Depth of injection: Subdermal

**Algeness VL 2.5%**
- Depth of injection: Supra-periosteal

**Algeness DF 3.5%**
- Depth of injection: Subcutaneous
Q: What is the difference with other fillers?
A. Unlike all other fillers, Algeness® is 100% natural and biodegradable. Algeness® achieves its volumizing youthful effects without the requirement of any added chemicals, solvents or cross-linked agents and is completely and safely absorbed over time by the body’s natural mechanisms.

Q: What areas could be problematic using Algeness®?
A. Never inject Algeness® superficially. It is strongly recommended not to use Algeness® fillers in the dermis.

Q: Into which layers of the skin is it possible to inject Algeness®?
A. The higher concentration Algeness® biodegradable implant should be injected deeply and never superficially. We therefore suggest that the Algeness® VL and Algeness® DF only be used in the subdermal, subcutaneous or supraperiosteal spaces.

Q: Is there a difference in the injecting technique between Algeness® and HA?
A. There is a slight difference in the injectability of HA versus Algeness® due to the difference in density of the material and the depth of the injection. Algeness® is injected deeply and slowly. A thorough massage is performed to shape the product, avoid formation of lumps and obtain the desired immediate result.

Q: Is it possible to inject Algeness® in an area where other filler was injected previously?
A. We see no reason why Algeness® cannot be used in an area where other injectables have been injected. However, this needs to be studied further.

Q: Is it painful?
A. All injections cause a sense of pain; however, the physician may decide to apply anesthetic cream to the injection site to numb the area.

Q: What kind of result can the patient expect?
A. Algeness® subcutaneous filler is able to achieve a youthful and natural look by filling-out lines around the mouth, the naso-labial fold as well as chin augmentation, correction of nose imperfections and redesign the jaw line. It can also re-plump your lips and add volume and lift to your cheeks.

Q: How long will it last?
A. Algeness® corrective effects typically last for about 12 months or longer depending on the injection amount and depth of injection.

Q: What are the side effects?
A. Depending on the area injected, the procedure is relatively painless, although there may be some mild discomfort during treatments to the sensitive nose or lip areas. There may be some redness around the site of injection for 1-2 days. Thanks to its unique all natural bio-compatibility, post-treatment allergic reactions are minimized.

Q: What is the recovery time?
A. Treatment times may vary from 20-25 minutes, depending on the correction level requested by the patient. The recovery time can be from a few hours to several days depending on the area treated. Usually, patients receiving Algeness® treatments return to normal activities straight after injection.

Q: What is the difference between Algeness® and other HA fillers?
A. Algeness® is the only all-natural gel implant. No HA filler is all natural, they all contain chemicals for the cross-linkage that the body does not absorb. So it builds up creating latent complications that is underreported by the manufacturers. Algeness does not have chemicals and therefore does not have this type of complication.