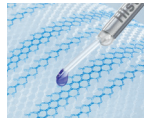
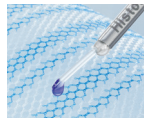


ORDERING INFORMATION

DESCRIPTION	ARTICLE NO.	CONTENTS
Histoacryl® LapFix: 1 unit with 2 Histoacryl® ampoules	 1052008	2 x 0.5 ml 1 x Histoacryl LapFix - Cannula 1 x Injekt 2mL Luer Lock Solo Syringe
Histoacryl® LapFix: 5 units with 5 Histoacryl® ampoules	 1050165	5 x 0.5 ml 5 x Histoacryl LapFix - Cannula 5 x Injekt 2mL Luer Lock Solo Syringe



AESCULAP® – a B. Braun brand

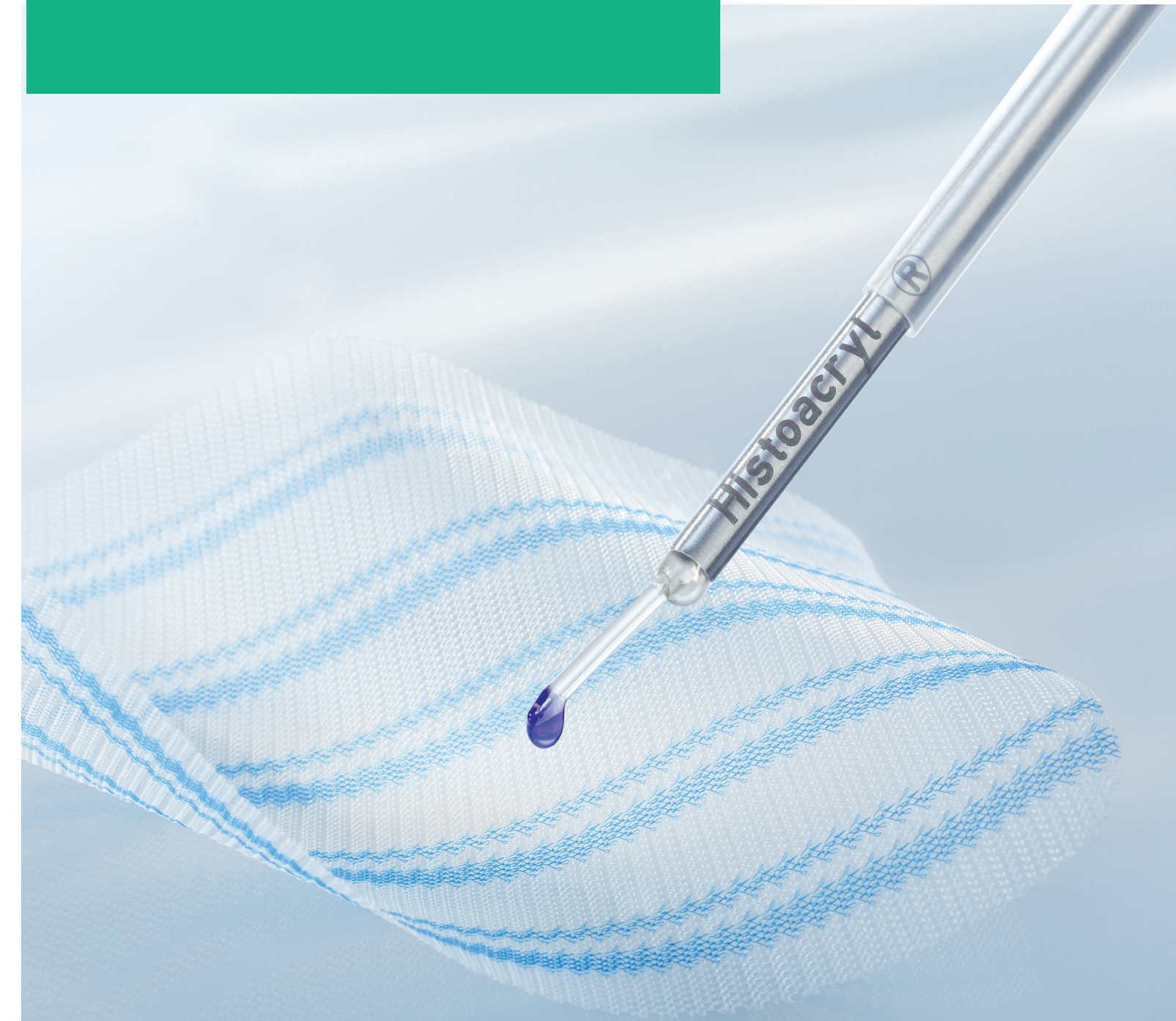
B. Braun Australia Pty Ltd | Level 5, 7-9 Irvine Place, Bella Vista NSW 2153 | Tel: 1800 251 705 | www.bbraun.com.au | info.au@bbraun.com

