



## SEPAX APPLICATION NOTE

# mRNA Separation on SEC and RP

**SRT SEC-1000, 5  $\mu\text{m}$ , 1000  $\text{\AA}$ , 7.8 x 300 mm**

Part Number: 215950-7830

**Proteomix RP-1000, 5  $\mu\text{m}$ , 1000  $\text{\AA}$ , 2.1 x 100 mm**

Part Number: 465950-2110

**Sample:** mRNA (Single-stranded, 1000 nucleotides, 300K ~ 600K Da)

**Concentration:** 0.5 mg/mL

**Sample solution:** Water (DEPC)

**Sample pH:** Neutral

**Storage:** -20 °C

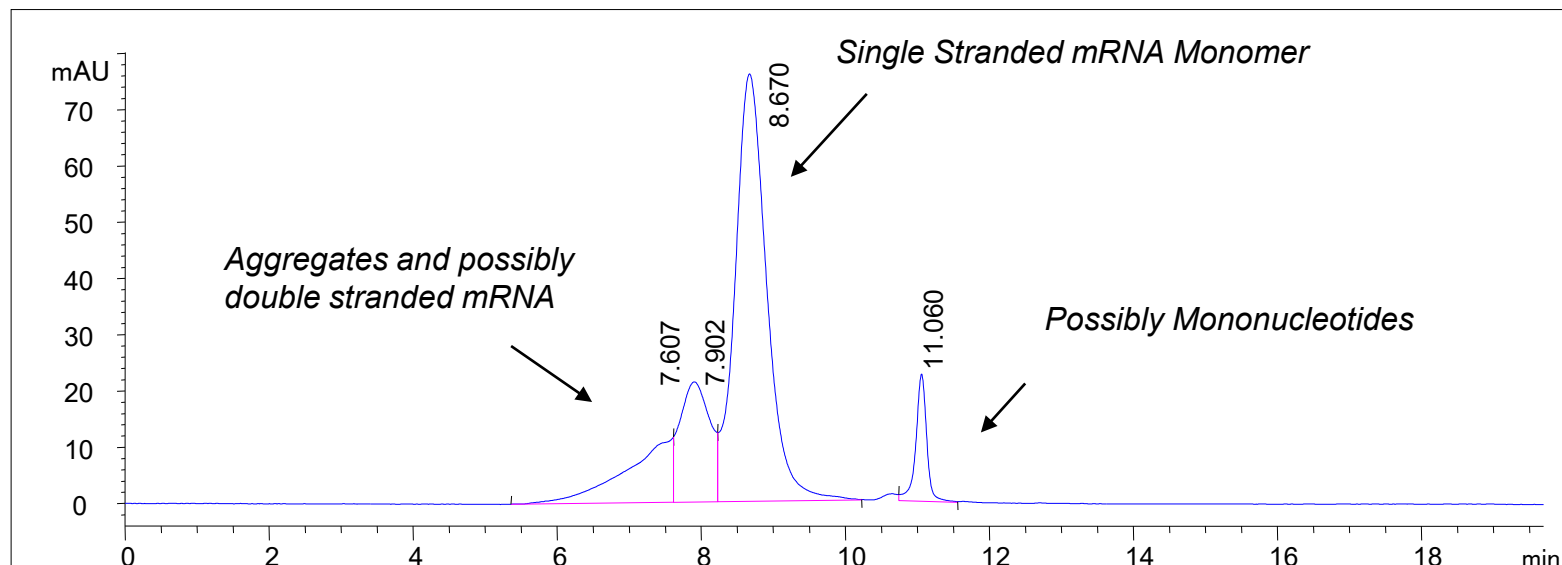
**Impurity:** Aggregates, fragments, double strand impurities



# mRNA-1 on SRT SEC-1000

Column: SRT SEC-1000, 5  $\mu\text{m}$ , 1000  $\text{\AA}$ , 7.8 x 300 mm (215950-7830); Mobile Phase: 150 mM PB, pH 7.0; Flow Rate: 1.0 mL/min; Detector: UV 260 nm; Column Temperature: 25  $^{\circ}\text{C}$ ; Injection Volume: 5  $\mu\text{L}$ , Sample: mRNA-1 0.5 mg/mL

RP can be used as orthogonal method for further characterization of each SEC peak.

