CONCLUSIONS

1. With sintering of samples created from Ukrainian powder, manufactured by LLC Zirconia of Ukraine, electrolytes for fuel cells were obtained.
2. Investigation of electrolytes porosity with different temperatures of sintering showed that with increasing sintering temperature up to 1300 °C closed porosity increases with rapid decrease of open porosity.
3. During sintering process two stages, corresponding to the temperatures of sintering 1100-1300 °C and 1300-1500 °C, were found. To each of the detected stages of sintering its own averaged activation energy of consolidation corresponds.
4. Increase of sintering temperature leads to a rapid increase in the strength of electrolyte at sintering temperatures of 1100-1300 °C and a further monotonous decrease in strength at temperatures of 1400 and 1500^{o}C.
5. Comparing results it can be seen that at sintering temperature 1300 ^{o}C difference between strengths values of both samples is 271%, and at 1500 ^{o}C strength of both samples becomes almost identical.
6. With increase in the temperature of sintering conductivity of electrolyte sample I is rapidly increasing and it prevails of sample II in conductivity: 55,15% at a temperature 1100^{o}C, 50% at 1200^{o}C, 50,63% at 1300^{o}C, 51,28% at 1400^{o}C and 78,15% at 1500^{o}C.
7. The scientific-technical feasibility of the work is substantiated.