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APPENDICES

Appendix A Degree of crystallinity of pure LLDPE and its blends with ENR and NR

Table A1 Degree of crystallinity of pure LLDPE and its blends with ENR and NR.

Sample	DR 7	DR 10	DR 15
L1	22.53	41.61	41.64
L1/90/10	21.71	23.48	25.00
L1/80/20	14.95	15.85	23.67
L1/ENR/NR	22.42	23.38	24.38
L6	21.71	26.30	29.33
L6/90/10	17.57	20.73	28.27
L6/80/20	16.56	19.34	25.52
L6/ENR/NR	20.93	21.35	23.54

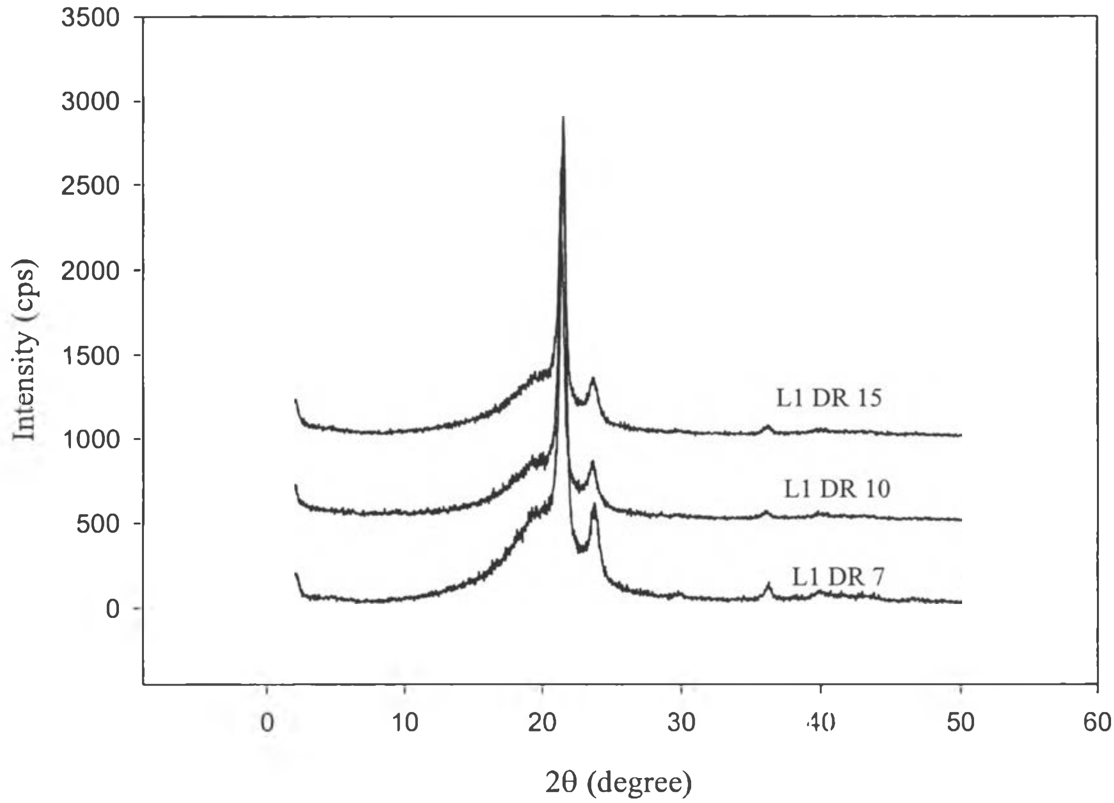

Figure A1 XRD spectra of L1 at draw ratio 7, 10, 15.

