

# SCHOTT Vitryxx® HA Serum

A new, effective and easy-to-formulate Anti-Aging Ingredient

## Product information

Vitryxx® HA Serum is a new, effective and easy-to-formulate Anti-Aging Ingredient for use in a wide variety of personal products. It is based on a proprietary formulation of Hyaluronic Acid and Bioactive Glass in a serum (patent pending), developed by Enhance Skin Products Inc. This unique formulation has been designed to deliver both the product benefits of Hyaluronic Acid (HA) and Bioactive Glass Powder as well as provide

## Advantages

### Hyaluronan:

- Highly hydrating
- Effective delivery system

### Bioactive Glass:

- Reduces redness
- Reduces visibility of wrinkles
- Anti-Aging Ingredient

### Additionally, the combination of both:

- pH of skin (5.5–5.9)
- Stable formulation
- Easy to formulate like any other HA product

## Applications

The potential applications for Vitryxx® HA Serum\* are widespread.

- Facial creams, e.g. anti-aging creams, night replenishment
- Anti-aging serums and treatments
- Decorative cosmetics, e.g. makeup
- Suncare products, e.g. after sun lotion
- Body lotions
- Hand and nailcare products, e.g. hand creams

## Clinical evaluation results

The first clinical evaluation of the formulation indicates clear anti-aging efficacy.

**Vitryxx® HA Serum\* when subjected to further clinical evaluation in human subjects was found to:**

- Promote elasticity
- Reduce the appearance of fine lines and wrinkles
- Make pores appear smaller
- Improve skin texture and moisture
- Enhance evenness of skin tone

100% of the subjects tested responded with improvements in at least one or more skin-aging parameters. 100% of the subjects felt that their skin showed improvements in fine lines/wrinkles, pore size, softness, smoothness, skin tightness, evenness, overall skin quality and healthiness.

Evaluations were conducted at Essex Testing Clinic, Inc., under the supervision of a Board-Certified Dermatologist, sponsored by Enhance Skin Products Inc. | \*Patents pending



Unique benefits from combining Hyaluronan and Bioactive Glass:  
1 + 1 = 3

- Hydrating effect      Hyaluronan  
- Topical delivery

+

- Reduce redness      SCHOTT Vitryxx®  
- Anti-Aging      Bioactive Glass  
- Ingredient

=

- Easy to formulate      Vitryxx® HA  
- Long-term stability      Serum  
of skin pH



**SCHOTT**  
glass made of ideas

# Material Basics for Bioactive Glass and Hyaluronic Acid



## SCHOTT Vitryxx® Bioactive Glass has the following key properties:

- Is made of four oxides essential for the human body: Silicon oxide, sodium oxide, calcium oxide, phosphorous oxide
- Is biocompatible due to its composition
- Used in cosmetics with amazing results:
  - Extremely high anti-oxidative properties
  - Redness of skin is reduced
  - Skin acceptance of other ingredients is highly improved
- Made from natural materials such as sand and soda ash
- Purified at >1400°C
- Insensitive to heat or UV light
- Vitryxx® builds hydroxyapatite on its surface

## The body's own Hyaluronic Acid has multiple functions:

- The largest amount of hyaluronan (7-8 grams per average adult human) resides in skin tissue, where it is present in both the dermis and epidermis.
- Hyaluronan has a dynamic turnover rate with a half life of 3-5 minutes in the circulation.
- Hyaluronan is prominent in the earliest stages of adult wound healing.
- Hyaluronan is a signaling molecule with size specific activities.
- In solution, hyaluronan oligomers form a random coil structure. This structure has both hydrophobic and hydrophilic domains allowing water soluble and water insoluble materials to dissolve into its structure. In this regard, hyaluronan is an amphiphilic compound.
- Hyaluronan readily binds proteins and other impurities.

After a decade of research, the scientists at Enhance Skin Products Inc. found that a specific hyaluronan oligomer of a molecular weight average of 700 kilodaltons and a high purity grade produces the best results.

For more information about Hyaluronan and Enhance Skin Products Inc. please see: [www.visibleyouth.com](http://www.visibleyouth.com)



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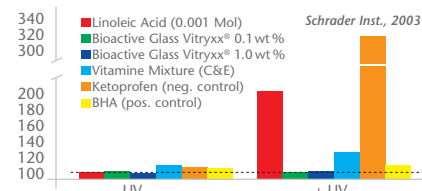
[www.us.schott.com/epackaging](http://www.us.schott.com/epackaging)

SCHOTT Vitryxx® – Anti-oxidative efficacy (in vitro studies)  
 SCHOTT Vitryxx® – Causes a strong reduction in the number of oxidized proteins

	Vitryxx®   4 µm conc. 1 mg/ml	Blank sample
-UV	13.35 nmol DNPH*/mg protein 33%	40.91 nmol DNPH*/mg protein 100%
+UV	19.60 nmol DNPH*/mg protein 48%	89.02 nmol DNPH*/mg protein 48%
	"shows a strong anti-oxidative effect"	Schrader Inst. 2003

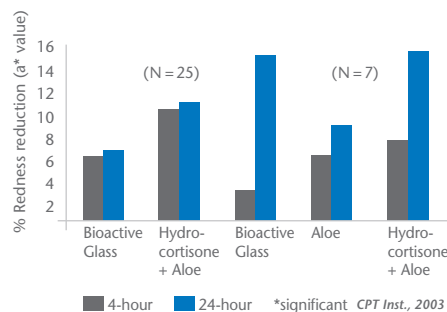
Performed with human keratinocytes \*DNPH Dinitrophenyl-hydrazin | Anti-oxidative efficacy in Protein-Carbonyl-Assay test (R. L. Levine et al, Meth. Enzymol. 186, 464-478, 1990)

SCHOTT Vitryxx® shows high anti-oxidative efficacy (conc. 0.1 and 1.0 mg/ml)



% of oxidized linoleic acid | relative to blind sample (without UV irradiation)

Redness reduction efficacy



SCHOTT Vitryxx®: Redness reduction properties in chemical skin barrier damage study

