Supporting Information for

Nitric Oxide-Releasing Electrospun Polymer Microfibers

*Peter N. Coneski, Jessica A. Nash and Mark H. Schoenfisch**

Department of Chemistry, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599-3290, United States

Table 1. Flow rate dependence on electrospun fiber diameter.

Polymer	Weight Percent (%)	Flow Rate ($\mu L\ min^{-1}$)	Diameter (nm)
Tecoflex Polyurethane	8	15	*b*
	8	50	454 ± 188
	8	100	392 ± 147
	12	15	1103 ± 601
	12	50	947 ± 283
	12	100	1006 ± 512
	16	15	2025 ± 527
	16	50	1788 ± 676
	16	100	2974 ± 1032
Tecophilic Polyurethane	8	15	334 ± 77
	8	50	347 ± 104
	8	100	384 ± 143
	12	15	621 ± 185
	12	50	626 ± 182
	12	100	827 ± 196
	16	15	719 ± 168
	16	50	1244 ± 180
	16	100	1745 ± 296
Poly(vinyl chloride)	8	15	125 ± 47
	8	50	164 ± 75
	8	100	210 ± 109
	12	15	418 ± 210
	12	50	596 ± 337
	12	100	1174 ± 626
	16	15	524 ± 174
	16	50	531 ± 160
	16	100	726 ± 281

b-electrospinning resulted in the formation of beaded fibers.

Table 2. Influence of needle gauge on electrospun fiber diameters.

Polymer	Weight Percent (%)	Needle Gauge	Flow Rate ($\mu L\ min^{-1}$)	Diameter (nm)
Tecoflex Polyurethane	8	18	15	*b*
	8	22	15	*b*
	8	30	15	*b*
	12	18	15	1307 ± 635
	12	22	15	1103 ± 601
	12	30	15	1283 ± 275
	16	18	15	1544 ± 698
	16	22	15	2025 ± 527
	16	30	15	1472 ± 727
Tecophilic Polyurethane	8	18	15	446 ± 139
	8	22	15	334 ± 77
	8	30	15	396 ± 81
	12	18	15	667 ± 179
	12	22	15	621 ± 185
	12	30	15	445 ± 122
	16	18	15	1334 ± 180
	16	22	15	719 ± 168
	16	30	15	730 ± 79
Poly(vinyl chloride)	8	18	15	185 ± 73
	8	22	15	125 ± 47
	8	30	15	178 ± 65
	12	18	15	357 ± 128
	12	22	15	418 ± 210
	12	30	15	394 ± 144
	16	18	15	561 ± 166
	16	22	15	524 ± 174
	16	30	15	*c*

b-electrospinning resulted in the formation of beaded fibers.

c- resulted in capillary clogging, no fiber formation.

Table 3. Influence of dopant type on conductivity of electrospinning solutions.

Polymer solution	Dopant	Solution Conductivity ($\mu S\ cm^{-1}$)
8% Tecoflex	-	2.3 ± 0.4
8% Tecoflex	0.4% proline	2.4 ± 0.3
8% Tecoflex	0.8% proline	1.9 ± 0.2
8% Tecoflex	1.6% proline	1.7 ± 0.2
8% Tecoflex	0.4% PROLI/NO	146.2 ± 13.1
8% Tecoflex	0.8% PROLI/NO	124.1 ± 20.4
8% Tecoflex	1.6% PROLI/NO	159.4 ± 1.8
12% Tecoflex	-	1.4 ± 0.1
12% Tecoflex	0.6% proline	6.8 ± 0.7
12% Tecoflex	1.2% proline	7.7 ± 0.3
12% Tecoflex	2.4% proline	17.1 ± 4.3
12% Tecoflex	0.6% PROLI/NO	136.8 ± 3.1
12% Tecoflex	1.2% PROLI/NO	102.0 ± 1.6
12% Tecoflex	2.4% PROLI/NO	157.2 ± 2.4
16% Tecoflex	-	2.5 ± 0.4
16% Tecoflex	0.8% proline	3.5 ± 0.5
16% Tecoflex	1.6% proline	3.4 ± 0.6
16% Tecoflex	3.2% proline	12.3 ± 3.9
16% Tecoflex	0.8% PROLI/NO	102.7 ± 10.9
16% Tecoflex	1.6% PROLI/NO	45.1 ± 3.1
16% Tecoflex	3.2% PROLI/NO	112.8 ± 3.5
8% Tecophilic	-	5.4 ± 0.1
8% Tecophilic	0.4% proline	3.6 ± 0.4
8% Tecophilic	0.8% proline	4.1 ± 0.5
8% Tecophilic	1.6% proline	2.6 ± 0.3
8% Tecophilic	0.4% PROLI/NO	176.0 ± 2.9
8% Tecophilic	0.8% PROLI/NO	128.0 ± 3.2
8% Tecophilic	1.6% PROLI/NO	156.6 ± 3.6
12% Tecophilic	-	4.9 ± 0.2
12% Tecophilic	0.6% proline	13.2 ± 3.1
12% Tecophilic	1.2% proline	5.7 ± 0.9
12% Tecophilic	2.4% proline	4.6 ± 0.6
12% Tecophilic	0.6% PROLI/NO	238.8 ± 30.4
12% Tecophilic	1.2% PROLI/NO	170.4 ± 10.5
12% Tecophilic	2.4% PROLI/NO	131.0 ± 6.3
16% Tecophilic	-	5.3 ± 0.2
16% Tecophilic	0.8% proline	15.7 ± 2.9
16% Tecophilic	1.6% proline	5.5 ± 0.1
16% Tecophilic	3.2% proline	*a*
16% Tecophilic	0.8% PROLI/NO	306.2 ± 44.1

16% Tecophilic	1.6% PROLI/NO	172.2 ± 9.0
16% Tecophilic	3.2% PROLI/NO	*a*
8% PVC	-	5.1 ± 0.1
8% PVC	0.4% proline	6.9 ± 1.1
8% PVC	0.8% proline	4.4 ± 0.3
8% PVC	1.6% proline	28.9 ± 9.0
8% PVC	0.4% PROLI/NO	168.6 ± 14.6
8% PVC	0.8% PROLI/NO	203.0 ± 8.0
8% PVC	1.6% PROLI/NO	239.6 ± 8.6
12% PVC	-	13.7 ± 2.6
12% PVC	0.6% proline	5.0 ± 0.2
12% PVC	1.2% proline	4.2 ± 0.2
12% PVC	2.4% proline	7.8 ± 2.1
12% PVC	0.6% PROLI/NO	153.2 ± 8.1
12% PVC	1.2% PROLI/NO	190.8 ± 3.6
12% PVC	2.4% PROLI/NO	201.8 ± 3.1
16% PVC	-	10.7 ± 1.9
16% PVC	0.8% proline	5.4 ± 0.2
16% PVC	1.6% proline	4.6 ± 0.4
16% PVC	3.2% proline	*a*
16% PVC	0.8% PROLI/NO	144.4 ± 7.3
16% PVC	1.6% PROLI/NO	171.2 ± 4.8
16% PVC	3.2% PROLI/NO	*a*
Spinning Solution	-	3.0 ± 0.1

a – homogeneous suspensions could not be formed.