

In order to perform an Alveographic test in accordance with the existing standards (NF EN ISO 27971; AACC 54-30A; ICC 121...), the laboratory conditions (hygrometry and temperature) must be controlled. The Alveolab, latest version of the Alveograph family, does not need to be placed in a controlled environment since the bubble is inflated in a sealed chamber, which is controlled in terms of temperature and humidity. Moreover, the Alveolab also controls the injected/added water temperature together with the mixing temperature and the resting temperature.



This study, completed by gathering the data of 115 tests, evaluates whether the Alveolab is able to maintain the overall conditions within the standard limits.

Q1. IS THE ALVEOLAB ABLE TO MAINTAIN ITS OVERALL OPERATING CONDITIONS WITHIN THE STANDARD LIMITS OVER TIME?

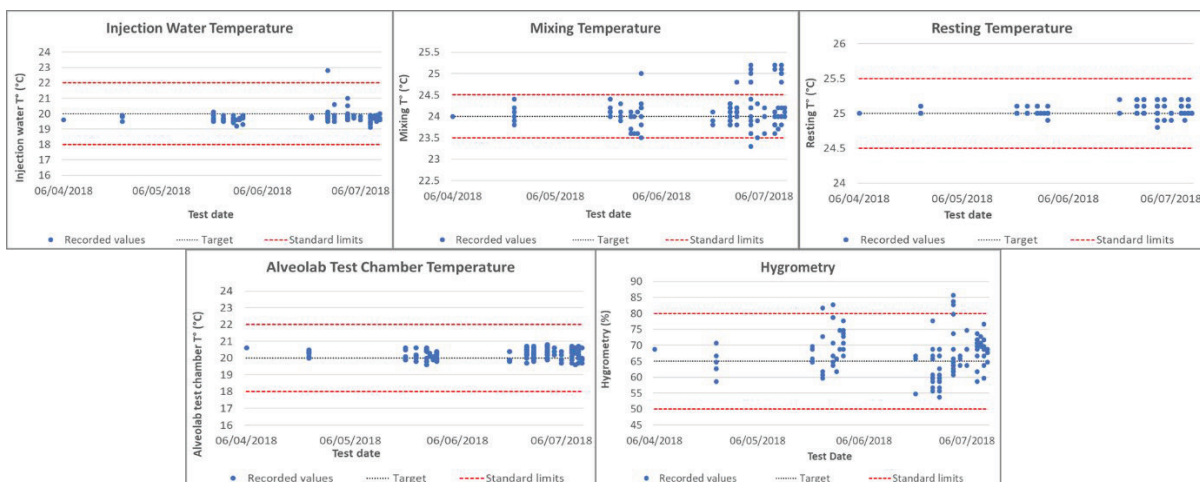
YES. On average the Alveolab conditions are very close to the targets defined by the standards (Table 1), Moreover, most of the test's parameters are within the standard tolerances (Figures 1 to 5):

Q2. WHY ARE SOME OF THE TEST CONDITIONS OUTSIDE OF THE STANDARD LIMITS?

If some of the test's conditions are outside the standard limits, the Alveolab will indicate to the operator that the concerned parameter(s) is (are) not correct. The choice to pursue and continue with the test is then at the discretion of the operator..

| Parameters | Injection water Temperature (°C) | Mixing Temperature (°C) | Resting Temperature (°C) | Alveo Test Chamber Temperature (°C) | Hygrometry (%) |
|----------------|----------------------------------|-------------------------|--------------------------|-------------------------------------|----------------|
| Average | 19.7 | 24.1 | 25.0 | 20.2 | 67.3 |
| Min | 19.1 | 23.3 | 24.8 | 19.6 | 53.7 |
| Max | 22.8 | 25.2 | 25.2 | 20.8 | 85.7 |

Table 1: Alveolab test conditions resume (115 tests)



Figures 1 to 5 (from left to right): Evolution of the Alveolab conditions of work over time