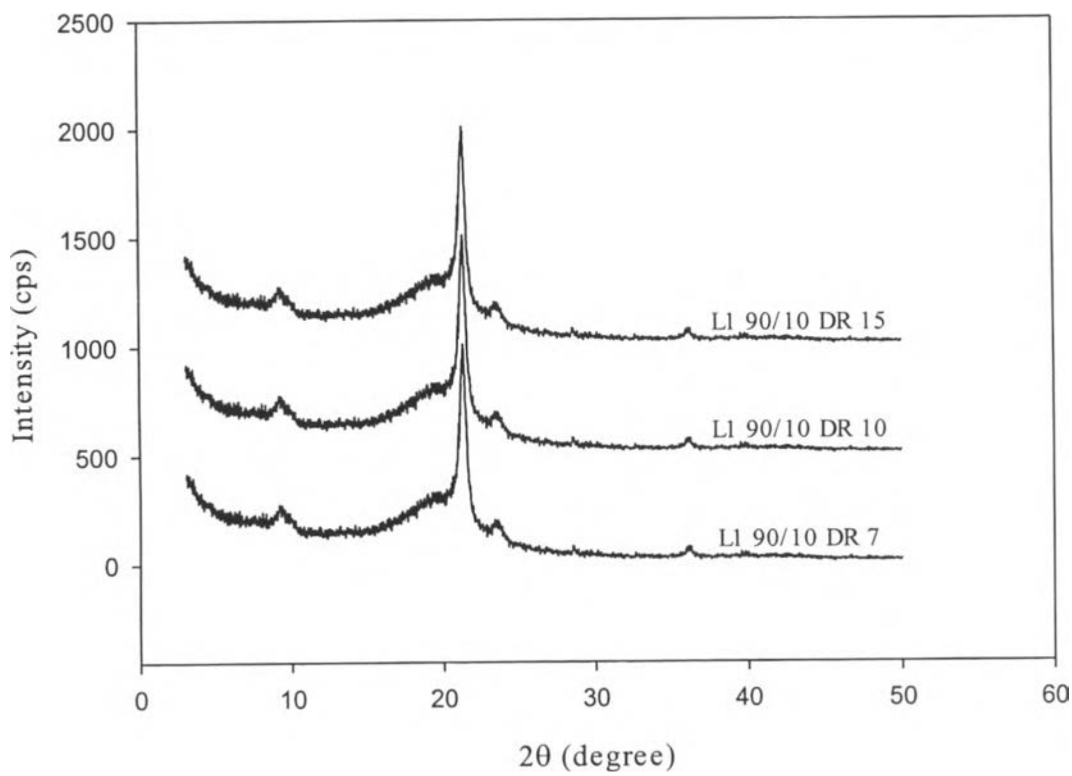

Figure A2 XRD spectra of L1/90/10 at draw ratio 7, 10, 15.

