

Monosyn[®]

The surgeon's choice

Mid-term absorbable synthetic monofilament suture made of glyconate



Sutures

Monosyn®

The surgeon's choice



Monosyn® is an excellent mid-term absorbable synthetic monofilament suture developed exclusively by B. Braun for the suturing of soft tissues.

Monosyn® provides:

- Monofilament structure
- Mid-term absorption profile
- Rapid Mass absorption
- Excellent Knot characteristics
- High knot-pull tensile strength
- Easy handling

Bowel anastomosis

Convincing monofilament structure

Using an absorbable monofilament suture offers specific features not available in absorbable braided sutures. Monosyn® glides smoothly through delicate tissues and decreases the risk of an infection spreading¹.

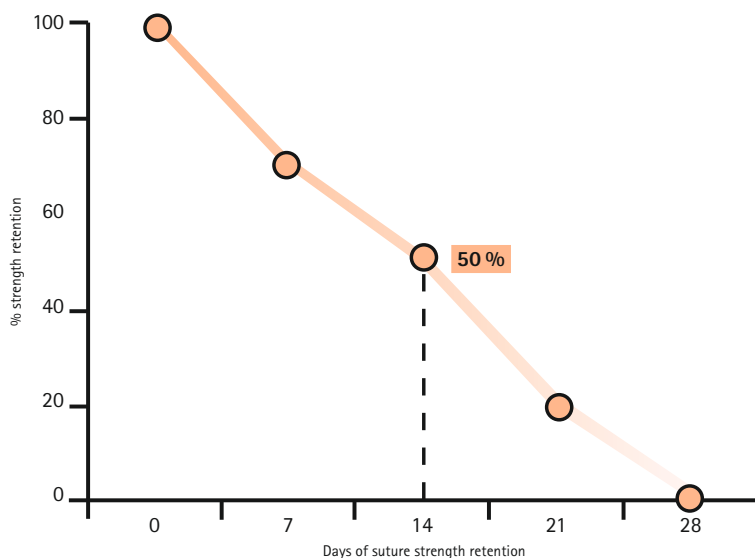
Adapted degradation profile for soft tissue suturing

The degradation profile of Monosyn® assures secure adaptation of most soft tissue throughout the critical wound healing phase.

Rapid mass absorption within 60 to 90 days

Monosyn® absorption occurs by means of hydrolysis. The Monosyn® unique synthetic copolymer causes very low tissue reaction.

Monosyn® in vivo degradation profile



Source: NAMSA laboratory tests

¹ S. KATZ, M.D., M. IZHAR, M.Sc., D. MIRELMAN, PH.D.; *Bacterial Adherence to Surgical Sutures. A Possible Factor in Suture Induced Infection; Ann Surg. 1981 July; 194(1): 35-41*



Monosyn® provides distinctive characteristics of a modern suture. Monosyn®'s excellent handling parameters allows a high knot security, flexibility and knot placement to achieve remarkable surgery results².

Excellent knot characteristics

Monosyn® offers a remarkable flexibility allowing easy knot-tying and an excellent knot characteristic.

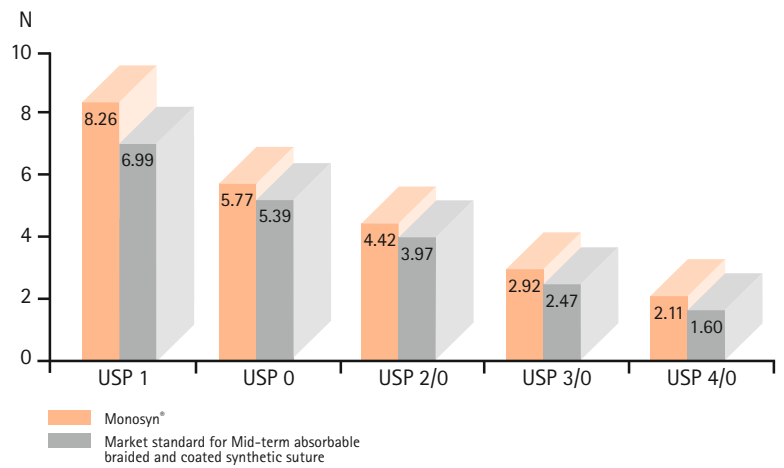
High knot-pull tensile strength

Monosyn® is characterized by a high knot-pull tensile strength.

