

## Deliverable D2.2 Test Report



This document deals with the experimental activity dedicated to the characterization of PEM FC stacks for  $\mu$ CHP and UPS applications, during both normal and faulty conditions. In the framework of the Health-code project, two different technologies ( $\text{H}_2/\text{air}$  and  $\text{H}_2/\text{O}_2$ ) of PEMFC stacks are characterized and tested. The project is built on the use of the EIS technique as main tool for diagnosis purposes and it deals with three major fault families: water management (drying, flooding); reactants' starvation (fuel and oxidant); fuel quality (contaminations).

Tests results obtained during the test campaigns are then presented and analyzed. Particularly, the relevant spectra deformations induced by the operating conditions variation are proposed and commented. Tests are performed based on the Test Protocol presented on the deliverable D2.1, in order to obtain the suited data for training diagnosis algorithm.