

saypha[®] VOLUME PLUS

Technical factsheet

saypha [®] VOLUME PLUS ¹	
Indication	to augment facial tissue and correct midface volume deficit, for restoring facial volume and shaping the contours of the face, for reconstructive purposes in the treatment, for instance, of facial lipotrophy
Injection area	deep dermis, subcutaneous or supraperiosteal
Ingredients	
Concentration HA	2.5% (25 mg/mL) high molecular weight hyaluronic acid of non-animal origin
Crosslinking agent	BDDE (concentration \leq 2 ppm)
Additional ingredients	phosphate buffer, NaCl, 0.3% lidocaine hydrochloride
Packaging	
Packaging unit	1 box of 1 mL syringe
Needle	2x27G 1/2" thin-wall Terumo [™] needles (CE 0197)
Duration	
Est. duration in the skin	9–12 months ²

Crosslinking

The product is a biphasic gel containing a crosslinked and a non-crosslinked phase mixed in a defined ratio (crosslinked phase 95%, non-crosslinked phase 5%). These specifications are not to be confused with the crosslinking degree of the products, since a crosslinked phase contains non-crosslinked HA as well.

Rheology

Purpose of rheological measurements is to evaluate the physical characteristics of HA fillers. The storage modulus G' represents a suitable parameter to determine the stiffness of HA-based, crosslinked products like saypha[®] VOLUME, where the elasticity is more pronounced than the viscosity.

Test method G' ($\omega = 1\text{s}^{-1}$, $f = 0.16\text{ Hz}$, $T = 25^\circ\text{C}$)

Result 500,600 mPa³

Extrusion force

Extrusion force measurements are conducted to determine the force [N] needed to eject the gel from the syringe. The tests are always performed with the enclosed needle. A low and constant extrusion force is beneficial for smooth and predictable results.

Needle 27G 1/2" thin-wall Terumo[™] (CE 0197)

Result 15 N⁴

Microbiological parameters

Endotoxins

Endotoxins are components of gram-negative bacteria membranes and are released when the bacterial cells are disrupted (e.g. during sterilization). Therefore, the products are tested to assure that the endotoxin concentration lies below the predefined specification limits.

Test method according to Ph.Eur.⁵

Result virtually free on endotoxins⁶

Sterility

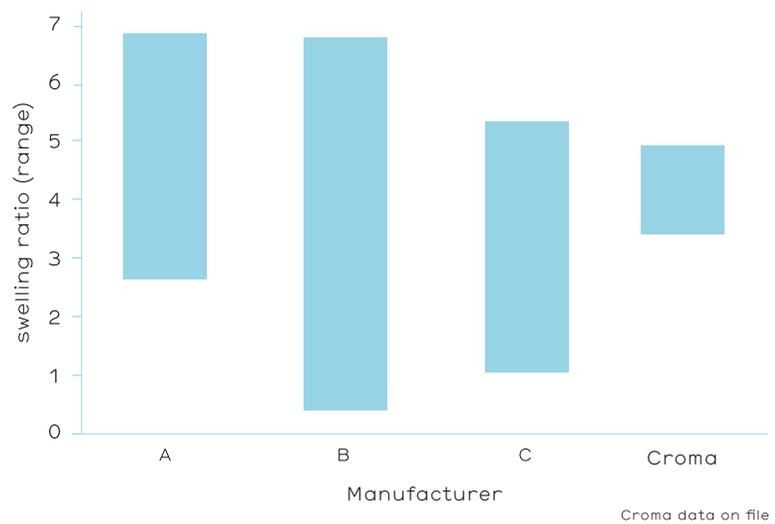
Croma HA fillers are steam sterilized within the syringe.

Swelling ratio

Water uptake influences the volumising effect of HA fillers. Therefore, the in vitro swelling behaviour is a useful parameter. Croma HA fillers show a reproducible swelling in vitro within the entire product range (compared to the competitor product ranges A, B, C in the table). Furthermore, Croma HA fillers have a very low batch to batch variability, which contributes to the predictability of the results.

Test method

gravimetric measurement to determine the ability of a gel to take-up PBS (phosphate buffered saline)



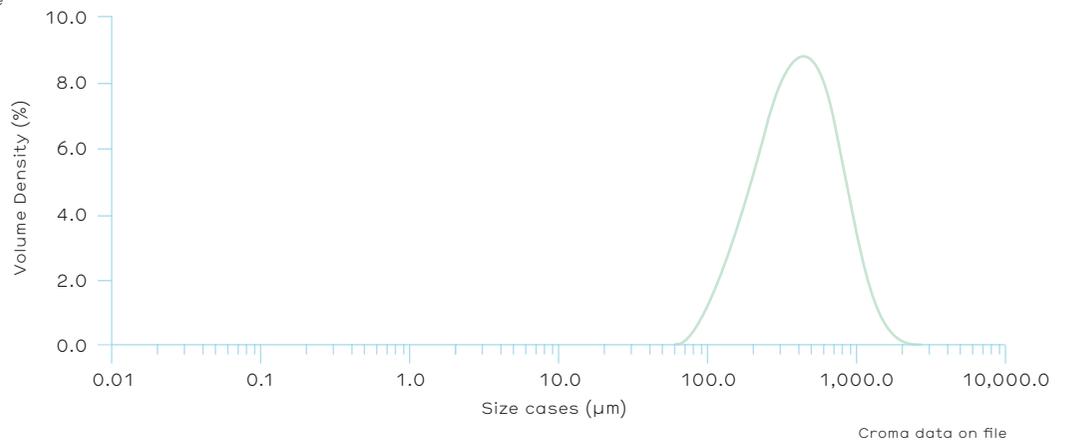
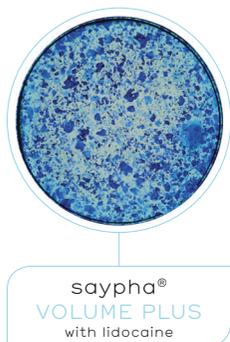
Gel particles

Croma's crosslinked hyaluronic acid fillers are characterized by smooth HA gel-particles with a typical diameter around 0.5mm. Particle staining is useful to illustrate the structure of HA fillers: a homogeneous composition of smooth gel particles made of crosslinked hyaluronic acid.

Test method

crosslinked gels are placed on petri dishes and treated with a methylene blue solution, leading to particle staining which is then photographed

An exemplary picture and particle size distribution of saypha® VOLUME PLUS are shown below



¹ CE0120, ² While duration of effect of saypha® VOLUME PLUS is not known at the moment, based on clinical experience with other devices from the Croma Injectable family, it is reasonable to assume that it will persist for at least 9 months ³ Batch: 205002, specification limits: 245,000–650,000 mPa, ⁴ Batch: 205003, specification limits: 10–25 N ⁵ Ph.Eur. = European Pharmacopoeia, ⁶ EU = Endotoxin Unit according to Ph.Eur., specification limits: < 5 EU/mL

The medical practitioner confirms having informed the patient of a likely risk associated with the use of the medical device in line with its intended use.