ABSTRACT

There had been research about releasing elements of nitrogen, phosphorus and kalium from mixed fertilizer made by blending method using percentage of N:P:K is 15:15:15, in addition with 5% nature zeolites of East Java (Malang, Blitar, Ponorogo and Pacitan) in 500 mL water during range time 24, 48, 72, 96 and 120 hours. Releasing elements of nitrogen, phosphorus and kalium had tendency to elements-water-soluble plot to time that were identical. Nitrogen-water-soluble as ammonium ion (NH₄⁺) formed water-soluble curve shape decreased with addition of 5% nature zeolites. Phosphorus as P₂O₅ had water-soluble curve parabol upside down, whereas kalium-water-soluble curve showed in raising percentage day by day continually until at fifth day. Application of nature zeolite of Ponorogo resulted releasing elements of nitrogen and kalium in smallest percentage. The nature zeolite of Blitar resulted releasing elements of nitrogen and kalium at the greatest percentage. The smallest amount of phosphorus-water-soluble yield were also found in addition of nature zeolite from Ponorogo which is type of natrolite zeolite. Analysis to the amount of nitrogen solute element being done by titration method whereas the amount of phosphorus-water-soluble solute in water were analysed by Spectrofotometry UV-Vis. While the amount of kalium-water-soluble were known by Atomic Absorption Spectrofotometer (AAS).