

Riave

New Standard of HA fillers



RE + WAVE

A new wave of structural rejuvenation

The name combines the concept of 'renewal' with a sense of transformation, delivering solutions that restore volume and refine facial contours to enhance your natural beauty.



Core technology & Key benefits



1. Safety

Formulated with low BDDE levels to enhance safety and minimize potential adverse reactions.



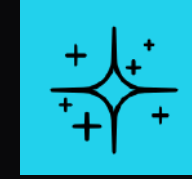
2. Technology

Utilizes advanced cross-linking technology to improve viscosity, elasticity, and overall product stability.



3. Convenience

Designed for smooth injection and easy handling, allowing for precise control during procedures.

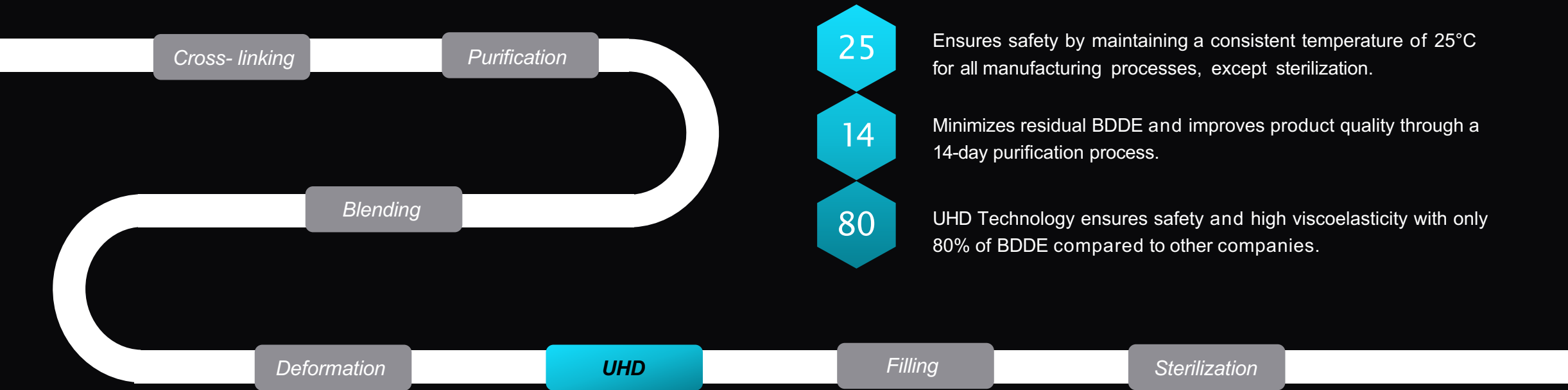


4. Effectiveness

Provides long-lasting volume with natural-looking results and consistent performance over time.

1. Safety

1) Differentiated Manufacturing Process



1. Safety

2) Purification Process

[Before Purification]



[After Purification]



- Cross-linked BDDE
- Pendant BDDE
- Unreacted BDDE
- UHD Cross-linking
- HA

• BDDE residue : **Below detection limit** • Endotoxin residue : **Below 0.1Eu/ml** • Protein residue from HA raw material : **Below 0.1%**

Impurities such as non-cross linked BDDE (unreacted BDDE & pendant BDDE) residues and endotoxin residues were **minimized through a strict purification process.**

1. Safety

3) Raw Materials

[illegible][illegible]

SEMA-ALFON

2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805

We pay extra attention to quality control, by using [EDQM listed materials](#) such as HA (150kDA heavy-molecular raw material), lidocaine and BDDE to ensure safety.

1. Safety

4) Degradation Test (safety)

RIAVE Degradation Test

Change over time after injecting 1ml of hyaluronidase 750 IU into 0.5ml of Riave

Time Filler	0 Hour	After 3 Hour	After 6 Hour	After 12 Hour	After 48 Hour
Riave					

Within 48 hours after hyaluronidase injection, the filler is completely degraded, indicating Riave's **high purity** which results in **minimized side effects**.