Easy handling

Monosyn® provides advanced handling properties that allow a high knot security with only a few throws.

Excellent initial knot-pull tensile strength



Source: Internal laboratory tests according to the European and American Pharmacopeia

² G. L. Forlivesi, N. Catalano, A. Petrassi et al.: Multi-centric A.C.O.I. study of a new mid-term absorbable monofilament suture; *General Surgery – XXIII*: 315, 2002

The surgeon's choice

Surgical specialties



As 50 % of its initial tensile strength remains after 14 days, Monosyn® is indicated for soft tissue approximation and more particularly for:

- Gastrointestinal surgery
- Gynaecology and obstetrics
- Urology

Gastrointestinal surgery



Excellent knot and easy handling for a good adaptation of gastrointestinal tissue.

Main indications:

- Enteric anastomosis
- Biliary intestinal anastomosis
- Peritoneum

Gynaecology and obstetrics

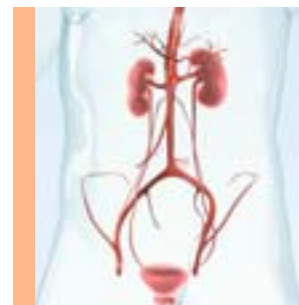


High tensile strength during the critical wound healing period. Its monofilament structure and its flexibility helps prevent any cutting effect on the tissue.

Main indications:

- Myomectomy
- Hysterectomy
- Ovaries surgery

Urology



Easy handling to work in deep areas. Monosyn® glides smoothly through the tissue and its degradation profile contributes to reduce calculus formation³.

Main indications:

- Prostatectomy
- Bladder surgery
- Uretral anastomosis and repair

³ Morris MC, Baquero A, Redovan E. et al.; Urolithiasis on absorbable and non-absorbable suture materials in the rabbit bladder; *J Urol.* 1986 Mar;135(3):602-3.

Needles



Monosyn® has a wide range of needle combinations in order to fulfill surgeons' needs. All B. Braun needles are silicone coated to reduce the force needed for the initial penetration of the tip and the tissue drag.

Round bodied needle with taper point



Designed for soft tissue penetration, its body is flattened to allow a precise handling with the needle holder.

Round bodied needle with trocar point



Provides a smooth pass through the tissue, decreasing the possibility of cutting further into the surrounding tissue.

Round bodied tapercutting needle



Specially designed to ensure good penetration in tougher tissues with minimum tissue trauma.

Reverse cutting needle with micro-point



The ideal needle for plastic surgery provides an atraumatic penetration.

Monosyn® is indicated for general soft tissue approximation and/or ligation in surgical specialities where the surgical practice requires the use of mid-term absorbable suture material.

| Tissue Layer / Surgical Speciality | Frequently used needle |
|--|--|
| Skin closure (All specialities) | DSMP 13 – DSMP 24 / HS 18 – HS 26 / GS 51 – GS 60 |
| Skin closure (Periocular, blefaroplasty) | DSMP 7 – DSMP 16 / DRC 10 – DRC 12 |
| Tendons (Peritendinous suture) | DSMP 7 – DSMP 16 / DRC 10 – DRC 12 |
| Gastrointestinal tract | HR 22 – HR 26 / GR 65 (Purse string) |
| Laparoscopic | DR 18 – DR 32 / GR 19 |
| Biliary ducts | HR 13 – HR 17 / DR 12 |
| Peritoneum | HR 26 – HR 30 |

| Tissue Layer / Surgical Speciality | Frequently used needle |
|---|--|
| Urologic tract | HR 13 – HR 30 / FR 26 – FR 40 |
| External female genitalia, vagina and perineal area | HR 22 – HR 37 / HRT 30 – HRT 37 / HS 30 – HS 37 |
| Female fertility (Fallopian tube) | HR 13 |
| Coloproctology | HR 26 – HR 30 / FR 26 – FR 40 |
| Oral cavity (Lip Cleft) | HR 22 – HR 30 / HRT 17 – HRT 30 / HS 18 – HS 26 |
| Thyroid procedure | HR 22 – HR 30 |
| Aneurismatic sac (Adventitia) | HR 26 – HR 30 |
| Lung parenchyma | HR 22 – HR 30 |