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Histoacryl® LapFix

Mesh Fixation: Atraumatic, Efficient, Convenient!



Histoacryl® LapFix

ATRAUMATIC, EFFICIENT, CONVENIENT!

ATRAUMATIC

Atraumatic mesh fixation with cyanoacrylate is a solution available for patients undergoing laparoscopic inguinal hernia surgery

- Non invasive method reported to be better tolerated by the patient^{1,2,3,4}
- Low recurrence rate^{1,4,5,6,8,11,12,13,14}
- Lower chronic pain^{6,8,12} or no chronic pain compared to tackers^{7,11,13,15,16}
- Less seroma compared to tackers^{9,10,11}
- Faster return to work⁶

EFFICIENT

Atraumatic mesh fixation with cyanoacrylate is a solution proven to be as efficient as the standard laparoscopic fixation with tackers

- Good biocompatibility and in vivo tolerance^{6,17,18,19}
- No human or animal components²¹
- Strong fixation (prevents mesh dislocation)^{8,20}
- Intrinsic bacteriostatic properties that help to reduce local septic complications⁵

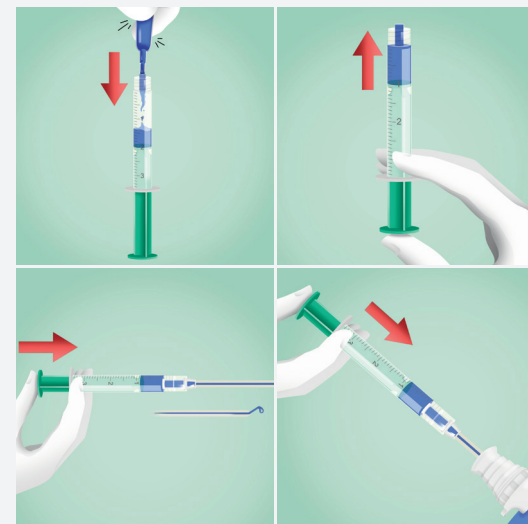
CONVENIENT

Atraumatic mesh fixation with cyanoacrylate is a very convenient solution that bring many advantages compared to tackers or sutures

- Fast and efficient polymerization⁶
- Storage at room temperature²¹
- Ready to use system, assembly in < 30 sec



In internal pre-clinical test²⁵, a group of experienced surgeons n=6 evaluated the easiness of use



- Evaluate the easiness to assemble the cannula to the device (from 1 to 10). **Average score 9.33**
- Is the shape of the type adequate for the procedure (from 1 to 10)? **Average score 9.00**
- Will it possible to fix a bilateral hernia with this device? **100 % yes**
- Does the device look functional and useful for being used to fix meshes in laparoscopic Hernia repair procedures? **100 % yes**

