The purpose of this study is to ascertain the battery life of ‘675’ mercury and Zinc Air in hearing aids with different power output. There are two parts in this study, which are the experimental study, and the study on experienced hearing aid users. The outcome of this study showed that Zinc Air batteries have superior life than the mercury. The battery life of a mercury cell ranges from 9 days in high power aids and 74 days in low power aids. The subjects recorded between 6 days in high power aids and 67 days in low power aids. As for Zinc Air batteries, in this experimental study, the life is double of the mercury cell, on the same power hearing aid. The subjects recorded between 14 days in high power aids and 36 days in medium power aids. Also in this study, sound quality comparison showed that 100% of the subjects prefer the sound quality from their aids using the Zinc Air batteries.