

## ABSTRACT

The balance of *salt level* in our body is very important. Consuming salt in high amount and high intensity will cause a high blood disease. For a diet purpose, the salt which is consumed must be limited. So that, to be stay health in consuming food, a quick information to know the salt content in the food is needed to show whether that food can be consumed or not.

This last project is realizing a salt tester in liquid food by using a microcontroller. This equipment is using a principle that fresh water has a relatively high DC resistance value that will decrease proportionally as an increasing amount of salt is added. Parallel pieces of metal from the stainless steel material are using to detect the changing resistance. An output voltage from these parallel pieces of metal will be strengthened by a non-inverting amplifier. The result from the amplifier will be the input for ADC. A *microcontroller AT89S52* is used to count the value of the salt content and the result will be displayed on *LCD*.

From this instrument the gain is 1,2 times. ADC will convert the result from the amplifier to be a digital signal. The digital signal from the ADC is as equal as the input analog voltage. The result which is displayed on *LCD* is a round number which is as a conversion of the ADC digital signal. This instrument is using a gram/liter as the measurement unit.

Key words: *salt level, microcontroller AT89S52, LCD.*