Monosyn®

The surgeon's choice



Excellent knot characteristics
+ Easy handling
+ Mid-term absorption time
= Monosyn®






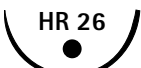



Monosyn®



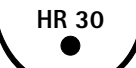
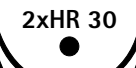
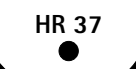
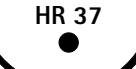
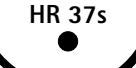
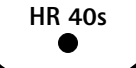
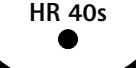
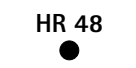
Product features

| | |
|---------------------------------|--|
| Structure | Monofilament |
| Chemical composition | Glyconate, a terpolymer made of: 72 % glycolide 14 % trimethylene carbonate 14 % ε-caprolactone |
| Colour | Violet or undyed |
| Sizes | USP 2 (metric 5) to USP 7/0 (metric 0.5) |
| Knot tensile strength retention | 70 % after 7 days implantation 50 % after 14 days implantation 20 % after 21 days implantation |
| Mass absorption | Degradation by hydrolysis within 60 - 90 days |
| Indications | For the approximation of soft tissues |
| Sterilisation | Ethylene oxide |












Needle-Thread combinations

| Needle length mm | Thread length cm colour | USP metric | | | | | | | | |
|--|--|------------|------------|----------------------|----------------------|----------------------|--|----------------------|----------|----------|
| | | 7/0 0.5 | 6/0 0.7 | 5/0 1 | 4/0 1.5 | 3/0 2 | 2/0 3 | 0 3.5 | 1 4 | 2 5 |
| 1/2 circle round bodied needle | | | | | | | | | | |
|  HR 13 | 70 violet 45 undyed | C0022132 | C0022007 | C0022008 | | | | | | |
|  HR 17 | 70 violet 90 violet 70 undyed | | C0022002 | C0022003 C0022810 | C0022004 | C0022005 | | | C0023006 | |
|  HR 17 "Take off" | 4x70 violet | | | C0022160 | | | | | | |
|  2xHR 17 | 70 violet | | | C0022803 | C0022804 | C0022805 | | | | |
|  HR 22 | 30 violet 45 violet 70 violet 120 violet 70 undyed | | C0022412 | C0022413 | C0022014 | C0022015 | C0022017 C0022016 C0022520 | C0022018 | | C0023016 |
|  2xHR 22 | 70 violet 90 violet | | | | C0022814 C0022914 | C0022815 C0022915 | | | | |
|  HR 22 "Take off" | 4x45 violet 4x70 violet | | | | C0022061 | | C0022511 | | | |
|  HR 26 | 30 violet 70 violet 90 violet 70 undyed | | | | C0022423 | C0022024 C0022422 | C0022022 C0022025 C0022026 C0022425 C0022426 | C0022023 C0022027 | C0022028 | C0022029 |
|  2xHR 26 | 70 violet 90 violet | | | | | C0022823 C0022824 | C0022835 C0022825 | C0022836 C0022826 | | |












Needle-Thread combinations

| Needle length mm | Thread length cm colour | USP metric | | | | | | | | |
|---|-------------------------------|------------|------------|----------|------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | | 7/0 0.5 | 6/0 0.7 | 5/0 1 | 4/0 1.5 | 3/0 2 | 2/0 3 | 0 3.5 | 1 4 | 2 5 |
| 1/2 circle round bodied needle | | | | | | | | | | |
|  HR 26 "Take off" | 4x45 violet | | | | | C0022522 | | | | |
|  HR 26s | 70 90 violet | | | | C0022084 | C0022085 C0022485 | C0022086 C0022486 | C0022087 C0022487 | C0022088 C0022488 | C0022089 C0022489 |
|  HR 30 | 70 violet | | | | | C0022035 | C0022036 | C0022037 | C0022038 | C0022039 |
|  2xHR 30 | 70 90 violet | | | | | C0022535 C0022435 | C0022536 C0022436 | | | |
|  HR 37 | 70 90 violet | | | | C0022044 | C0022045 C0022445 | C0022046 C0022446 | C0022047 C0022447 | C0022048 C0022448 | C0022049 C0022449 |
|  HR 37 "Take off" | 4x45 violet | | | | | | | B0022543 | | |
|  HR 37s | 90 violet 90 undyed | | | | | | C0022456 | C0022457 | C0022458 | |
|  HR 40s | 70 90 violet | | | | | | C0022066 C0022466 | C0022067 C0022467 | C0022068 C0022468 | C0022069 |
|  HR 40s "Take off" | 4x45 violet | | | | | | | B0022548 | | |
|  HR 48 | 90 violet | | | | | | C0022076 | C0022077 | C0022078 | C0022079 |








