

# 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)																Minimum Guaranteed Yield																				
		10	40	200	1000	2500	5000	10000	20000																													
Range	Product	Length	SePOP RP-Cartridge-Gold™ HPLC (RP or IEX)	SePOP RP-Cartridge-Gold™ HPLC (RP or IEX)	PAGE (®)	Dual/HPLC	SePOP RP-Cartridge-Gold™ HPLC (RP or IEX), in vivo	PAGE (®)	Dual/HPLC	UltraPureGold™	SePOP RP-Cartridge-Gold™ HPLC (RP or IEX), in vivo	PAGE (®)	Dual/HPLC	UltraPureGold™	SePOP HPLC (RP or IEX)	Dual/HPLC	PAGE (®)	SePOP HPLC (RP or IEX)	Dual/HPLC	PAGE (®)	SePOP HPLC (RP or IEX)	Dual/HPLC	PAGE (®)															
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	15	200	140	100	70	50	30	475	225	125	125	2000	1000	500	500	4200	2100	1050				
		20-39	5	4	-	-	20	16	10	4	2	60	50	30	20	15	10	190	120	90	40	45	20	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	6	115	60	45	20	20	12	285	110	55	55	600	230	115	115	1200	460	230	230	2500	1000	500
		60-79	2	2	-	-	8	6	-	2	-	20	18	-	8	-	4	75	40	-	14	-	8	185	-	-	40	350	-	-	90	750	-	-	180	1500	-	-
	80-99	-	-	-	-	-	-	-	1	-	-	-	-	3	-	2	-	-	-	5	-	3	-	-	-	30	-	-	-	40	-	-	80	-	-	-		
	100-139	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	3	-	2	-	-	-	10	-	-	-	20	-	-	40	-	-	-		
	(including DNA, RNA, 2' O-Me RNA, LNA* and phosphorothioate linkages)	5-9	-	-	-	-	3	-	-	-	12	-	6	-	-	-	-	25	-	12	-	-	60	30	30	-	125	60	60	-	250	125	125	-	-	-		
		10-19	-	-	-	-	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
		20-59	-	-	-	-	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
Real-Time qPCR Probes	Double-Dye probes (2)	8-38	-	-	<2(4)	-	-	4	-	-	-	-	12	-	-	-	25	-	-	-	-	65	-	-	-	135	-	-	-	275	-	-	-	600	-	-		
	Molecular Beacons	32-50	-	-	-	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																																			

## 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 greater 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.

### 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®