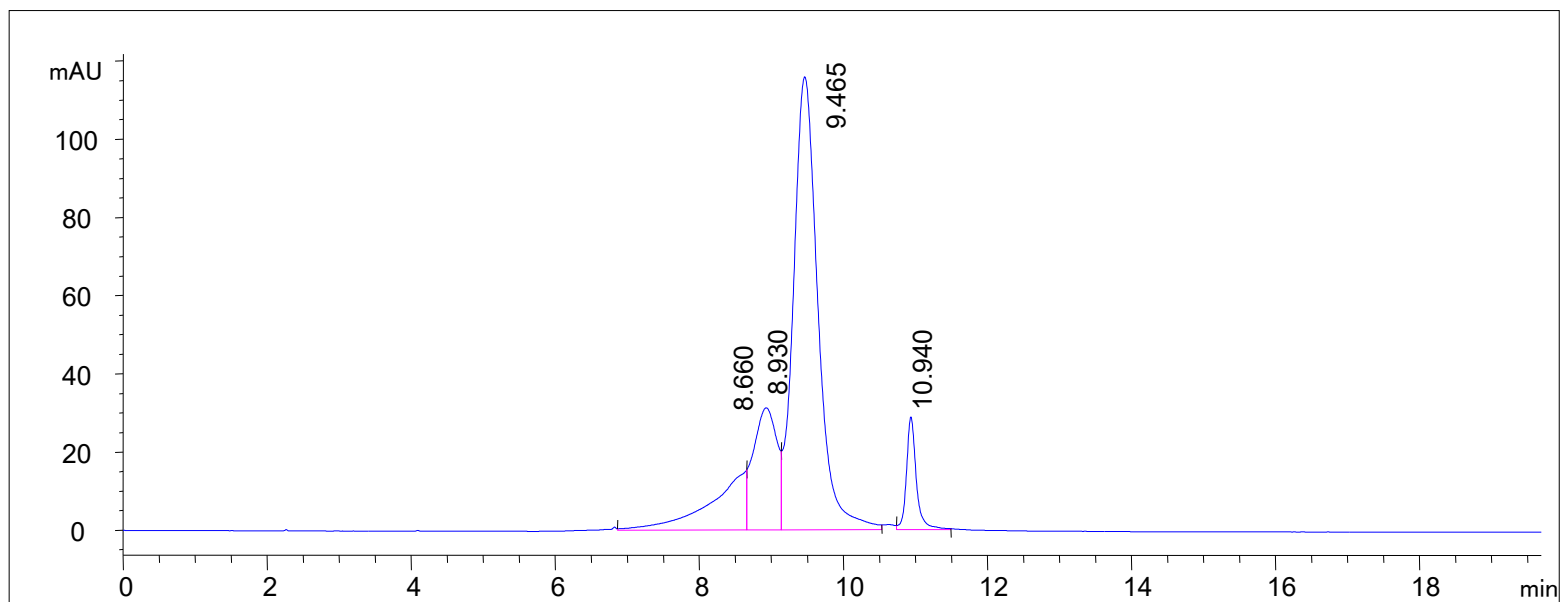


RT [min]	Height	Area	Area%	Plates	Tailing	Resolution
7.607	11	517.2	13.952	832	0.50	
7.902	21	623.2	16.812		-1.74	
8.670	76	2329.6	62.847	2055	1.23	
11.060	23	236.9	6.390	31503	0.78	4.71



## mRNA-1 on SRT SEC-2000

Column: SRT SEC-2000, 5  $\mu\text{m}$ , 1000  $\text{\AA}$ , 7.8 x 300 mm (215980-7830); Mobile Phase: 150 mM PB, pH 7.0; Flow Rate: 1.0 mL/min; Detector: UV 260 nm; Column Temperature: 25  $^{\circ}\text{C}$ ; Injection Volume: 5  $\mu\text{L}$ , Sample: mRNA-1 0.5 mg/mL