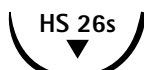


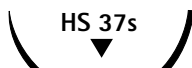
| |
|---------------------|
| glyconate |
| mid-term absorbable |
| uncoated |
| monofilament |

| Needle length mm | Thread length cm colour | USP metric | | | | | | | | |
|--|-------------------------------|------------|------------|----------|----------------------------------|----------------------------------|----------------------------------|----------|----------|--------|
| | | 7/0 0.5 | 6/0 0.7 | 5/0 1 | 4/0 1.5 | 3/0 2 | 2/0 3 | 0 3.5 | 1 4 | 2 5 |
| 3/8 circle round bodied needle | | | | | | | | | | |
|  DR 12 | 70 violet | | C0022095 | C0022096 | | | | | | |
|  DR 18 | 70 violet | | | C0022093 | C0022094 | | | | | |
|  DR 18 "Loop" | 70 violet | | | | | C0022783 | | | | |
|  DR 22 | 30 70 120 violet | | | | C0022128 C0022110 C0022129 | C0022097 C0022100 C0022112 | C0022098 C0022113 | | | |
|  DR 26 | 30 70 120 violet | | | | | C0022119 C0022117 C0022121 | C0022120 C0022118 C0022122 | | | |
|  DR 32 | 70 violet | | | | | C0022101 | C0022106 | C0022125 | C0022126 | |
| 5/8 circle round bodied needle | | | | | | | | | | |
|  FR 26 | 70 violet 70 undyed | | | | | C0022619 | C0022620 C0023620 | C0022621 | | |
|  2xFR 26 | 70 violet | | | | C0022734 | C0022735 | C0022736 | | | |
|  FR 36 | 70 undyed | | | | | C0022635 | C0022636 | C0022637 | | |
|  2xFR 36 | 90 violet | | | | | C0022729 | C0022730 | | | |
|  FR 40 | 70 violet | | | | | | C0022629 | C0022630 | | |









Needle-Thread combinations

| Needle length mm | Thread length cm colour | USP metric | | | | | | | | |
|--|-------------------------------|------------|------------|----------|------------|----------|----------|----------|----------|----------|
| | | 7/0 0.5 | 6/0 0.7 | 5/0 1 | 4/0 1.5 | 3/0 2 | 2/0 3 | 0 3.5 | 1 4 | 2 5 |
| Straight round bodied needle | | | | | | | | | | |
| GR 19  | 30 violet | | | | C0022410 | C0022406 | | | | |
| 2xGR 65  | 70 violet | | | | | | C0022575 | | | |
| 3/8 circle round bodied tapercutting needle | | | | | | | | | | |
| DRC 10  | 70 violet | | C0022382 | | | | | | | |
| DRC 12  | 70 violet | | | C0022403 | | | | | | |
| 1/2 circle round bodied needle with trocar point | | | | | | | | | | |
| HRT 13  | 70 violet | | C0022310 | C0022311 | | | | | | |
| HRT 17  | 70 violet | | C0022322 | C0022323 | C0022324 | C0022325 | | | | |
| HRT 26  | 70 90 violet | | | | C0022304 | C0022305 | C0022306 | C0022307 | | C0022508 |
| HRT 30  | 70 violet | | | | | | C0022336 | C0022337 | | |
| HRT 37  | 70 90 violet | | | | | | C0022316 | C0022317 | C0022318 | |
| | | | | | | | C0022516 | C0022517 | C0022518 | C0022519 |
| HRT 40  | 90 violet | | | | | | | C0022527 | C0022528 | |
| HRT 48  | 90 violet | | | | | | | C0022332 | C0022333 | |