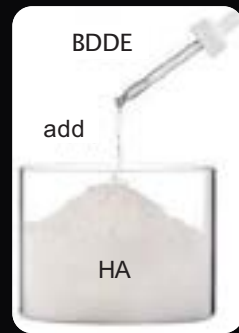
2. Technology

1) Technology_ UHD TECHNOLOGY

STEP 1

Chemical cross linking

- Minimization of BDDE, a chemical cross-linking agent



STEP 2

Physical cross linking

- Our core production technology to improve viscoelasticity through physical cross-linking
- Realization of safe, highly viscoelastic and cohesive filler with low BDDE

Patent for manufacturing technology
(Patent 10-2186646)

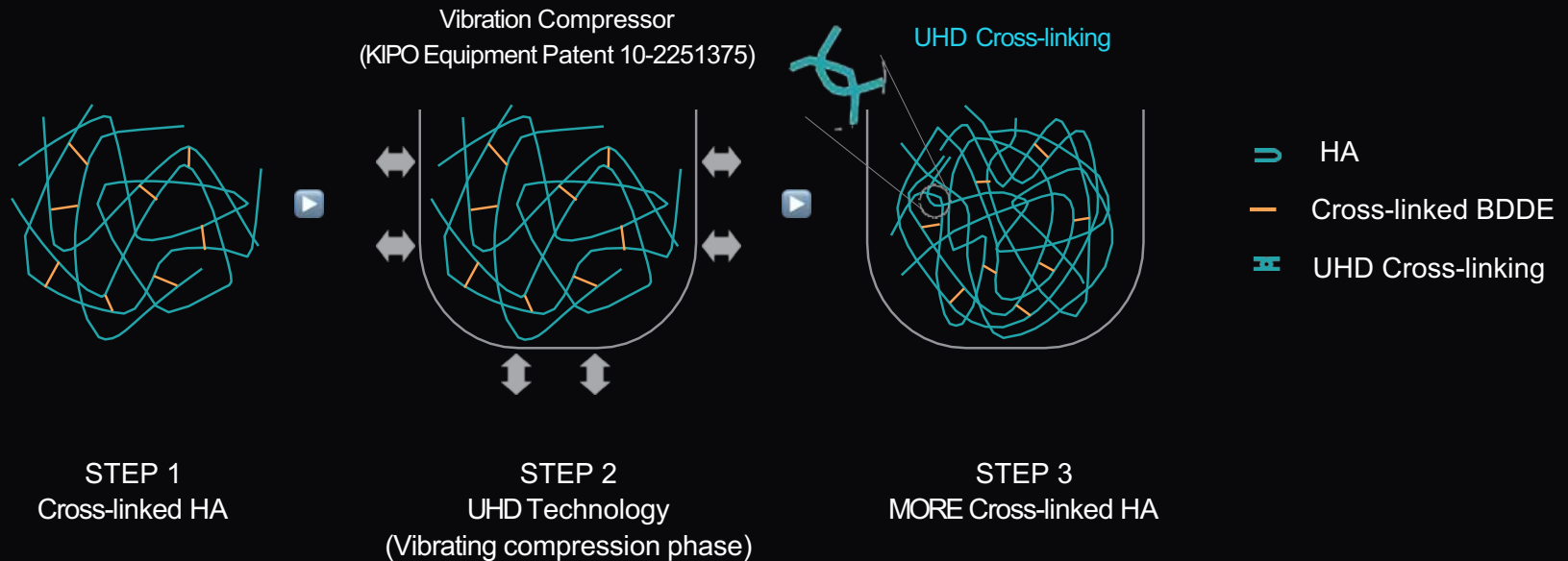


UTH TECHNOLOGY

2. Technology

1) Technology_ UHD TECHNOLOGY

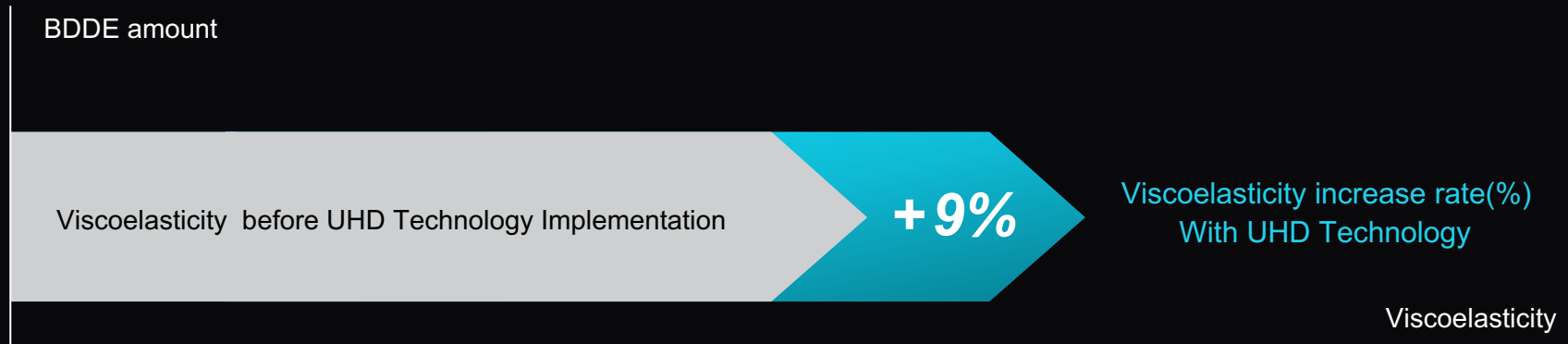
ULTRA HIGH DENSITY (Patent-10-2186646)



Patented Cross-linking Technology that increases the viscoelasticity by
Improving the internal density at the optimal frequency during the optimal time.

2. Technology

1) Technology_ UHD TECHNOLOGY



9% increase after UDD Technology implementation

3. Convenience

1) Convenience_ Types

Product Name	RIAVE ESSENTIAL	RIAVE FINE	RIAVE DEEP	RIAVE IMPLANT
Type				
Needle Gauge	30G	30G	27G	25G