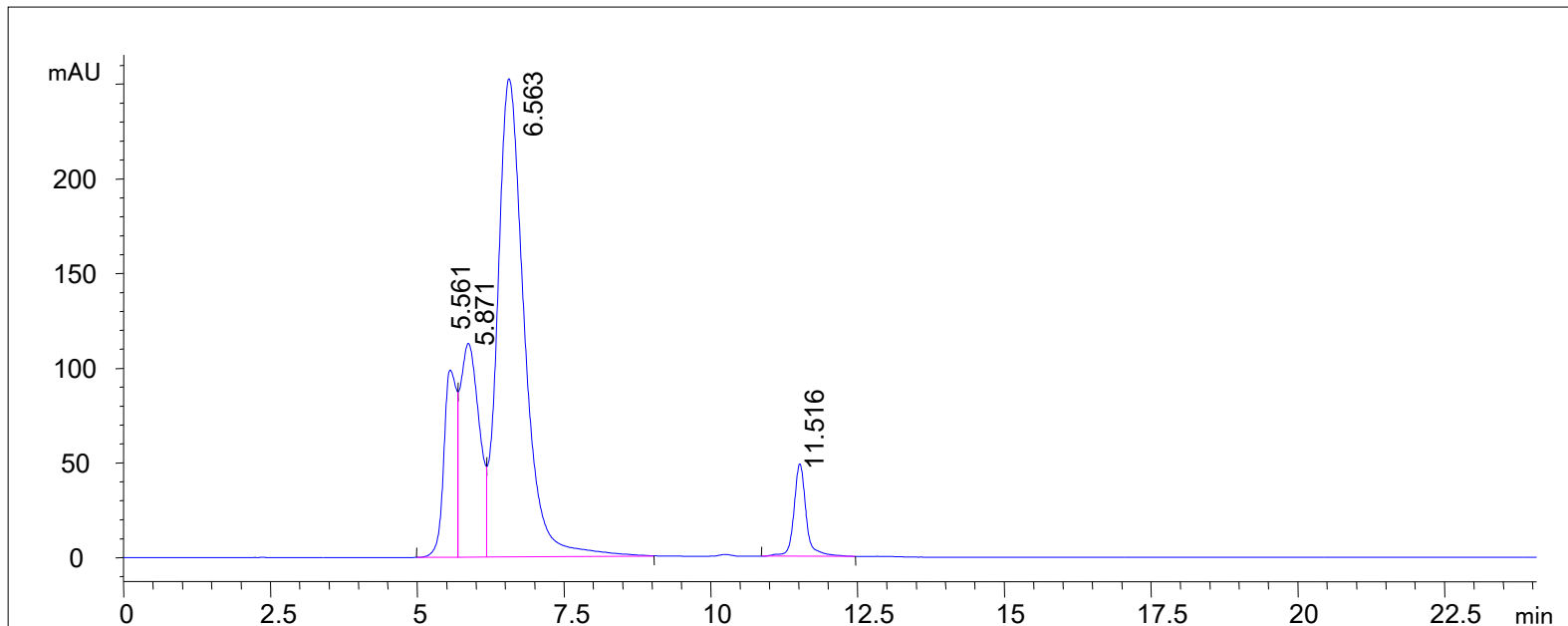
RT [min]	Height	Area	Area%	Plates	Tailing	Resolution
8.660	15	523.5	12.297	2397	0.50	
8.930	31	713.4	16.759	1967	-1.83	0.36
9.465	116	2745.1	64.487	4149	1.26	0.77
10.940	29	274.9	6.457	37511	1.22	3.62

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# mRNA-1 on SRT-C SEC-500

Column: SRT-C SEC-500, 5  $\mu\text{m}$ , 500  $\text{\AA}$ , 7.8 x 300 mm (235500-7830); Mobile Phase: 150 mM PB, pH 7.0; Flow Rate: 1.0 mL/min; Detector: UV 260 nm; Column Temperature: 25  $^{\circ}\text{C}$ ; Injection Volume: 5  $\mu\text{L}$ , Sample: mRNA-1 0.5 mg/mL