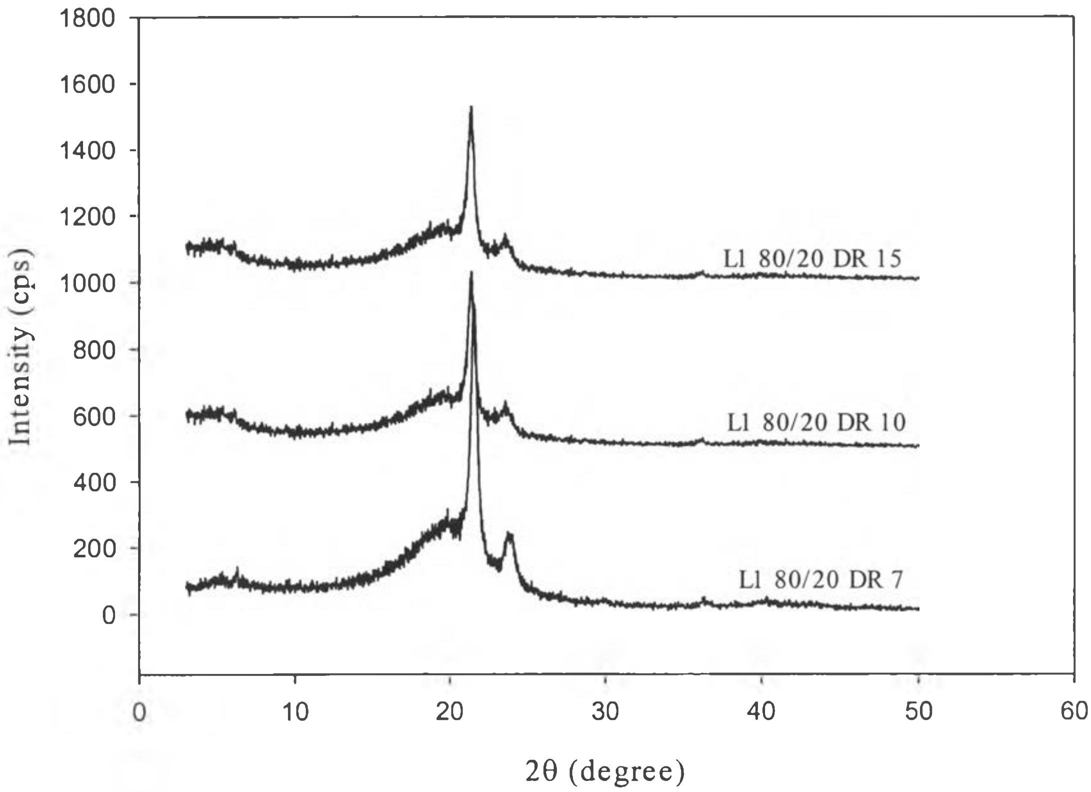

Figure A3 XRD spectra of L1/80/20 at draw ratio 7, 10, 15.

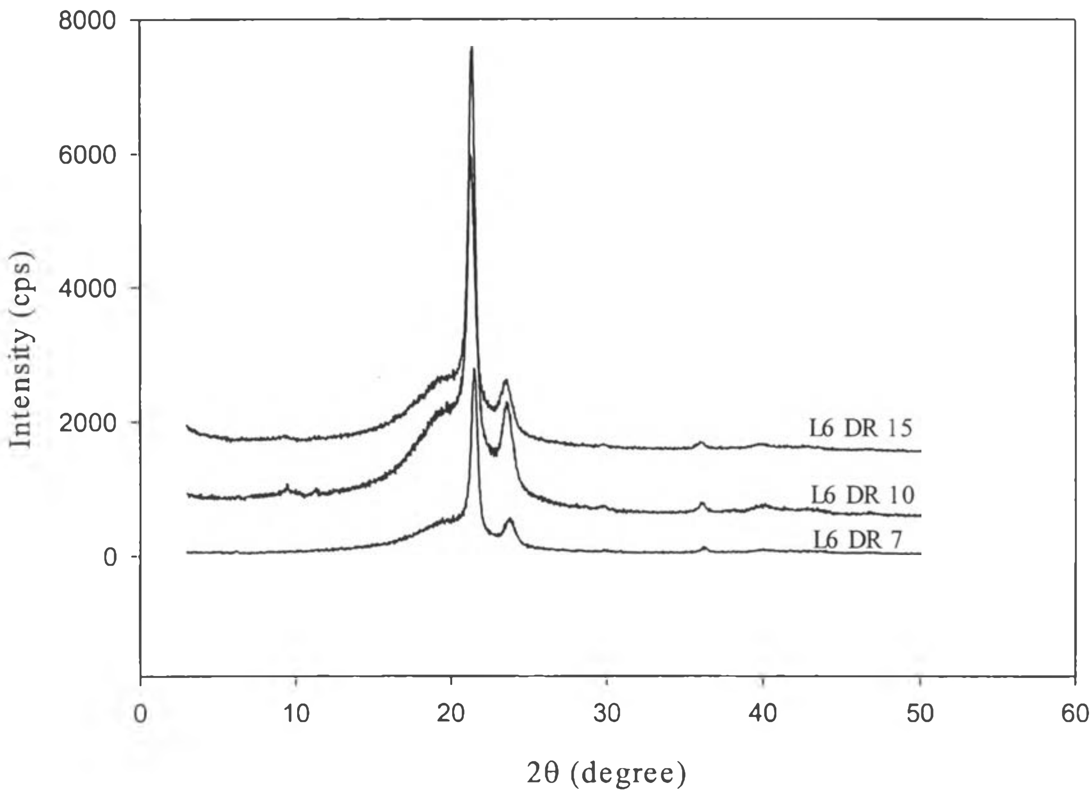

Figure A4 XRD spectra of L6 at draw ratio 7, 10, 15.