| |
|---------------------|
| glyconate |
| mid-term absorbable |
| uncoated |
| monofilament |

| Needle length mm | Thread length cm colour | USP metric | | | | | | | | |
|---|-------------------------------|------------|------------|----------|------------|----------|----------|----------|----------|--------|
| | | 7/0 0.5 | 6/0 0.7 | 5/0 1 | 4/0 1.5 | 3/0 2 | 2/0 3 | 0 3.5 | 1 4 | 2 5 |
| 3/8 circle round bodied needle with trocar point | | | | | | | | | | |
|  DRT 18 | 70 violet | | | C0022343 | C0022344 | | | | | |
|  DRT 22 | 70 violet | | | | C0022354 | C0022355 | | | | |
|  DRT 26 | 70 violet | | | | | C0022365 | C0022366 | | | |
|  DRT 32 | 70 violet | | | | | | C0022376 | C0022377 | C0022378 | |
| 1/2 circle reverse cutting needle | | | | | | | | | | |
|  HS 18 | 70 undyed | | | C0023263 | C0023264 | | | | | |
|  HS 23 | 70 undyed | | | | C0023224 | C0023225 | C0023226 | | | |
|  HS 26 | 70 violet | | | | | C0022236 | C0022237 | | | |
| | 70 undyed | | | | | C0023239 | C0023240 | | | |
|  HS 26s | 70 violet | | | | | C0022241 | C0022242 | C0022243 | | |
| | 70 undyed | | | | | | | | C0023230 | |
|  HS 30 | 70 undyed | | | | | | C0023250 | C0023251 | | |
|  HS 37 | 70 undyed | | | | | C0023235 | C0023236 | C0023237 | C0023238 | |
|  HS 37s | 70 violet | | | | | | C0022247 | C0022248 | C0022249 | |

Needle-Thread combinations

| Needle length mm | Thread length cm colour | USP metric | | | | | | | | | |
|---|--|------------|----------------------|----------------------|------------|----------------------|----------|----------|----------|----------------------|----------|
| | | 7/0 0.5 | 6/0 0.7 | 5/0 1 | 4/0 1.5 | 3/0 2 | 2/0 3 | 0 3.5 | 1 4 | 2 5 | |
| 1/2 circle reverse cutting needle | | | | | | | | | | | |
|  HS 40 | 90 undyed | | | | | | | | | C0023247 | C0023248 |
|  HS 48 | 90 undyed | | | | | | | | | C0023259 | C0023258 |
| 3/8 circle reverse cutting needle | | | | | | | | | | | |
|  DS 12 | 45 70 undyed | | C0023102 C0023412 | C0023103 C0023413 | C0023414 | | | | | | |
|  DS 16 | 45 violet 45 70 undyed | | | C0022419 | | | | | | | |
|  DS 19 | 45 70 violet 45 70 undyed | | | | | C0022504 C0022204 | C0022205 | | | | |
|  DS 24 | 70 violet 45 70 undyed | | | | | | | C0022215 | C0022216 | C0022217 | |
|  DS 30 | 70 violet 45 70 undyed | | | | | | | | C0022231 | C0022232 | C0022233 |
|  DS 39 | 70 undyed | | | | | | | | C0023435 | C0023201 C0023436 | C0023437 |
| | | | | | | | | | | C0023191 | |

| |
|---------------------|
| glyconate |
| mid-term absorbable |
| uncoated |
| monofilament |