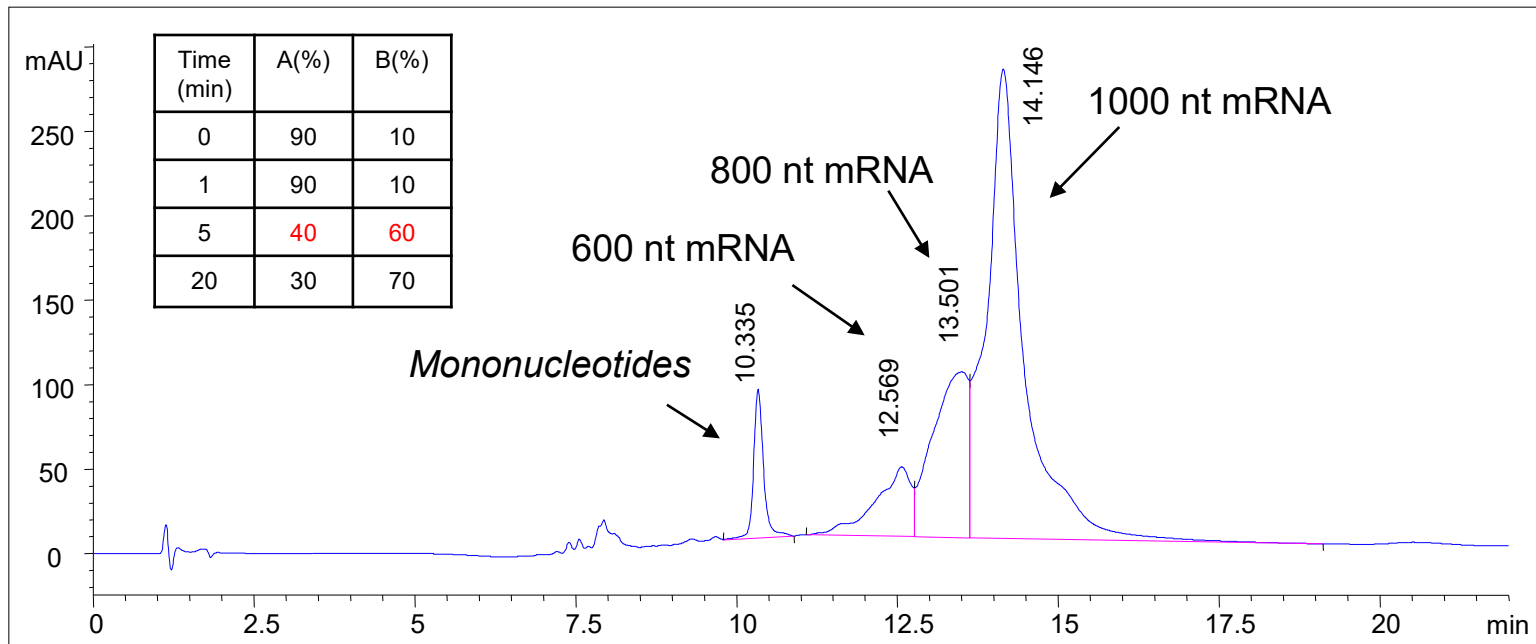


RT [min]	Height	Area	Area%	Plates	Tailing	Resolution
5.561	99	1498.5	11.772	2801	0.76	
5.871	113	2557.6	20.092	1101	-2.80	0.55
6.563	252	7959.4	62.527	1122	1.40	0.93
11.516	49	714.0	5.609	17461	1.25	8.74



# mRNA-2 Analysis on Proteomix RP-1000

Column: Proteomix RP-1000, 5  $\mu\text{m}$ , 1000  $\text{\AA}$ , 2.1 x 100 mm (465950-2110); Mobile Phase: A: 100 mm TEAA B: 100 mm TEAA / 25% ACN; Flow Rate: 0.3 mL/min; Detector: UV 260 nm; Column Temperature: 50  $^{\circ}\text{C}$ ; Injection Volume: 10  $\mu\text{l}$ ; Sample: mRNA-2; Pressure: 95 bar



Compound Name	RT [min]	Height	Area	Area%	Plates	Tailing	Resolution
	10.335	88.1	940.2	5.32	25906	1.30	
	12.569	41.4	1590.2	9.00	2275	0.58	3.40
	13.501	98.2	3762.6	21.30	2173	-0.68	0.84
	14.146	278.1	11371.9	64.38	4812	1.70	0.65

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