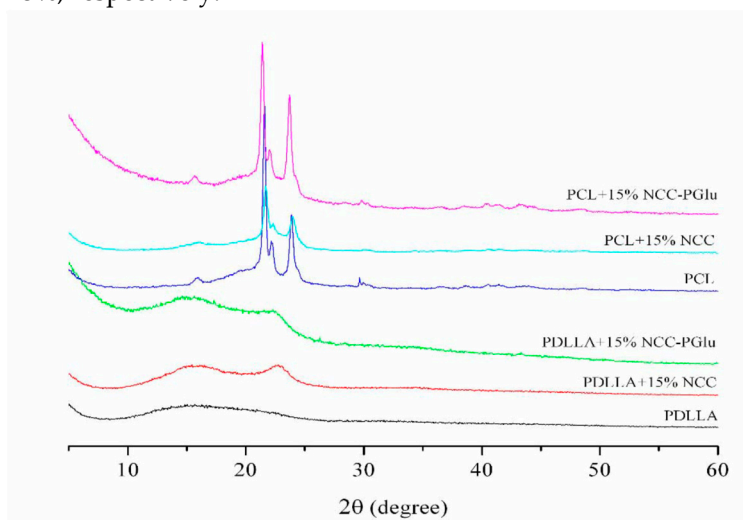


# PGlu-Modified Nanocrystalline Cellulose Improves Mechanical Properties, Biocompatibility, and Mineralization of Polyester-Based Composites

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## Crystallinity Evaluation

As expected, no diffraction reflexes were observed for PDLLA, indicating the amorphous nature of the polymer. The broad halo at  $2\theta$  equal to  $10.0\text{--}25.0^\circ$  was detected. The addition of NCC led to the appearance of the characteristic peak near  $23.8^\circ$  against the background of an amorphous halo. In turn, PCL specimens were characterized with the presence of fairly pronounced diffraction peaks located at  $21.4^\circ$ ,  $22.1^\circ$ , and  $23.8^\circ$ . The results are coincided with previously published data [1,2]. This indicates the semi-crystalline nature of the polymer and composite films. The contents of the crystalline and amorphous regions for pure PCL were found to be 35% and 65%, respectively. For PCL-based composite materials containing from 5% to 15% of NCC, these values varied in the range of 40–57% and 60–43%, respectively.



**Figure S1.** XRD patterns of pure PDLLA and PCL, and their composites with original and modified NCC.

## References

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