EFFECT OF POST-PURIFICATIONS TREATMENTS ON CELLULOSE NANOCRYSTAL ISOLATED FROM OIL PALM MESOCARP (OPM) BIOMASS

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This Final Year Project Report entitled **"Effect of Post-Purifications Treatments on Cellulose Nanocrystal Isolated from Oil Palm Mesocarp (Opm) Biomass"** was submitted by Muhammad Syafiq Mohammad, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Chemistry, in the Faculty of Applied Sciences, and was approved by

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THE EFFECT OF POST-PURIFICATIONS TREATMENTS ON CELLULOSE NANOCRYSTAL ISOLATED FROM OIL PALM MESOCARP (OPM) BIOMASS

Cellulose nanocrystal (CNC) has been isolated from oil palm mesocarp (OPM) using standard sulfuric acid hydrolysis method followed by three different post-purification treatment. These three post-purifications treatment been produce three different end products which is CNC1, CNC2 and CNC3. The effect of post-purifications treatment on the cellulose nanocrystal were determined using FTIR, UV-Vis, Chroma Meter and SEM. During the FTIR analysis there four major peak that been observed which is at the region of 3600 to 3200 cm^{-1} ,2900 cm^{-1} ,1700 cm^{-1} and at 1100 to 600 cm^{-1}. This all peak is importance in conforming the CNC. While in UV-Vis, to indicate the successfully isolated of CNC the light intensity must over 75% in range of 350 to 800 nm. In SEM, the rod-like structure of CNC was observed.