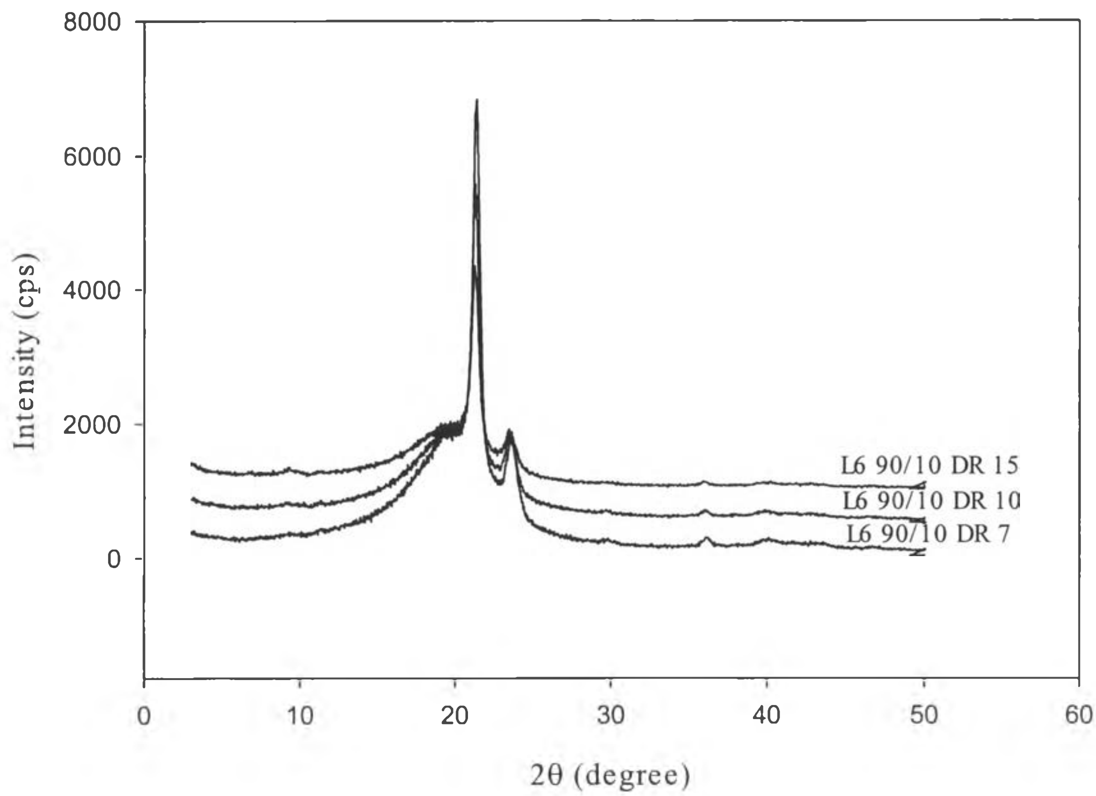

Figure A5 XRD spectra of L6/90/10 at draw ratio 7, 10, 15.

