A round robin campaign on the hygric properties of porous building materials

The reliable determination of the hygric properties of porous building materials is important. In earlier round robin campaigns large discrepancies of measured hygric properties were found among different labs. Later studies indicated that differences in lab conditions and more importantly, personnel’s operation procedures and data processing methods, might have the greatest impact. To gain further insight, a new round robin campaign has been launched by KU Leuven (Belgium), to which another eight institutes contributed. A relatively stable and homogeneous ceramic brick is tested, and 3 standard tests are performed: the vacuum saturation test, the capillary absorption test and the cup test. During the campaign, two rounds of measurements are performed. In the 1st round, tests are performed according to participants’ respective experimental protocols. Next, a strict and detailed common protocol is prescribed. This paper reports on the results obtained in the 1st round of measurements. Results show that not much progress has been made since the EC HAMSTAD project: the vacuum saturation test leads to the most consistent results, while the cup test produces the largest discrepancies, most probably originating from sample sealing and humidity control.