



## INTISARI

### **Studi Analisis Kimia Logam Pb dan Flavonoid pada Bawang Merah Brebes**

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Penelitian analisis logam Pb dan flavonoid pada bawang merah Brebes telah dilakukan. Analisis logam Pb dilakukan dengan cara mendestruksi sampel bawang merah yang telah dihaluskan dengan menambahkan asam nitrat ( $\text{HNO}_3$ ), didiamkan dan dipanaskan. Analisis logam Pb pada bawang merah Brebes dilakukan dengan beberapa variasi perlakuan seperti: jarak dalam pengambilan sampel, uji korelasi antara konsentrasi logam Pb dalam bawang merah terhadap kepadatan lalu lintas. Analisis Flavonoid dalam bawang merah dilakukan dengan metode ekstraksi maserasi menggunakan pelarut etanol. Konsentrasi logam Pb ditentukan dengan spektrofotometer AAS dan karakterisasi flavonoid menggunakan spektrofotometer FTIR dan LC-MS.

Hasil penelitian menunjukkan adanya hubungan antara konsentrasi Pb dalam sampel terhadap kepadatan lalu lintas. Hubungan diperoleh dari uji korelasi dengan mencari nilai  $t_{hitung}$  dan angka korelasi. Nilai  $t_{hitung}$  diperoleh sebesar  $2,53 > 2,23$  ( $t_{tabel}$ ) dan angka korelasi diperoleh sebesar  $0,625 > 0,5$ . Konsentrasi Pb dalam sampel diperoleh hasil yaitu stasiun 1 sebesar 2,451; 0,614; dan 0,41 mg/kg, stasiun 2 sebesar 1,022; 1,226; dan 0,410 mg/kg, stasiun 3 sebesar 0,410; 0,818; dan 0,410 mg/kg dan terakhir stasiun 4 sebesar 13,267; 5,716; dan 2,655 mg/kg. Dari ekstraksi bawang merah diperoleh berat ekstrak sebesar 36 g dengan rendemen sebesar 7,2%. Hasil ekstraksi dan karakterisasi menunjukkan bawang merah Brebes mengandung flavonoid berupa Leucocyanidin.

Kata kunci : *Pb, Flavonoid, bawang merah, desktruksi, ekstraksi*



## ABSTRACT

### Study of Chemical Analysis of Pb and Flavonoid in Brebes Onion

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Research analysis of Pb(Lead) and analysis of flavonoids on Brebes onion has been done. Pb analysis was carried out by destroying the onions samples by adding nitric acid ( $\text{HNO}_3$ ), allowed to stand for 12 hours and heated. Analysis of Pb on the onions was carried out with several variations of treatment such as: distance in sampling, correlation test between Pb metal concentrations in onions and traffic congestion. Analysis Flavonoids in samples were carried out by maceration methods using ethanol as a solvent. Pb concentration was determined by a spectrophotometer AAS and flavonoids was determined by FTIR spectrophotometer and LC-MS.

The results showed the relationship between the concentration of Pb in the sample against traffic density. The relationship is obtained from the correlation test by looking for the value of  $t_{\text{arithmetic}}$  and correlation number. The value of  $t_{\text{arithmetic}}$  obtained by  $2.53 > 2.23 (t_{\text{table}})$  and correlation figures obtained amounted to  $0.625 > 0.5$ . The Pb concentration in the sample obtained results that were station 1 amounted to 2.451; 0.614; and 0.41 mg/kg, station 2 is 1.022; 1.226; and 0.410 mg/kg, station 3 is 0.410; 0.818; and 0.410 mg/kg and the last station 4 is 13.267; 5.716; and 2.655 mg/kg. From the extraction of red onion, the extract weight was 36 g with a remission of 7.2%. Extraction and characterization results showed that Brebes onion contains flavonoids in the form of Leucocyanidin.

Keywords: *Pb, Flavonoid, onion, destruction, extraction*