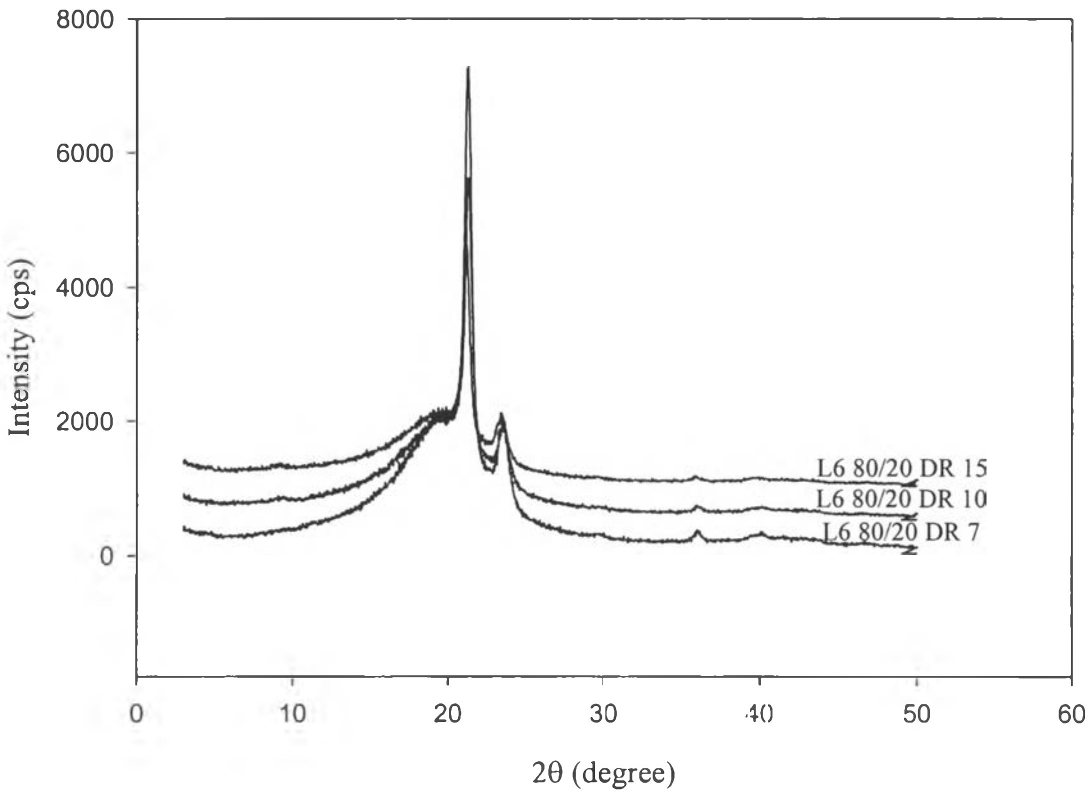

Figure A6 XRD spectra of L6/80/20 at draw ratio 7, 10, 15.