REFERENCES / STUDIES

- Testini M, Lissidini G, Poli E, Gurrado A, Lardo A, Piccinni G. A single-surgeon randomized trial comparing sutures, N-butyl-2-cyanoacrylate and human fibrin glue for mesh fixation during primary inguinal hernia repair. *Can J Surg.* 2010;53(3):155-60.
- Agresta F, Baldazzi GA, Ciardo LF, Trentin G, Giuseppe S, Ferrante F et al. Lightweight partially absorbable monofilament mesh (polypropylene / poliglecaprone 25) for TAPP inguinal hernia repair: initial experience. *Surg Laparosc Endosc Percutan Tech.* 2007;17(2):91-4.
- Helbling C, Schlumpf R. Sutureless Lichtenstein: first results of a prospective randomised clinical trial. *Hernia.* 2003;7(2):80-4.
- Nowobilski W, Dobosz M, Wojciechowicz T, Mionskowska L. Lichtenstein inguinal hernioplasty using butyl-2-cyanoacrylate versus sutures. Preliminary experience of a prospective randomized trial. *Eur Surg Res.* 2004;36(6):367-70.
- Farouk R, Drew PJ, Qureshi A, Roberts AC, Duthie GS, Monson JR. Preliminary experience with butyl-2-cyanoacrylate adhesive in tension-free inguinal hernia repair. *Br J Surg.* 1996;83(8):1100.
- Kukleta JF, Freytag C, Weber M. Efficiency and safety of mesh fixation in laparoscopic inguinal hernia repair using n-butyl cyanoacrylate: long-term biocompatibility in over 1,300 mesh fixations. *Hernia.* 2012;16(2):153-62.
- Treepongkaruna SA, Subwongcharoen S. Novel technique of mesh fixation with cyanoacrylate in totally extraperitoneal laparoscopic repair: early experience. *J Med Assoc Thai.* 2012;95 Suppl 3:98-101.
- Brügger L, Bloesch M, Ipaktchi R, Kurmann A, Candinas D, Beldi G. Objective hypoesthesia and pain after transabdominal preperitoneal hernioplasty: a prospective, randomized study comparing tissue adhesive versus spiral tacks. *Surg Endosc.* 2012;26(4):1079-85.
- Lau, H. Fibrin sealant versus mechanical stapling for mesh fixation during endoscopic extraperitoneal inguinal hernioplasty: a randomized prospective trial. *Ann Surg.* 2005;242(5):670-5.
- Topart P, Vandenbroucke F, Lozac'h P. Tisseel vs tack staples as mesh fixation in totally extraperitoneal laparoscopic repair of groin hernias: a retrospective analysis. *Surg Endosc.* 2005;19(5):724-7.
- Jani K. Randomised controlled trial of n-butyl cyanoacrylate glue fixation versus suture fixation of mesh in laparoscopic totally extraperitoneal hernia repair. *J Minim Access Surg.* 2016;12(2):118-23.
- Subwongcharoen S, Ruksakul K. A randomized controlled trial of staple fixation versus N-butyl-2-cyanoacrylate fixation in laparoscopic inguinal hernia repair. *J Med Assoc Thai.* 2013;96 Suppl 3:8-13.
- Wang MG, Tian ML, Zhao XF, Nie YS, Chen J, Shen YM. Effectiveness and safety of n-butyl-2-cyanoacrylate medical adhesive for noninvasive patch fixation in laparoscopic inguinal hernia repair. *Surg Endosc.* 2013;27(10):3792-8.
- Filipovic-Cugura J, Romic M, Misir Z, Filipovic N. Laparoscopic total extraperitoneal (TEP) inguinal hernia repair, comparison between postoperative pain using Hystoacril® Braun glue or Covidien ProTack™ fixation device for mesh fixation. *Hernia.* 2014;18(2):55-134.
- Moreno-Egea A. Is sutureless hernia repair a safe option for treating abdominal Wall Hernias? A prospective study with a synthetic tissue adhesive (n-hexyl-alpha-cyanoacrylate). *Cir Esp.* 2013;91(4):243-9.
- Burza A, Avantifiori R, Curinga R, Santini E, Delle Site P, Stipa F. Comparison between two different mesh fixation methods in laparoscopic inguinal hernia repair: tackers vs. Synthetic cyanoacrylate glue. *Minerva Chir.* 2014;69(6):321-9.
- Eldabe Mikhail A, Palomo Luquero A, Reoyo Pascual JF, Seco Gil JL. Prosthetic material fixation in open inguinal hernioplasty: suture vs. synthetic glue. *Cir Esp.* 2012;90(7):446-52.
- Shen YM, Sun WB, Chen J, Liu SJ, Wang MG. NBCA medicaladhesive (n-butyl-2-cyanoacrylate) versus suture for patchfixation in Lichtenstein inguinal herniorrhaphy: a randomized controlled trial. *Surgery.* 2012;151(4):550-5.
- Pascual G, Sotomayor S, Rodríguez M, Pérez-Köhler B, Kühnhardt A, Fernández-Gutiérrez M et al. Cytotoxicity of Cyanoacrylate-Based Tissue Adhesives and Short-Term Preclinical In Vivo Biocompatibility in Abdominal Hernia Repair. *PLoS One.* 2016;11(6):e0157920.
- Golling M, Hofmann P, Hess C. Mesh fixation for TAP and TEP – First use of a new laparoscopic cyanoacrylate applicator. *Hernia* 2014;18(2):135-47.
- Instruction for Use Histoacryl®.
- Mikhail AE, Palomo AP, Reoyo JF, Seco JL. Prosthetic material fixation in open inguinal hernioplasty: suture vs. synthetic glue. *Ciresp* 2012;90(7):446-52.
- Gutlic N, Rogmark P, Nordin P, Petersson U, Montgomery A. Impact of mesh fixation on chronic pain in total extraperitoneal inguinal hernia repair (TEP): a nationwide register-based study. *Ann Surg.* 2016;263(3):1199-206.
- García-Vallejo L, Couto-Gonzalez I, Concheiro-Coello P, Brea-García B, Taboada-Suarez A. Cyanoacrylate surgical glue for mesh fixation in laparoscopic total extraperitoneal hernia repair. *Surg Laparosc Endosc Percutan Tech.* 2014;24(3):240-3.
- Internal data. Survey on the handling of Histoacryl® LapFix, Barcelona, Spain, May 2016