Application & Indication	Superficial dermis injection for correction of fine lines and wrinkles or facial defects	Lip defects or volume enhancement	Mid to deep dermis injection for correction of scars or deep wrinkles or facial tissue augmentation	A facial tissue augmentation for mid to deep dermal implantation for the correction of moderate to severe facial wrinkles and folds
Shape				

Riave is divided into 4 types: **ESSENTIAL**, **FINE**, **DEEP**, and **IMPLANT** depending on the viscoelasticity. It can be applied on the entire face with the appropriate type of product depending on the application area, required amount, and desired treatment direction, etc.

3. Convenience

1) Convenience_ Types

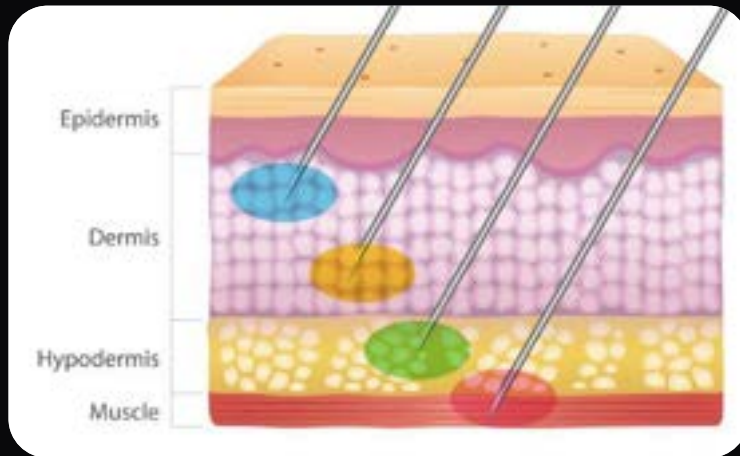
Riave Injection layer

Riave ESSENTIAL : Superficial dermis

Riave Fine : Mid dermis/Subdermal layer (Subcutaneous)

Riave Deep : Subdermal layer (Subcutaneous)

Riave IMPLANT : Deep fat layer / SubSMAS space/periosteum



RIAVE DEEP

Forehead
Midcheek groove
Nose
Lips
Cheek
Nasolabial fold
Marionette lines
Jowl lines
Chin
Face contour

