

Synthesis scale vs Guaranteed yield

The **synthesis scale** refers to the **amount of raw material** used to start the synthesis of oligonucleotides.

The **yield** corresponds to the amount of **final product**

recovered at the end of the synthesis and purification processes.

The length, the sequence, the type/number of modifications and the purification, strongly

influence the reaction yield.

Based on that, Eurogentec defined a minimum guaranteed yield in nmoles for all product categories (see table below).

The minimum guaranteed yields represent only a reference because the delivered quantities may vary.

			Synthesis scale (nmol)																																				
			10			40			200			1000			2500			5000			10000			20000															
Range	Product	Length	SePOP	RP-Cartridge-Gold™ HPLC (RP or IEX)	RP-Cartridge-Gold™ HPLC (RP or IEX) (6)	PAGE (3)	Dual HPLC (6)	SePOP	RP-Cartridge-Gold™ HPLC (RP or IEX), in vivo (6)	PAGE (3)	Dual HPLC (6)	SePOP	RP-Cartridge-Gold™ HPLC (RP or IEX), in vivo (6)	PAGE (3)	Dual HPLC (6)	SePOP	HPLC (RP or IEX) (6)	Dual HPLC (6)	PAGE (3)	SePOP	HPLC (RP or IEX) (6)	Dual HPLC (6)	PAGE (3)	SePOP	HPLC (RP or IEX) (6)	Dual HPLC (6)	PAGE (3)	SePOP	HPLC (RP or IEX) (6)	Dual HPLC (6)	PAGE (3)								
Custom Oligonucleotides	Non-Modified (DNA only)	5-9	-	-	-	-	-	60	50	30	20	15	180	100	80	40	40	450	200	100	100	900	400	200	200	1800	800	400	400	-	-	-							
		10-19	5	4	-	20	16	10	4	3	70	60	45	30	23	200	140	100	70	50	500	250	125	125	1000	500	250	250	2000	1000	500	500	4200	2100	1050				
		20-39	5	4	-	20	16	10	4	2	60	50	30	20	15	190	120	90	40	45	475	225	115	115	1000	500	250	250	2000	1000	500	500	4200	2100	1050				
		40-59	3	2	-	10	8	5	2	1	30	25	15	12	7	115	60	45	20	20	285	110	55	55	600	230	115	115	1200	460	230	230	2500	1000	500				
		60-79	2	2	-	8	6	5	2	1	20	18	10	8	5	75	40	30	14	14	185	-	-	40	350	-	-	90	750	-	-	180	1500	-	-				
		80-99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	40	-	-	-	80	-	-				
100-139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	20	-	-	-	40	-	-						
Custom Oligonucleotides	Modified (1) (including DNA, RNA, 2' O-Me RNA, 2' O-MOE RNA, LNA® and phosphorothioate linkages)	5-9	-	-	-	-	-	-	-	12	6	5	4	1	35	20	17	15	8	70	40	35	30	15	175	90	45	45	500	190	95	95	1000	380	190	190	2000	760	380
		10-19	-	-	-	8	5	4	3	1	20	15	12	10	6	45	35	25	20	12	100	65	30	30	300	135	65	65	600	275	130	130	1200	600	275	-	-		
		20-59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	30	-	-	-	60	-	-					
		60-139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	40	-	-	-	60	-	-					
Real-Time qPCR Probes	Double-Dye probes (2)	8-45	-	-	-	2(4)	-	-	-	4	-	-	-	-	-	-	25	-	-	-	65	-	-	-	135	-	-	-	275	-	-	-	600	-	-				
	Molecular Beacons	28-50	-	-	-	1	-	-	-	4	-	-	-	-	-	-	12	-	-	-	30	-	-	-	65	-	-	-	130	-	-	-	275	-	-				
	MGB Taqman Probes	8-30	Delivered quantity: 6, 20 or 50 nmol																																				
			Delivered Quantity (nmol)																		On Request																		
RNAi Oligonucleotides	siRNA Duplexes Non-Modified (5)	21-27	7	-	3	22	-	12	-	-	60	-	40	-	-	200	-	80	-	-																			
	siRNA Duplexes Modified (1)	21-27	7	-	3	22	-	12	-	-	60	-	40	-	-	200	-	80	-	-																			
NGS Oligonucleotides	RP-Cartridge purified	20-85	Minimum delivered quantity: 10 nmol																																				
	RP-HPLC purified																																						
Universal Primers	-	15-38	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Unique Oligonucleotides	-	2-225	On request - please contact us at unique@eurogentec.com																																				

Minimum Guaranteed Yield

Post-synthesis modifications may yield 50% less than the above stated values.

Table: (1) Between 5 and 59 bases length single-modified Oligonucleotides. Eurogentec does not provide minimum guaranteed yield for modified oligonucleotides longer than 59 bases. Post-synthesis modifications are not compatible with SePOP and RP-Cartridge-Gold™ purification. A lower yield may result from poly-modifications and/or strong secondary structures.

(2) Double-Dye probes only result from the combination of a 5' fluorescent dye and a 3' quencher.

(3) Except for oligonucleotides with GC-rich regions.

(4) Only available for Double-Dye FAM-TAMRA 10 nmol and FAM-BHQ1® 10 nmol.

(5) Non-modified siRNA's only include 3' dTdT overhang.

(6) Please be aware that all purifications containing an IEX-HPLC are limited to a length up to 39 bases.

List of the post-synthesis modifications

- > 5' Alexa Fluor® (350, 430, 488, 500, 514, 532, 546, 555, 568, 594, 610, 633, 647, 660, 680, 700 and 750)
- > 5' ATTO (390, 425, 465, 488, 495, 520, 532, 550, 565, 590, 594, 610, 620, 633, 635, 647N, 655, 680, 700, 725 and 740)
- > 5' BODIPY® (530/550, FL and TR)
- > 3', 5' and dT Cascade Blue®
- > 3' and dT Cy® (3, 3.5, 5 and 5.5)
- > 3', 5', dR and dT Digoxigenin
- > 5' Dragonfly Orange®
- > 5' DY-(681, 781 and 782)
- > dR 6-FAM
- > dR and dT HEX
- > 5' HiLyte™ Fluor (405, 488, 555, 594, 647, 680 and 750)
- > 3', dR and dT JOE
- > 5' Marina Blue®
- > 5' Oregon Green® (488 and 488 X)
- > 5' Pacific Blue™
- > 3' QXL®
- > 3', 5', dR and dT Rhodamine 6G
- > 3', 5', dR and dT ROX
- > 5' TAMRA
- > dR and dT TET
- > 3', 5', dR and dT Texas Red®

