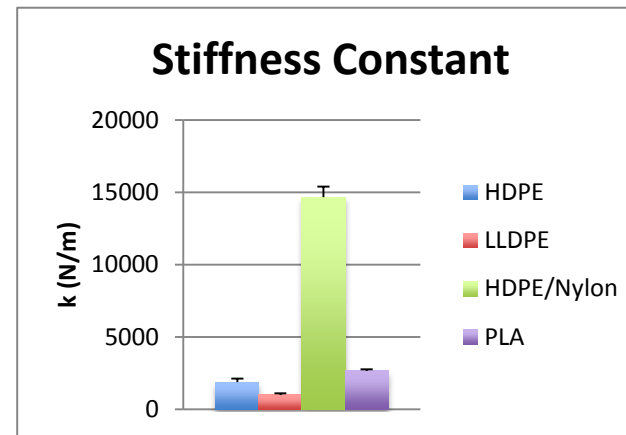


Stiffness Coefficient						
Material	Thickness (mm)	Specimen	E (MPa)	E(Pa)	k (N/m)	Average of k Standard Dev of k
HDPE	0.025	1	406.62	406620000	2033.1	<b>1880.5167</b> <b>256.31</b>
		2	316.92	316920000	1584.6	
		3	404.77	404770000	2023.9	
LLDPE	0.0254	1	200.42	200420000	1018.1	<b>1002.8597</b> <b>115.67</b>
		2	218.53	218530000	1110.1	
		3	173.29	173290000	880.3	
HDPE/Nylon	0.762	1	92.307	92307000	14067.6	<b>14662.048</b> <b>734.98</b>
		2	94.716	94716000	14434.7	
		3	101.6	101600000	15483.8	
PLA	0.65405	1	19.454	19454000	2544.77774	<b>2657.754</b> <b>105.01</b>
		2	21.041	21041000	2752.37321	
		3	20.458	20458000	2676.11098	



Statistical Analysis:

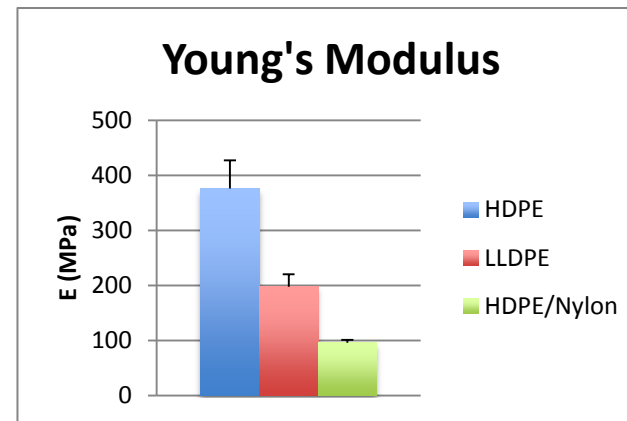
	HDPE	LLDPE	HDPE/Nylon	PLA
HDPE		0.1211	<0.0001	0.1548
LLDPE	0.1211		<0.0001	0.0041
HDPE/Nylon	<0.0001	<0.0001		<0.0001
PLA	0.1548	0.0041	<0.0001	

**Preliminary Testing - Young's Modulus**

Material	Thickness (mm)	Specimen	E (MPa)	Average	Standard Dev
HDPE	0.025	1	406.62	<b>376.10333</b>	<b>51.2626163</b>
		2	316.92		
		3	404.77		
LLDPE	0.0254	1	200.42	<b>197.41333</b>	<b>22.7693749</b>
		2	218.53		
		3	173.29		
HDPE/Nylon	0.762	1	92.307	<b>96.207667</b>	<b>4.82273411</b>
		2	94.716		
		3	101.6		

Statistical Analysis - p-values

	HDPE	LLDPE	HDPE/Nylon
HDPE		0.0013	0.0001
LLDPE	0.0013		0.0207
HDPE/Nylon	0.0001	0.0207	



**Thickness and Area**

Material	Trial	Thickness (in)	Thickness (mm)	Average (mm)	St Dev
PLA Center	1	0.021	0.5334	0.5588	0.091581
	2	0.019	0.4826		
	3	0.026	0.6604		
PLA Edge	1	0.008	0.2032	0.2032	0.0254
	2	0.009	0.2286		
	3	0.007	0.1778		
Vacuum Bag	1	0.029	0.7366	0.762	0.0254
	2	0.031	0.7874		
	3	0.03	0.762		

Axial Length (m):  
0.0635

Area (m <sup>2</sup> )	
HDPE	3.175E-07
LLDPE	3.2258E-07
HDPE/NYL	9.6774E-06
PLA	8.30644E-06

Material	Thickness (mm)
HDPE	0.025
LLDPE	0.0254
HDPE/Nylon	0.762
PLA	0.65405