RIAVE IMPLANT

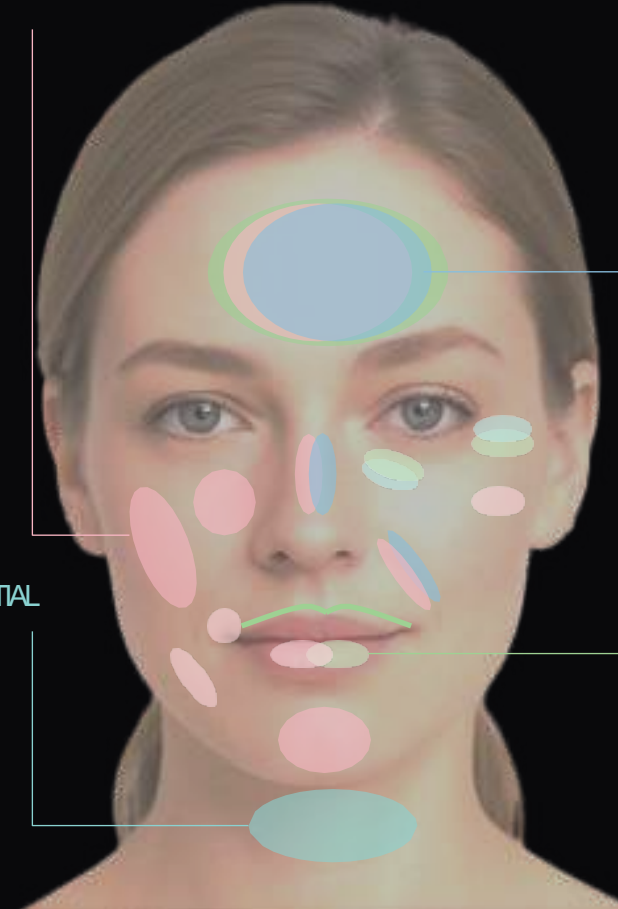
Forehead
Nose
Cheek
Nasolabial folds
Chin
Face contour

RIAVE ESSENTIAL

Neck lines
Crow's feet
Tear trough
Fine wrinkle
Upper hand

RIAVE FINE

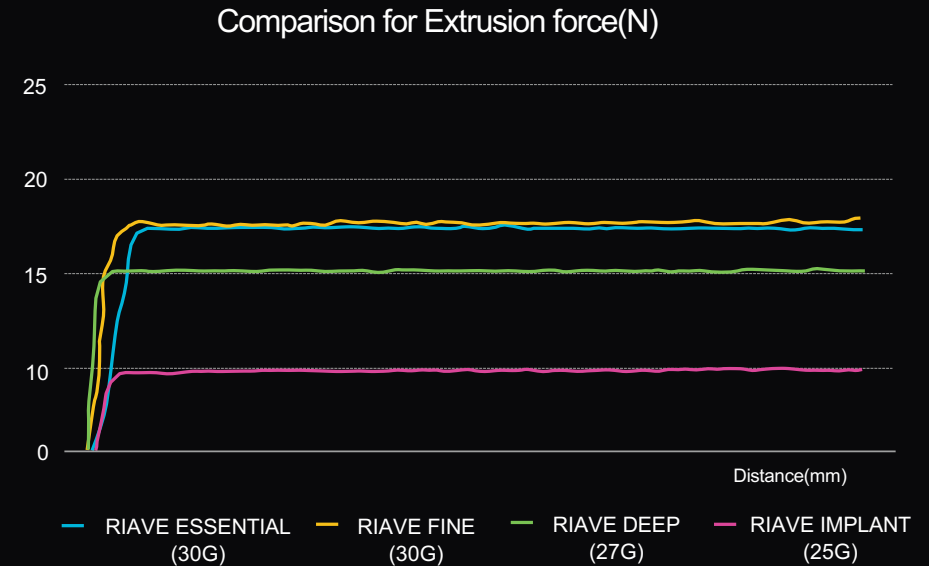
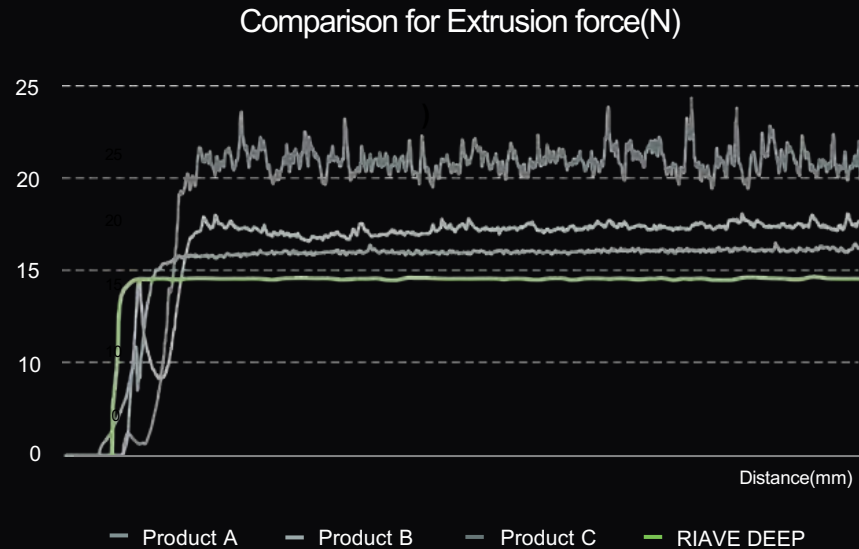
Forehead
Crow's feet
Tear trough
Lips