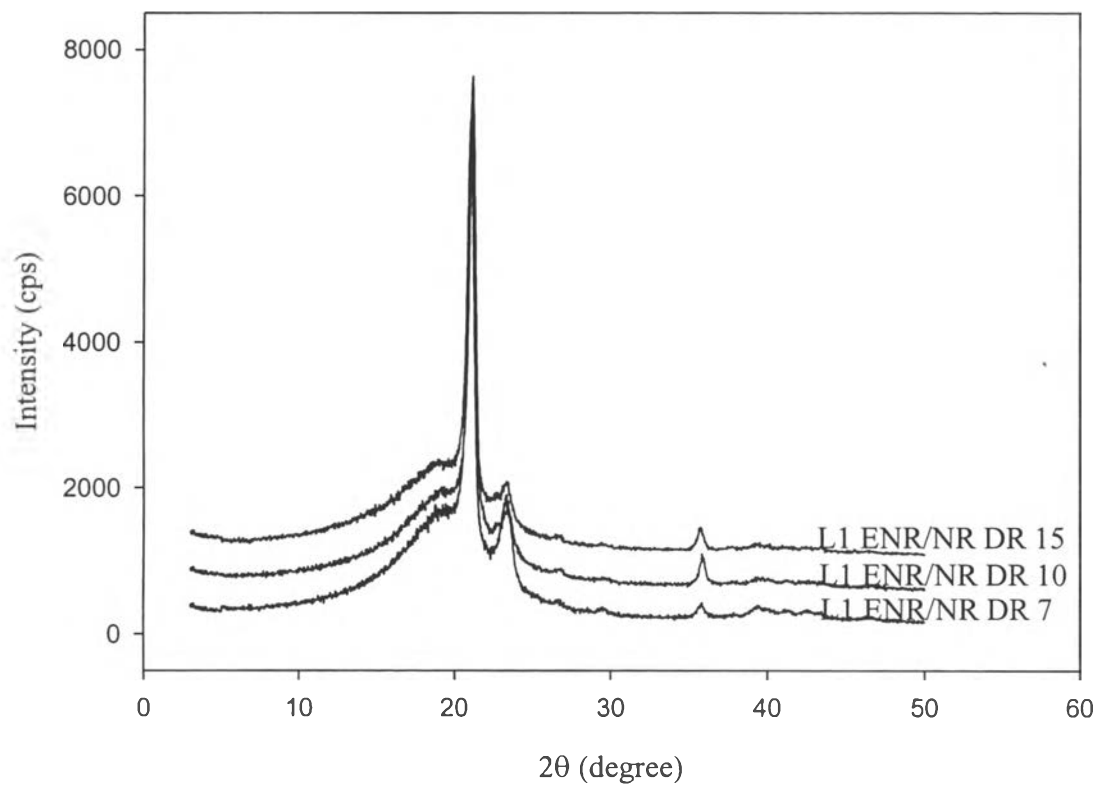

Figure A7 XRD spectra of L1/ENR/NR at draw ratio 7, 10, 15.

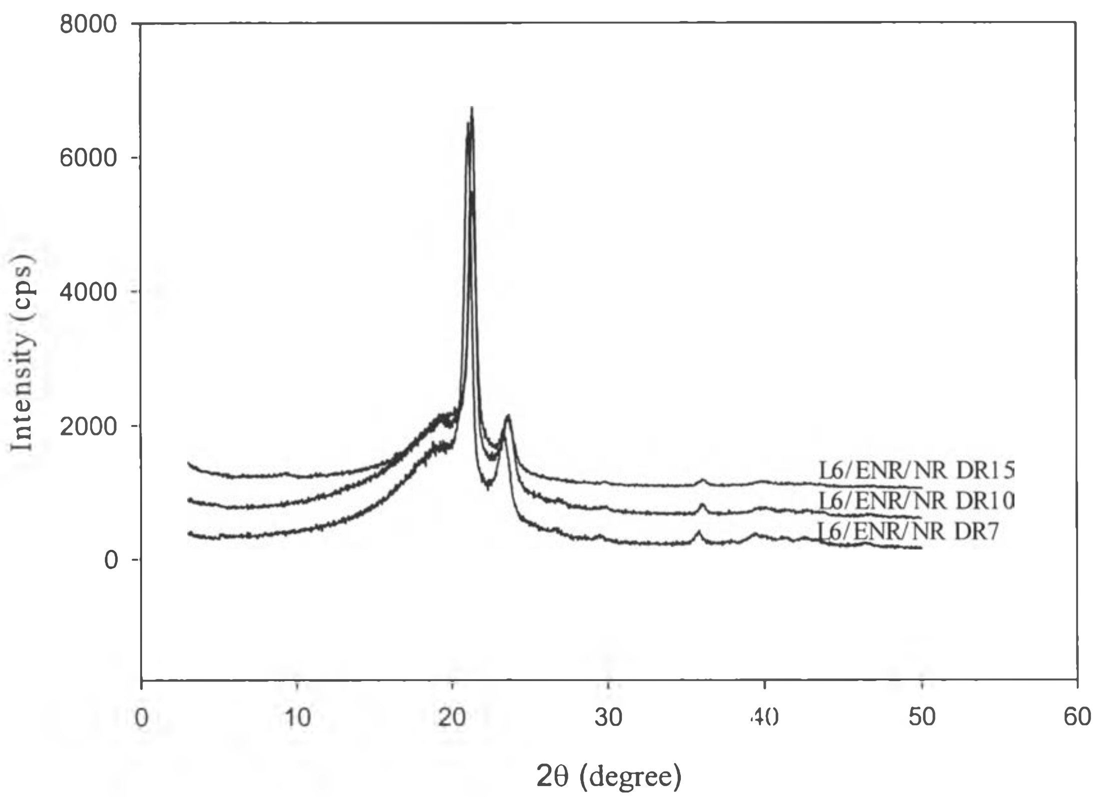

Figure A8 XRD spectra of L6/ENR/NR at draw ratio 7, 10, 15.

