Development of Novel Polyamide 11 Multifilaments and Fabric Structures Based on Industrial Lignin and Zinc Phosphinate as Flame Retardants

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Table S1. Prepared blend formulations

Sample code	Polyamide 11 (wt%)	Lignosulphonate (wt%)	Domtar kraft lignin (wt%)	Zinc phosphinate (wt%)
PA11	100	-	-	-
PA80-LL20	80	20	-	-
PA80-KL20	80	-	20	-
PA80-ZnP20	80	-	-	20
PA-LL5-ZnP15	80	5	-	15
PA-LL7-ZnP13	80	7	-	13
PA-LL10-ZnP10	80	10	-	10
PA-KL5-ZnP15	80	-	5	15
PA-KL7-ZnP13	80	-	7	13
PA-KL10-ZnP10	80	-	10	10

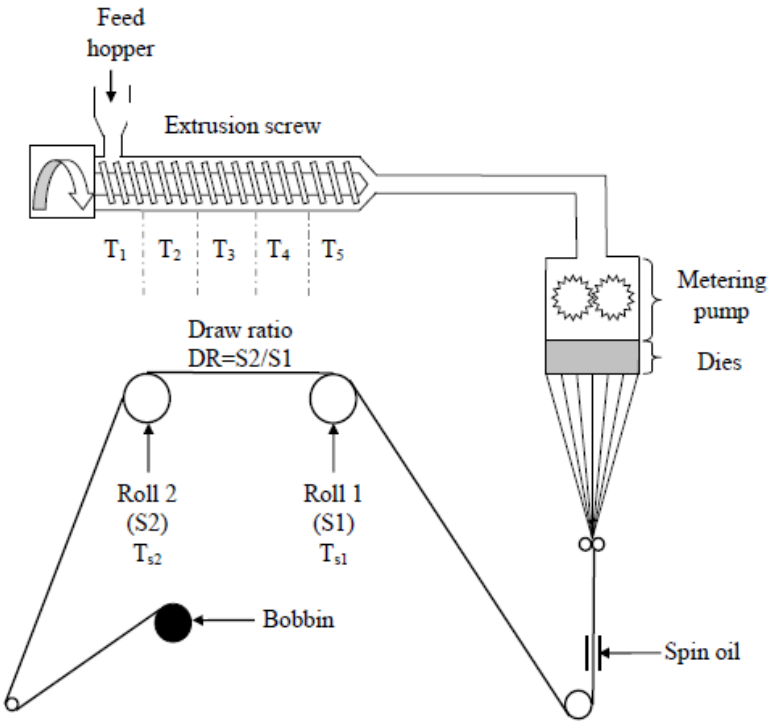

Figure S1. Schematic of melt spinning machine.

Figure S2. KL and ZnP filled PA11 knitted fabric structure.

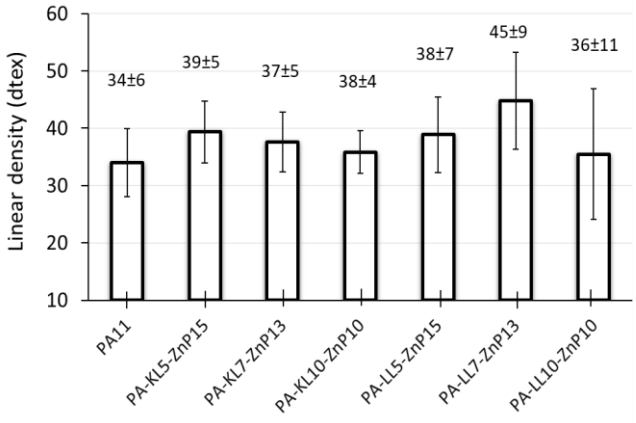

Figure S3. The linear density of monofilament yarns.