

ABSTRACT

Halitosis is the condition when someone has bad smell of breath. Halitosis may cause by some factors. Such as kidney dysfunction. People with kidney dysfunction has breath smells like urea. Urea smells cause by residual substances that stacked up in blood. In some cases, people with kidney dysfunction may be die. Therefore, there is a tool needed that can detect the level of urea. So that it can avoid and minimize the death caused by kidney dysfunction.

In this research, the level of urea ($\text{CH}_4\text{N}_2\text{O}$) will be measured one by one with hydrogen sensor, nitrogen sensor, oxygen sensor, and carbon sensor. They will be connected to the Arduino UNO. If the level of the substances is more than the normal limit, the person in the experiment is indicated with kidney dysfunction. Then, Arduino UNO will send the results to the Ubidots database. After all, user can see the results through android application. So that the user will immediately know the results. The result of this research ia aming to avoid and minimize the death caused by kidney dysfunction.

Keywords : Kidney Dysfunction, Halitosis, Urea, *Arduino UNO*, *Ubidots databse*