* The injection layer may vary depending on the operator's technique or treatment area.

3. Convenience

2) Convenience_ Extrusion Force

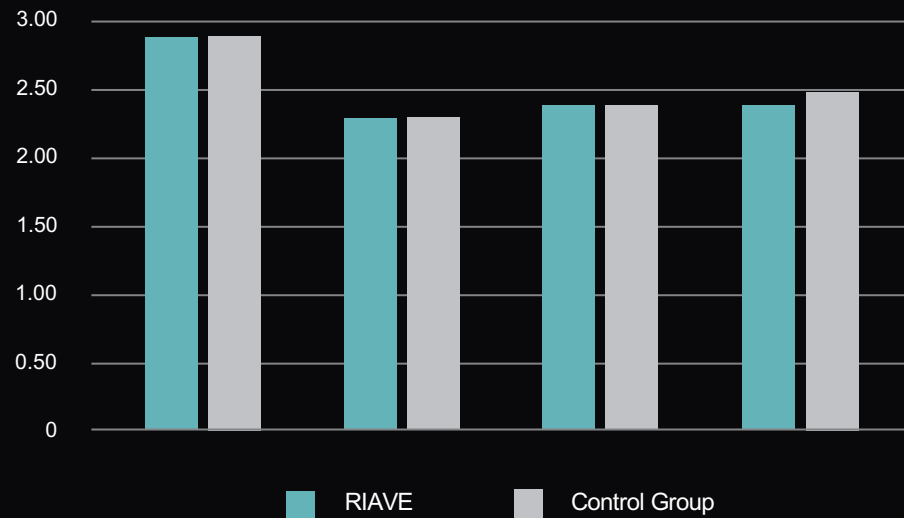


Ensures equal pressure which increases the procedure's convenience
Delivers a stable and smooth injection experience

4. Effectiveness

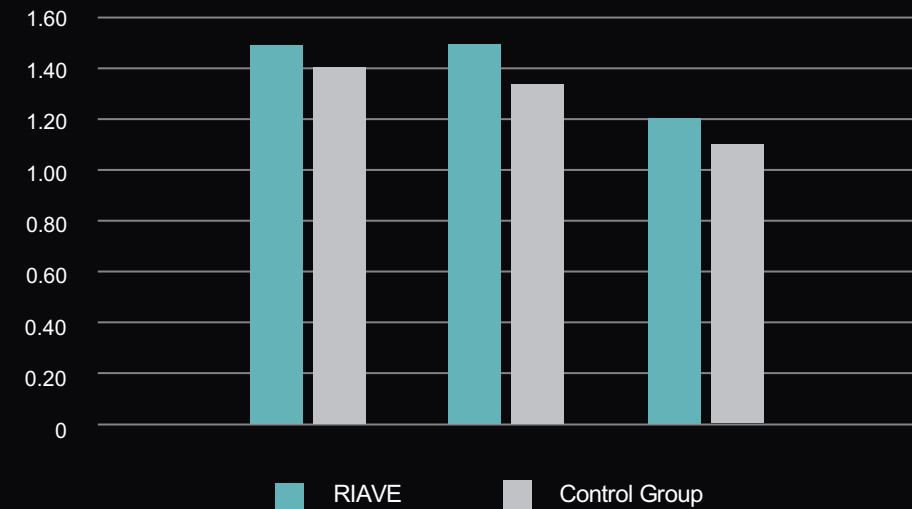
1) Clinical Practice

Result of WSRS(Wrinkle Severity Rating Scale) by independent evaluators



WSRS results evaluated by independent evaluators show improvement in wrinkle depth from week 8, 12 and 24 of baseline

Satisfaction level by panel, measured with GAIS (Global Aesthetic Improvement Scale)



The overall appearance improvement by subject GAIS was found to be similar to or slightly higher than the control group.