Appendix B Gas permeability of pure LLDPE and its blends with ENR and NR

Table B1 Gas permeability of Pure L1.

Draw ratio	Sample 1	Sample 2	Sample 3	Avg
7	689.03	694.22	683.18	688.95
10	320.68	375.87	340.66	345.64
15	280.44	250.14	260.32	263.54

Table B2 Gas permeability of L1/90/10.

Draw ratio	Sample 1	Sample 2	Sample 3	Avg
7	656.03	679.68	675.32	670.36
10	750.03	650.14	699.87	700.00
15	850.33	875.64	860.98	862.27

Table B3 Gas permeability of L1/80/20.

Draw ratio	Sample 1	Sample 2	Sample 3	Avg
7	220.33	218.16	216.29	218.26
10	365.39	380.14	350.21	363.94
15	780.45	760.24	752.06	764.10

Table B4 Gas permeability of L1/ENR/NR.

Draw ratio	Sample 1	Sample 2	Sample 3	Avg
7	230.11	213.06	203.02	215.40
10	420.11	430.55	380.09	410.03
15	980.35	950.21	950.61	960.29

Table B5 Gas permeability of Pure L6.

Draw ratio	Sample 1	Sample 2	Sample 3	Avg
7	870.56	881.02	872.36	874.72
10	678.45	667.58	605.55	650.00
15	585.69	590.34	565.98	580.56

Table B6 Gas permeability of L6/90/10.

Draw ratio	Sample 1	Sample 2	Sample 3	Avg
7	325.69	355.21	331.26	337.68
10	653.55	635.16	630.17	639.29
15	629.15	689.55	634.49	654.80

Table B7 Gas permeability of L6/80/20.

Draw ratio	Sample 1	Sample 2	Sample 3	Avg
7	401.25	389.69	377.22	389.76
10	741.18	750.12	780.45	757.92
15	800.56	810.25	795.89	802.76

Table B8 Gas permeability of L6/ENR/NR.

Draw ratio	Sample 1	Sample 2	Sample 3	Avg
7	260.55	279.11	275.30	271.23
10	760.87	780.69	760.87	767.41
15	2556.15	2895.25	2539.54	2664.52

Appendix C Melting and crystalline temperatures of pure LLDPE and its blends with ENR and NR

Table C1 Melting and crystalline temperatures of pure LLDPE and its blends with ENR and NR.

Sample	T_m (^{0}C)	T_c (^{0}C)
L1 DR 7	120.9	106.633
L1 DR 10	120.9	106.133
L1 DR 15	121.1	105.800
L1/90/10 DR 7	120.60	105.966
L1/90/10 DR 10	119.50	105.133
L1/90/10 DR 15	119.60	104.966
L1/80/20 DR 7	120.70	105.466
L1/80/20 DR 10	120.30	105.800
L1/80/20 DR 15	120.40	105.633
L6 DR 7	121.0	105.300
L6 DR 10	121.4	105.300
L6 DR 15	121.2	105.466
L6/90/10 DR 7	121.1	106.633
L6/90/10 DR 10	121.1	106.633
L6/90/10 DR 15	121.1	106.300
L6/80/20 DR 7	121.0	107.466
L6/80/20 DR 10	121.1	107.633
L6/80/20 DR 15	121.0	107.633

Cont....

