



ABSTRACT

ADINDA NURUL ANNISAH. Determination of H₂S in Natural Gas at PT Pupuk Sriwidjaja using Spectrophotometer Visible. Supervised by WINA YULIANTI, M.Si dan MUFTY HAKIM, S.T.

Natural gas is one of fuel and raw materials in industry. Natural gas is a fossil fuel that formed into gas and has CH₄ as the main component. Natural gas is not only composed of CH₄ compounds that must be known in exact concentration, but it also contains this impurity gases that can be harmful for the workers. One of the impurity gases in natural gas is the H₂S compound. H₂S is a foul odor, colorless and flammable gas. This compound should be removed as it is the main impurity in the industrial processes. The SNI No. 19-0232-2005 on the Airborne Chemical Boundaries (NAV) Value of Workplace Chemicals, regulates H₂S concentration exposure permitted by workers is 8 hours in a day and also regulates the short-term exposure limit value (STEL) for exposed workers to work no more than 15 minutes under the exposure. The method used for the determination of H₂S content of natural gas sample is Spectrophotometry Method by using spectrophotometer visible in 666 nm wavelength. The results obtained are in the sample coded C6 which was the sample in April has the highest level 10.477 mg/L while other samples have lower and safer a concentration than sample C6. The concentration exceeded the NAV regulated by SNI No.19-0232-2005 that exposed workers should not receive H₂S gas exposure more than 10 mg/L for 8 hours per day.

Keywords: natural gas, SNI No.19.0232-2005, spectrophotometer visible



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