



Synthesis And Characterization Carbonate Apatite From Bukit Tui Limestone, Padang, Indonesia

Novesar Jamarun*, Sirly Yuwan, Ratna Juita and Jumriana Rahayuningsih

*Material Chemistry, Chemistry Department, Faculty of Mathematics and Natural Science, Andalas University, **INDONESIA**

Email: novesar62@yahoo.com

Accepted on 22nd February 2015

ABSTRACT

Carbonate apatites has been synthesized using Bukit Tui limestone and investigated by XRD, FT-IR, Nanolaser, TGA, and SEM. In present study, PCC was mixed with gypsum was treated with 1M (NH₄)₂HPO₄. In visual observations, showed that same colour morphologically before and after treated with 1M (NH₄)₂HPO₄. XRD analysis revealed that formed carbonate apatite A-type and B-type FT-IR analysis appears band absorption at 1120 cm⁻¹ (P-O stretching), 460, 560-600 cm⁻¹ (P-O bending), and 1450,1410, and 876 cm⁻¹ (C-O stretching). Nanolaser characterized the change of particle size after treated by phosphate salt. TGA analysis showed that stability of material obtained depending on compositions and SEM images showed that well distributed of particles.

Keywords: limestone, precipitated calcium carbonate, carbonate apatite.
