ABSTRACT

Sulfur-based electrodes were chosen due to their wide availability in nature and low cost. The nature of sulfur that can degrade during the cycle requires sulfur to be added to carbon materials such as MWCNT and activated carbon. SEM test results show the presence of complex structures that have their own specific functions with carbon as the largest component. Based on the variation used, the ratio of sulfur: activated carbon: MWCNT, 1:1:1, 1: 2 : 1, 1 : 3 : 1, CV test results show the most significant increase of specific capacitance in sample 1: 2 : 1, which is 1.32 F/g. EIS testing also shows a decrease in the resistance value on the electrode which means an increase in conductivity. The lowest resistance value was obtained in sample 1 : 1 : 1, which is 8.95, because the sample has the highest MWCNT mass value among other samples.

***Keyword** : Battery, MWCNT, Activated Carbon, Sulphur, Capacitance, Resistance*