

**SYNTHESIS OF LAYERED DOUBLE HYDROXIDE-PAMOIC
ACIDS VIA DIRECT CO-PRECIPIATION METHOD AND ITS
CONTROLLED RELEASED BEHAVIOURS**

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ABSTRACT

SYNTHESIS OF LAYERED DOUBLE HYDROXIDE PAMOIC ACID VIA DIRECT CO-PRECIPIATION METHOD AND ITS CONTROLLED RELEASE BEHAVIOURS.

Pamoic acids were successful intercalated into the layered double hydroxide by using direct co-precipitation method to form layered double hydroxide pamoic acid. The result obtained from the FTIR spectroscopy shows that the appearance of the pamoic acid peak into the intercalated compound which are 3503.96 cm^{-1} , 1639.20 cm^{-1} , 1454.84 cm^{-1} , 739.20 cm^{-1} , and 1199.11 cm^{-1} indicate the OH stretching, C=O stretching, C=C stretching, C-H of the aromatics ring out of plane bending and C-O stretching frequency. The basal spacing of nanocomposites increases from 9.061 \AA to 17.661 \AA shows that the nitrate disappearance from the nanocomposites. The amount of pamoic acid loaded into the layered double hydroxide was estimated to be 50.23%, which can be calculated from the percentage of C that was 35.7%. The release of the nanocomposites by using sodium carbonate as the aqueous solution show slow release of the pamoic acids over extended period of time with saturated release of around 70%.