| Needle length mm | Thread length cm colour | USP metric | | | | | | | | |
|---|-------------------------------|------------|------------|----------|------------|----------|----------|----------|--------|--------|
| | | 7/0 0.5 | 6/0 0.7 | 5/0 1 | 4/0 1.5 | 3/0 2 | 2/0 3 | 0 3.5 | 1 4 | 2 5 |
| Straight cutting needle | | | | | | | | | | |
| GS 51  | 70 undyed | | | | C0023279 | C0023280 | C0023281 | | | |
| GS 60  | 70 undyed | | | | C0023284 | C0023285 | C0023286 | | | |
| 3/8 circle reverse cutting needle with micro-point | | | | | | | | | | |
| DSMP 7  | 45 undyed | C0023647 | | | | | | | | |
| DSMP 11  | 45 undyed | C0023641 | C0023642 | C0023643 | | | | | | |
| DSMP 13  | 45 violet | | | C0022433 | C0022434 | | | | | |
| | 45 undyed | C0023601 | C0023602 | C0023603 | C0023604 | | | | | |
| DSMP 16  | 45 undyed | | | C0023613 | C0023614 | | | | | |
| DSMP 19  | 45 70 undyed | | | C0023623 | C0023624 | C0023625 | | | | |
| | | | | | C0023627 | C0023628 | | | | |
| DSMP 24  | 45 70 undyed | | | | C0023634 | C0023633 | C0023637 | | | |
| | | | | | C0023632 | C0023635 | C0023636 | | | |

Needle-Thread combinations

| | Thread length cm colour | USP metric | | | | | | | | |
|---------------------------|-------------------------------|------------|------------|----------|------------|----------|----------|----------|----------|--------|
| | | 7/0 0.5 | 6/0 0.7 | 5/0 1 | 4/0 1.5 | 3/0 2 | 2/0 3 | 0 3.5 | 1 4 | 2 5 |
| Pre-cut sutures | | | | | | | | | | |
| 3 threads of 45 cm | 3 x 45 | | | | | C0020005 | C0020006 | C0020007 | C0020008 | |
| 6 threads of 45 cm | 6 x 45 | | | | | C0020015 | C0020016 | B0020017 | B0020018 | |
| 5 threads of 70 cm | 5 x 70 | | | | | C0020025 | C0020026 | C0020027 | B0020028 | |
| 1 thread of 140 cm | 1 x 140 | | | | | C0020035 | C0020036 | C0020037 | C0020038 | |
| Ligature reels | | | | | | | | | | |
| 1 thread of 250 cm | 1 x 250 | | | | | G0020045 | G0020046 | G0020047 | G0020048 | |



| |
|---------------------|
| glyconate |
| mid-term absorbable |
| uncoated |
| monofilament |

| Needle length mm | Thread length cm colour | USP metric | | | | | | | | |
|---------------------------------------|-------------------------------|------------|----------|----------------------|----------------------|----------|----------|--------|--------|--|
| | | 6/0 0.7 | 5/0 1 | 4/0 1.5 | 3/0 2 | 2/0 3 | 0 3.5 | 1 4 | 2 5 | |
| 1/2 circle round bodied needle | | | | | | | | | | |
| HR 13 | 70 violet | C0022301 | | | | | | | | |
| HR 17 | 70 violet | | C0022616 | C0022688 | C0022689 | | | | | |
| HR 17 "Take off" | 8 x 45 violet | | | | | M0022622 | | | | |
| 2xHR 17 | 70 violet | | | C0022626 | | | | | | |
| HR 22 | 70 violet | | | C0022659 | C0022660 | C0022661 | | | | |
| HR 22 "Take off" | 8 x 45 violet | | | M0022627 | M0022628 | | | | | |
| 2xHR 22 | 70 90 violet | | | C0022632 C0022638 | C0022639 | | | | | |
| HR 26 | 70 violet | | | C0022643 | C0022357 | C0022358 | | | | |
| HR 26 "Take off" | 8x45 8x70 violet | | | | M0022645 M0022646 | | | | | |
| 2xHR 26 | 70 90 violet | | | | C0022649 C0022650 | C0022654 | | | | |
| Progressive curve round bodied needle | | | | | | | | | | |
| PR 13 | 45 violet | | C0022655 | | | | | | | |



B. Braun Surgical SA | Carretera de Terrassa, 121 | 08191 Rubí | Spain
Phone +34 93 5 86 62 00 | Fax +34 93 6 99 63 30 | www.bbraun.es

Aesculap AG | Am Aesculap-Platz | 78532 Tuttlingen | Germany
Phone +49 (0) 74 61 95-0 | Fax +49 (0) 74 61 95-26 00 | www.aesculap.com

Aesculap – a B. Braun company

Subject to technical changes. All rights reserved.
This brochure may only be used for the exclusive
purpose of obtaining information about our
products. Reproduction in any form partial or
otherwise is not permitted.

Brochure No. B20402

0112/1/1