

## Appendix A

### Compression set values of polymer samples irradiated

<b>Total dose (kGy)</b>	<b>Compression set (%)</b>
0	25
150	17
300	19.5
400	20.9
600	22.2
800	35

## Appendix B

### Elongation at break values polymer samples irradiated

<b>Total dose(KGy)</b>	<b>Elongation</b>
0	1
150	0.81
300	0.63
400	0.52
600	0.41
800	0.32

## Appendix C

<b>Total dose(KGy)</b>	<b>Hardness</b>
0	1
150	1.05
300	1.13
400	1.05
600	1.1
800	1.15

**Hardness Values of Polymer Samples Irradiated**

## **Appendix D**

### **Elastic modulus values of polymer samples irradiated**

<b>Total dose (KGy)</b>	<b>Elastic</b>
0	1
150	1.14
300	1.39
400	1.75
600	1.89
800	1.98

### **Appendix E**

### **Strength of polymer samples irradiated with different doses**

<b>f (pound)</b>	<b>00 kGy</b>	<b>10 kGy</b>	<b>20 kGy</b>	<b>30 kGy</b>	<b>40 kGy</b>	<b>50 kGy</b>
20	2.32E+00	1.61E+00	3.93E+00	6.10E+00	3.91E+00	1.15E+01
24	2.60E+00	1.81E+00	4.03E+00	6.13E+00	4.17E+00	1.17E+01
32	2.83E+00	1.99E+00	4.13E+00	6.18E+00	4.38E+00	1.19E+01
45	3.03E+00	2.15E+00	4.26E+00	6.27E+00	4.60E+00	1.21E+01
56	3.20E+00	2.29E+00	4.36E+00	6.34E+00	4.77E+00	1.23E+01
75	3.36E+00	2.44E+00	4.48E+00	6.44E+00	4.97E+00	1.25E+01
100	3.48E+00	2.53E+00	4.57E+00	6.56E+00	5.11E+00	1.27E+01
130	3.59E+00	2.62E+00	4.67E+00	6.69E+00	5.24E+00	1.29E+01
180	3.72E+00	2.74E+00	4.79E+00	6.89E+00	5.42E+00	1.32E+01
240	3.86E+00	2.86E+00	4.92E+00	7.09E+00	5.62E+00	1.35E+01
320	4.03E+00	3.02E+00	5.07E+00	7.34E+00	5.86E+00	1.38E+01
450	4.28E+00	3.24E+00	5.30E+00	7.69E+00	6.23E+00	1.42E+01
560	4.49E+00	3.43E+00	5.50E+00	7.96E+00	6.55E+00	1.46E+01
750	4.84E+00	3.74E+00	5.83E+00	8.42E+00	7.10E+00	1.52E+01
1000	5.30E+00	4.13E+00	6.26E+00	9.04E+00	7.84E+00	1.59E+01
1300	5.88E+00	4.61E+00	6.82E+00	9.81E+00	8.78E+00	1.67E+01
1800	6.82E+00	5.38E+00	7.75E+00	1.11E+01	1.04E+01	1.81E+01
2400	8.05E+00	6.37E+00	8.98E+00	1.29E+01	1.25E+01	2.00E+01
3200	9.54E+00	7.60E+00	1.05E+01	1.50E+01	1.52E+01	2.23E+01
4500	1.20E+01	9.66E+00	1.31E+01	1.87E+01	1.98E+01	2.66E+01
5600	1.39E+01	1.13E+01	1.52E+01	2.17E+01	2.35E+01	3.02E+01
7500	1.71E+01	1.41E+01	1.87E+01	2.67E+01	2.98E+01	3.66E+01
10000	2.09E+01	1.75E+01	2.28E+01	3.25E+01	3.72E+01	4.45E+01
13000	2.50E+01	2.13E+01	2.74E+01	3.90E+01	4.54E+01	5.35E+01
18000	3.09E+01	2.69E+01	3.40E+01	4.82E+01	5.72E+01	6.69E+01
24000	3.77E+01	3.34E+01	4.16E+01	5.89E+01	7.08E+01	8.24E+01
32000	4.58E+01	4.13E+01	5.07E+01	7.16E+01	8.69E+01	1.01E+02
45000	5.83E+01	5.36E+01	6.47E+01	9.09E+01	1.11E+02	1.29E+02
56000	6.70E+01	6.23E+01	7.45E+01	1.04E+02	1.29E+02	1.49E+02
75000	8.29E+01	7.82E+01	9.24E+01	1.29E+02	1.60E+02	1.85E+02
100000	1.02E+02	9.77E+01	1.14E+02	1.59E+02	1.97E+02	2.27E+02
130000	1.21E+02	1.17E+02	1.35E+02	1.87E+02	2.33E+02	2.68E+02
180000	1.50E+02	1.47E+02	1.68E+02	2.33E+02	2.90E+02	3.33E+02
240000	2.01E+02	1.99E+02	2.25E+02	3.10E+02	3.86E+02	4.41E+02
320000	2.54E+02	2.54E+02	2.84E+02	3.91E+02	4.88E+02	5.55E+02
450000	3.58E+02	3.62E+02	4.01E+02	5.49E+02	6.86E+02	7.76E+02
560000	4.35E+02	4.43E+02	4.88E+02	6.66E+02	8.33E+02	9.40E+02
750000	5.63E+02	5.80E+02	6.32E+02	8.63E+02	1.08E+03	1.22E+03
1000000	6.93E+02	7.19E+02	7.79E+02	1.06E+03	1.33E+03	1.50E+03