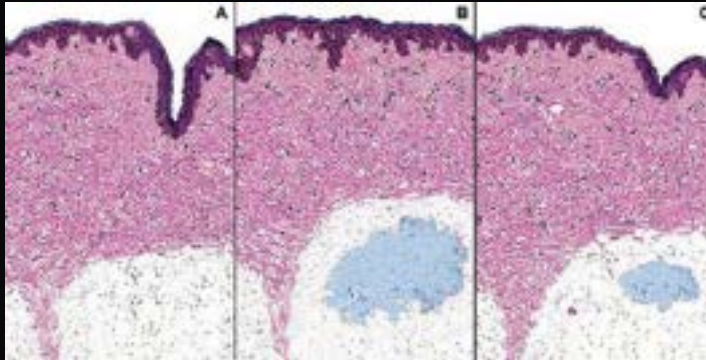
RIAVE demonstrates product **safety and Effectiveness** through clinical trials.

4. Effectiveness

2) Scientific Papers (1)



A. 50-year-old female with moderate FHLs
B. Smooth forehead 48 h after application
C. Partial recovery of the FHLs 12 months after application



A. Intradermal FHL depth before HA application stained with hematoxylin–eosin
B. No wrinkle into the dermis and a compact nodule into the subcutaneous fat 48 h after HA application
C. Partial recovery of the intradermal FHL depth and reduction in the nodule diameter into the subcutaneous fat 12 months after application

<Histological and Clinical Appraisal of Distribution and Long Acting New Hyaluronic Acid into the Subcutaneous Fat of the Forehead to Improve Horizontal Lines>

Published on August 03, 2020 in Aesthetic Plastic Surgery, a world-renowned academic journal. Author, ANTONIO CARLOS ABRAMO, is a prominent plastic surgeon who actively conducts medical research, surgery, and education in Brazil.

- Histological analysis correlated the gel distribution with clinical findings and also with wrinkle depth, 48 h and 12 months after HA application. (sample: 10 female patients)
- Subcutaneous application created a compact cylindrical filament as pattern of gel distribution, which acted as strut raising the FHL to the level of the surrounding tissues.
- The residual amount of the gel at month twelve ensured the efficacy and long-acting of RIAVE in the subcutaneous fat.

Evidence-based analysis showed that the high cohesivity of HA gel takes a form of a compact cylindrical filament capable to level the FHL with the surrounding tissues, **evidencing the efficacy of RIAVE.**

4. Effectiveness

2) Scientific Papers (2)



A. 54-year-old female with severe NLFs
B. No visible NLFs 1 month after HA application
At 12 months, NLFs two-thirds less than 1 month after application



Measures of the largest axes of the spindle-shaped nodule
A. At 24 hours
B. 1 month after HA application
C. 12 months after HA application

<Effectiveness and Long-Acting of the Hyaluronic Acid Injected into the Nasolabial Fold Measured Through Magnetic Resonance Imaging>

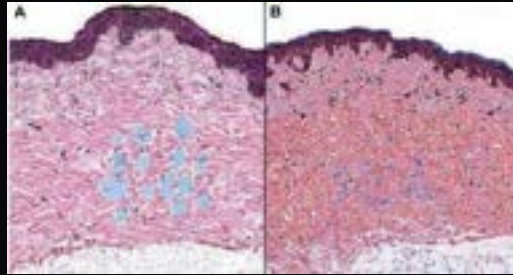
Published on November 23, 2020 in Aesthetic Plastic Surgery, a world- renowned academic journal. Author, ANTONIO CARLOS ABRAMO, is a prominent plastic surgeon who actively conducts medical research, surgery, and education in Brazil.

- Evaluated clinically 24 hours, 1 month and 12 months after HA application in Nasolabial fold through MRI. (sample: 10 female patients)
- Efficacy and long-acting of the HA was evident comparing the NLF before application with those seen at 1 month and 12 months after application.
- Application into the superficial compartment of the subcutaneous fat, apart to level the NLF with the surrounding tissues, maintained the HA for twelve months into the tissue.
- Despite decrease in size and denseness of the spindle-shaped nodule, its presence into the subcutaneous fat after 12 months evidence the efficacy and long-acting of the HA filler.