STUDY	YEAR	PATIENT	PRODUCT	TECHNIQUE	EARLY PO PAIN	CHRONIC PAIN	RECURRENCE	OPERATION TIME	FOLLOW-UP
Kukleta et al. ⁶	2011	1336	BCA vs. tacks	TAPP	BCA<T due to different factors. Not used as evidence.	BCA<T	0.37 % vs. 2.3 %	NR	98 months
Mikhail et al. ²²	2012	198	BCA vs. suture	Plug in open technique	NS	2.9 % vs. 10.3 %	0 % vs. 1 %	NR	16 months
Brügger et al. ⁸	2012	80	BCA vs. tackers	TAPP	2 % vs. 14 %	4 % vs. 32 %	BCA = T	BCA = T	38 months
Moreno Egea et al. ¹⁵	2013	70	BCA vs. non absorbable suture	Lichtenstein/Rutkow and TEP	2.4 +/- 1 vs. 4.5 +/- 1.4 (VAS)	0 % vs. 20 %	0 % vs. 0 %	30 min vs. 70 min	15 months
Subwongcharoen et al. ¹²	2013	60	Histoacryl® vs. staples	TEP	1.6 +/- 1.33 vs. 2.35 +/- 1.32 (VAS)	16 % vs. 33 %	0 % vs. 3.3 %	NR	1 year
Wang et al. ¹³	2013	1027	No fixation vs. BCA vs. S vs. BCA + S	TAPP	1.4 ± 0.6 vs. 1.3 ± 0.6 vs. 2.2 ± 0.9 vs. 2.2 ± 0.7 (VAS)	0 % vs. 0 % vs. 2.2 % vs. 2.1 %	0 % vs. 0 % vs. 0 % vs. 0 %	NR	19 months
Gutlic N et al. ²³	2016	1110	Permanent fixation (staplers / tackers) vs. BCA/ no fixation	TEP	0 % vs. 0.5 %, NS	8.7 % vs. 7.4 %, NS	1.5 % vs. 1.3 %, NS	40 min	33 months recurrent hernia 7.5 years
Filipovic-Cugura et al. ¹⁴	2014	30	Histoacryl® vs. tackers	TEP	1.8 vs. 2.3	NR	0 % vs. 0 %	NR	1 month
Golling et al. ²⁰	2014	28	Histoacryl® vs. tackers	TAPP and TEP	NR	NR	NR	NR	NR
Burza et al. ¹⁶	2014	70	BCA vs. tackers	TAPP	NR	0 % vs. 11.42 %	2.85 % vs. 2.85 %	BCA = T	24 months
García-Vallejo et al. ²⁴	2014	61	BCA	TEP	59 % (24h), 34.4 % (48h), 6.6 % (>48h)	0 %	0 %	NR	29.7 months
Jani K ¹¹	2016	251	BCA vs. absorbable suture	TEP	BCA<S but not statistically significant	0 % vs. 0 %	0 % vs. 0 %	BCA>S	24 months

NR: not recorded, > better or faster, = equal, < smaller or lower, H: Histoacryl®, BCA: Butyl-cyanoacrylate, S: suture, T: tackers, F: fibrin glue, NS: no significance