

# Monosyn<sup>®</sup>

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 spreading<sup>1</sup>.

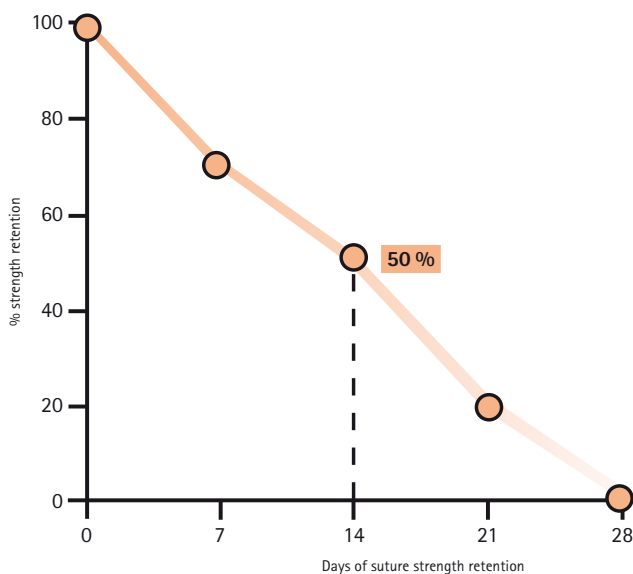
#### Adapted degradation profile for soft tissue suturing

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

<sup>1</sup> 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 results<sup>2</sup>.

#### Excellent knot characteristics

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

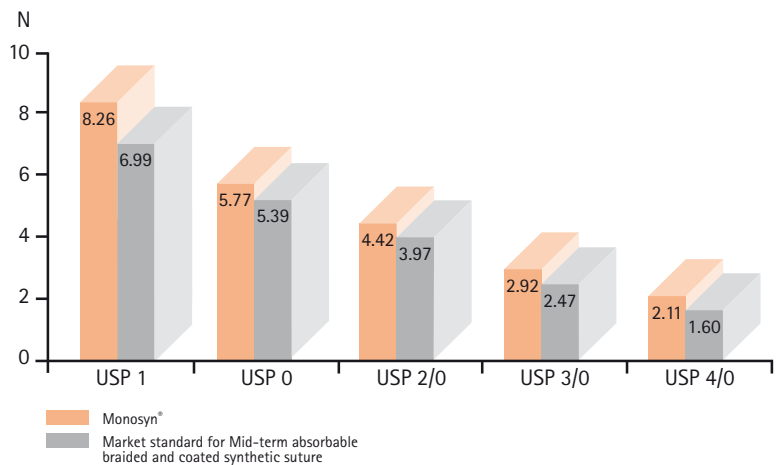
#### High knot-pull tensile strength

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

<sup>2</sup> 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

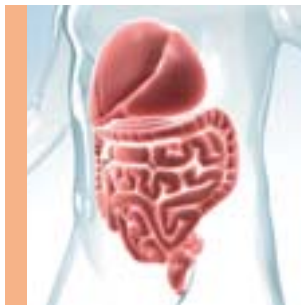
### Surgical specialties



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 formation<sup>3</sup>.

##### Main indications:

- Prostatectomy
- Bladder surgery
- Uretral anastomosis and repair

<sup>3</sup> 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

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












## Monosyn®



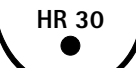
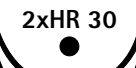
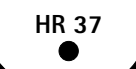
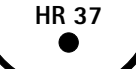
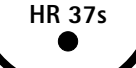
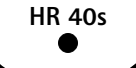
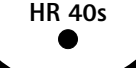
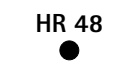
### Product features

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










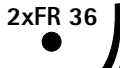

Needle length mm	Thread length cm colour	USP metric								
		7/0 0.5	6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5
1/2 circle round bodied needle										
 HR 13	70 violet 45 undyed	C0022132	C0022007	C0022008						
 HR 17	70 violet 90 violet 70 undyed		C0022002	C0022003 C0022810	C0022004	C0022005			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	C0022018	C0022016 C0022520	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				C0022024 C0022422	C0022022 C0022025 C0022425	C0022023 C0022026 C0022426	C0022027	C0022028	C0022029
 2xHR 26	70 violet 90 violet				C0022823 C0022824	C0022835 C0022825	C0022836 C0022826			

## Needle-Thread combinations











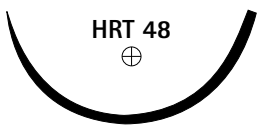
Needle length mm	Thread length cm colour	USP metric								
		7/0 0.5	6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5
1/2 circle round bodied needle										
 HR 26 "Take off"	4x45 violet					C0022522				
 HR 26s	70 90 violet				C0022084	C0022085 C0022485	C0022086 C0022486	C0022087 C0022487	C0022088 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 C0023456	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



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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
<b>3/8 circle round bodied needle</b>										
 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	
<b>5/8 circle round bodied needle</b>										
 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








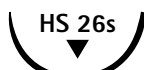


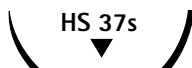
Needle length mm	Thread length cm colour	USP metric								
		7/0 0.5	6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5
<b>Straight round bodied needle</b>										
<b>GR 19</b> 	30 violet				C0022410	C0022406				
<b>2xGR 65</b> 	70 violet						C0022575			
<b>3/8 circle round bodied tapercutting needle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

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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	

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monofilament

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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 C0023627	C0023625 C0023628				
 DSMP 24	45 70 undyed				C0023634 C0023632	C0023633 C0023635	C0023637 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										
<b>3 threads of 45 cm</b>	3 x 45					C0020005	C0020006	C0020007	C0020008	
<b>6 threads of 45 cm</b>	6 x 45					C0020015	C0020016	B0020017	B0020018	
<b>5 threads of 70 cm</b>	5 x 70					C0020025	C0020026	C0020027	B0020028	
<b>1 thread of 140 cm</b>	1 x 140					C0020035	C0020036	C0020037	C0020038	
Ligature reels										
<b>1 thread of 250 cm</b>	1 x 250					G0020045	G0020046	G0020047	G0020048	



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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						



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