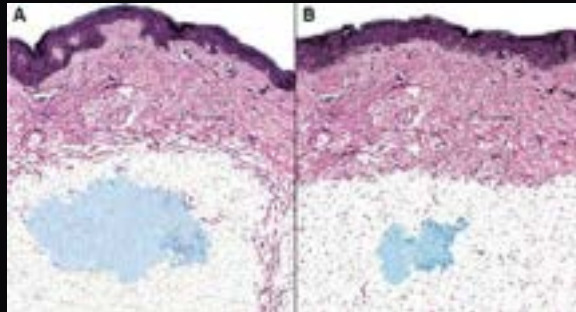
This result demonstrates that **RIAVE is an effective and long-lasting HA filler for nasolabial folds.**

4. Effectiveness

2) Scientific Papers (3)



A. Small nodules of HA into the NLF dermis 72 h after application
B. Significant decrease in diameter and number of the small nodules 9 months after application



A. A Nodule diameter 72 h after application into the subcutaneous fat
B. Moderate decrease in the nodule diameter 9 months after application

<Histological and Quantitative Appraisal of the Intradermal and Subcutaneous Distribution of the Hyaluronic Acid Injected into the Nasolabial Fold>

Published on March 20, 2020 in Aesthetic Plastic Surgery, a world-renowned academic journal. Author, ANTONIO CARLOS ABRAMO, is a prominent plastic surgeon who actively conducts medical research, surgery, and education in Brazil.

- Comparison by Sub-Q into the dermal layer and sub cutaneous layer of folds of wrinkles (sample: 10 persons)
- Filler degradation occurs on the surface of and inside the gel. Dermis splits the filler gel into several nodules due to the tight collagen fibers meshwork, while subcutaneous fat layer is flexible and lightly dense, allowing homogeneous and compact distribution of the gel.
- Therefore, injection into subcutaneous fat layer has longer permanence than injection into dermis.
- RIAVE IMPLANT acts as an effective and long-lasting volumizer due to its high concentration and cohesivity, when injected into the subcutaneous layer of the NFL (nasolabial fold).

This paper demonstrates that **RIAVE is effective HA filler for nasolabial folds.**

4. Effectiveness

2) Scientific Papers (4)



48-year-old woman uses RIAVE to correct crooked nose bridge
Start from the left, before and after the procedure



39-year-old woman uses RIAVE to correct nose bridge
Start from the left, before treatment, 1 month after treatment,
12 months after treatment

<Nonsurgical rhinoplasty with hyaluronic acid to enhance precise areas of the nose and improve its overall shape and contour>

Published on February 24, 2022 in Journal of Dermatology & Cosmetology, a world-renowned academic journal. Author, ANTONIO CARLOS ABRAMO, is a prominent plastic surgeon who actively conducts medical research, surgery, and education in Brazil.

- As a scientific paper using RIAVE IMPLANT for nose augmentation,
- HA's rheology and physicochemical properties are adequate for nasal augmentation and demonstrate product durability.
- 0.73 cc of HA was used per patient and showed significant improvement.
- Patient satisfaction was 73% in the first month and 70% in the 12th month. After 12 months, the patient's satisfaction level remained unchanged from the the 1st month of the procedure, proving the product's efficacy and longevity.

4. Effectiveness

3) Before & After



Procedure

Cherry lips

Product

RIAVE FINE

Procedure

Lips volume and definition

Product

RIAVE FINE

4. Effectiveness

3) Before & After



Procedure Forehead voluminization
Product **RIAVE IMPLANT**



Procedure Lips volume and definition
Product **RIAVE IMPLANT**

4. Effectiveness

3) Before & After



Procedure
Product

Lips volume and definition + Nasolabial fold correction
RIAVE DEEP & FINE

4. Effectiveness

3) Before & After



Procedure
Product

Cheek volumization
RIAVE DEEP & FINE



Procedure
Product

Nasolabial fold and tear trough correction
RIAVE IMPLANT & DEEP

Type	MEDICAL DEVICE
SPEC	Hyaluronic acid filler with lidocaine 0.3%
Country of Origin	Republic of Korea
Shelf life	2 years (24 months)
Storage conditions	Room temperature(2C –25C) Avoid direct light and freezing
Packaging	1 Syringe & 2 needles per box * Gauge may vary according to the product type
HA concentration	24 mg/ml





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