List of Tables

Chapter 1
Table 1.1. Starch polymer based products and suppliers.
Table 1.2. Typical composition of soy protein preparation.
Table 1.3. Approximate distribution of the major components of soy proteins.
Table 1.4. Amino acid contents of some protein sources used for bioplastics.
Table 1.5. Commercially major fibre sources.
Table 1.6. Different types of fibre and their example.
Table 1.7. Chemical composition and structural parameters of jute.

Chapter 2
Table 2.1. The chemicals used in this study along with the manufacturers are listed below.

Chapter 3
Table 3.1.1. Composition of plasticized soy flour based composite.
Table 3.1.2. Thermal properties of soy flour, jute and S/J glutaraldehyde and nanoclay composite.
Table 3.1.3. LOI and Flaming Characteristics of the prepared composites.
Table 3.2.1. Codification and filler content of the nanocomposites based on Jute and crosslinked SF with CWs and nanoclay (wt %).
Table 3.2.2. UV-Vis/DRS Spectra Data ($\lambda_{\text{max}}$ in nm) for the neat SF, GA and their Composites.
Table 3.2.3. Thermal Properties of (a) SF/J/G50, (b) SF/J/G50/C1, (c) SF/J/G50/C3, (d) SF/J/G50/C5, (e) SF/J/G50/C5/M1, (f) SF/J/G50/C5/M3 and (g) SF/J/G50/C5/M5.
Table 3.2.4. Comparison of the Tensile, Flexural and LOI values of Unfilled and Filled jute based crosslinked SF nanocomposites
Table 3.3.1. Codification and filler content of the nanocomposites based on Jute and crosslinked SF with TiO$_2$ nanoparticles and nanoclay (wt %).
Table 3.3.2. Comparison of Tensile and Flexural values of unfilled and filled crosslinked jute based SF nanocomposites before UV treatment.
Table 3.3.3. Changes in the mechanical properties of Unfilled and Filled jute based crosslinked SF nanocomposites after UV Exposure.
Table 3.3.4. LOI and Flaming Characteristics of the prepared composites.

Table 3.4.1. Codification and filler content of the nanocomposites based on jute and crosslinked SF with zinc oxide nanoparticles and nanoclay (wt %).

Table 3.4.2. Comparison of Tensile, Flexural, and LOI values of unfilled and filled crosslinked jute based SF nanocomposites before UV treatment.

Table 3.4.3. Thermal Properties of (a) SF/J/GA50, (b) SF/J/GA50/Z1, (c) SF/J/GA50/Z3, (d) SF/J/GA50/Z5, (e) SF/J/GA50/Z5/N1, (f) SF/J/GA50/Z5/N3 and (g) SF/J/GA50/Z5/N5.

Table 3.4.4. Changes in the mechanical properties of Unfilled and Filled jute based crosslinked SF nanocomposites after UV Exposure.

Chapter 4

Table 4.1.1. Different composition of prepared composite.


Table 4.1.3. Thermal properties of starch, jute, glutaraldehyde and nanoclay composite.

Table 4.1.4. LOI and Flaming Characteristics of the prepared composites.

Table 4.2.1. Codification and composition of the nanocomposites based on jute and crosslinked starch with CWs and nanoclay (wt %).


Table 4.2.3. Comparison of the Tensile, Flexural and LOI properties of Unfilled and Filled jute based crosslinked Starch nanocomposites.

Table 4.3.1. Codification and filler content of the nanocomposites based on Jute and crosslinked Starch with TiO₂ nanoparticles and nanoclay (wt %).

Table 4.3.2. Comparison of Tensile and Flexural properties of Unfilled and Filled jute based crosslinked starch nanocomposites before UV treatment.
Table 4.3.3. Changes in the mechanical properties of Unfilled and Filled jute based crosslinked starch nanocomposites after UV Exposure.

Table 4.3.4. LOI and Flaming Characteristics of the prepared composites.

Table 4.4.1. Codification and filler content of the nanocomposites based on Jute and crosslinked Starch with zinc oxide nanoparticles and nanoclay (wt %).


Table 4.4.3. Comparison of Tensile and Flexural properties of Unfilled and Filled jute based crosslinked starch nanocomposites before UV treatment.

Table 4.4.4. Changes in the mechanical properties of Unfilled and Filled jute based crosslinked starch nanocomposites after UV Exposure.

Table 4.4.5. LOI and Flaming Characteristics of the prepared composites.