

COMPLIANCE MEASUREMENTS OF LIGHTING, MICROCLIMATE AND DUST ON MUSEUM SHOWCASES

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The “Faraggiana-Ferrandi” natural history museum is placed in an ancient building in the city of Novara. The exhibition rooms are arranged on two floors around a central, open zone closed at the top by a glass velarium. The museum, open every day from 10 am to 6 pm, is specially visited by groups of student. In each room there is a fan-coil fed by a central conditioning unit.

The present museum preparation makes up of new showcases made to measure few years ago; different types of showcases were chosen, with different dimensions, windows lock and lighting.

After the reopening of the museum, a series of measurements was carried out to verify the compliance of the showcases with some technical standard settled by the town council (the museum owner). Temperature, relative humidity and dust in the air into the showcases have been measured and compared with those of the air in the museum (at the external of the showcases). UV and visible radiation (always on the objects in the showcases and outside) have been also measured.

The measurements was carried out on some showcases representative of the different types mounted in the museum.

The difference between internal and external air temperature and relative humidity is small because of the small thermal energy introduced by lighting apparatus of the showcases (the unique thermal source).

Lock of showcases is able to filter external dust that remain high with respect to the internal.

UV radiations is, in all room of the museum and also in the showcases, lower than instrument sensibility.

Visible radiation, instead, is spread not evenly in the different showcases and in some of them it reaches high values.

The relation describes the different measurements carried out and the results obtained (showed above in a synthetic way).