

Della Dwi Ananda (Chemistry 2016)

Laboratory Quality Assurance Off Farm Pabrik Gula Tjoekir



Desa Cukir Kecamatan Diwek Kabupaten Jombang Jawa Timur

I have internship experience at Laboratory Quality Assurance Off Farm Pabrik Gula Tjoekir on 1st July – 31st July 2019. One of my tasks during my internship was analysis of phospat levels on nira using a UV-Vis spectrophotometer.

The process of analyzing phospat levels by taking 50 ml of NPP, NM, NE and added with Keiselguhr powder. Then stirred evenly and filtered with filter paper until obtained filtrate and residue from NPP, NM, NE. Filtrat brown color obtained, taken 1 mL and added 40 mL aquades and 4 mL ammonium molibdate. After that, stirred with a spatula and heated at 300°C until it boils. The result NPP, NM, NE is brown. Furthermore, coupled with 0.1 grams of ascorbic acid until the solution of NPP, NM, NE changes color to blue. NPP, NM, NE are cooled at room temperature and then diluted with added aquades to the limit mark. Stirred and shaken until homogeneous, then measured absorbance at λ -650 nm. So that the absorbance results from each nira (NPP, NM, NE). The results of the absorbance can be used to find the phospat levels contained in NPP, NM, NE by formula:

$$\text{Phospat levels} = y \times \text{absorbance} \times 100$$

The result phospat levels in each nira: NPP = 206.03, NM = 298.0, NE = 59.41. Result of the phospat levels is close to the established standard, the best phospat level results from NPP which ranges from 200, if the result levels are less than 200 then it is necessary to add phospat again during the purification process. For the standard phospat level on NM is 300 and the standard phospat level on NE which is 60.

	
NPP, NM, and NE	NPP, NM, and NE added into beaker glass

	
<p>Weigh 1 gram Keiselguhr powder</p>	<p>1 gram Keiselguhr powder added into beaker glass</p>
	
<p>Stir with a spatula until all mixed</p>	<p>NPP, NM and NE + 1 gram Keiselguhr filtered with filter paper</p>
	
<p>Filtrate NPP, NM, and NE</p>	<p>Taken 1 mL NPP, NM and NE</p>
	
<p>NPP, NM and NE solution added aquades</p>	<p>NPP, NM and NE solution added 4 mL ammonium molybdate</p>



NPP, NM and NE solution heated at 300°C until it boils



Weigh 0.1 grams of ascorbic acid



NPP, NM and NE solution added 0.1 grams of ascorbic acid until the solution changes color to blue



NPP, NM and NE solution diluted with aquades to the limit mark



NPP, NM and NE solution inserted into the kuvet to measured the absorbance



Measured the absorbance at λ -650 nm