Table C1 (Continued)

Sample	T_m (^{0}C)	T_c (^{0}C)
L1/ENR/NR DR 7	120.0	104.966
L1/ENR/NR DR 10	120.0	104.633
L1/ENR/NR DR 15	119.9	104.800
L6/ENR/NR DR7	121.5	105.633
L6/ENR/NR DR 10	121.7	105.966
L6/ENR/NR DR15	121.3	106.300

Appendix D Thickness of pure LLDPE and its blends with ENR and NR

Table D1 Thickness of pure LLDPE and its blends with ENR and NR.

Sample	DR 7	DR 10	DR 15
L1	225.2	118.9	104.8
L1/90/10	206.6	49.4	28.3
L1/80/20	220.6	115.6	62.9
L1/ENR/NR	421.7	400.1	300.6
L6	198.4	139.2	70.6
L6/90/10	156.2	98.8	65.9
L6/80/20	186.8	108.3	19.3
L6/ENR/NR	567.9	269.4	96.6

Appendix E Orientation function of pure LLDPE and its blends with ENR and NR

Table E1 Orientation function of pure LLDPE and its blends with ENR and NR.

Sample	DR 7	DR 10	DR 15
L1	.0345	.0621	.0826
L1/90/10	.0451	.0542	.0765
L1/80/20	.0557	.0605	.0723
L1/ENR/NR	-.0425	-.0028	0.279
L6	.0453	.0705	.0743
L6/90/10	.0318	.0441	.0672
L6/80/20	.0367	.0463	.0475
L6/ENR/NR	0	.0010	.009

Appendix F Tensile at yield of pure LLDPE and its blends with ENR and NR

Table F1 Tensile at yield of pure LLDPE.

Draw Ratio	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Avg
7	7.7368	6.7298	7.3536	6.9754	7.0125	7.1616
10	8.3784	8.5835	7.7739	7.4857	8.6188	8.1680
15	9.8023	9.6188	8.8157	9.2892	9.1935	9.3439

Table F2 Tensile at yield of L1/90/10.

Draw Ratio	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Avg
7	6.4434	6.8586	7.3839	7.0784	6.4932	6.8515
10	7.4805	7.4173	7.4624	8.5635	8.3073	7.8462
15	7.2075	8.3541	7.3780	9.2956	8.7136	8.1897

Table F3 Tensile at yield of L1/80/20.

Draw Ratio	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Avg
7	6.7843	7.2600	6.5785	7.0470	5.7327	6.6805
10	6.7075	7.3689	8.3423	7.8293	6.7075	7.3911
15	9.1642	9.2602	9.4971	6.9390	7.8438	8.5409

Table F4 Tensile at yield of L1/ENR/NR.

Draw Ratio	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Avg
7	5.6787	6.8226	5.2922	6.1163	5.5864	5.8992
10	7.0856	6.4976	6.2228	5.6120	6.6250	6.4086
15	7.1644	6.4617	7.0682	6.7752	7.4168	6.9773

Table F5 Tensile at yield of L6.

Draw Ratio	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Avg
7	7.0471	7.5360	6.3700	7.8410	6.5298	7.0648
10	6.8676	7.8948	8.0722	7.8887	7.1047	7.5656
15	10.5443	9.4179	9.6805	9.4751	9.0753	9.6382

Table F6 Tensile at yield L6/90/10.

Draw Ratio	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Avg
7	6.9695	7.7036	7.4053	6.9061	7.2198	7.2409
10	8.4666	6.4216	6.3983	7.3358	6.3380	6.9921
15	8.5314	7.2462	7.6729	9.7850	7.7056	8.1882

Table F7 Tensile at yield of L6/80/20.

Draw Ratio	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Avg
7	6.5776	6.6332	6.0882	6.5975	5.3985	6.2590
10	7.1236	6.5660	5.9369	7.3689	7.2259	6.8443
15	9.0103	8.5679	7.6072	7.8170	7.6889	8.1383

Table F8 Tensile at yield of L6/ENR/NR.

Draw Ratio	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Avg
7	5.4232	5.8702	5.3455	5.6082	5.4444	5.5383
10	5.8829	5.9322	6.2823	5.7303	6.1200	5.9895
15	6.4834	5.9411	6.0236	6.2104	5.8755	6.1068

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