Survey of indoor airborne fungi in different educational institutions from Iasi, România

E. ULEA, F. D. LIPŞA, Nicoleta IRIMIA, Andreea Mihaela BĂLĂU - USAMV Iasi

The aim of this investigation was to monitor the densities and distribution of indoor airborne fungal spores that can cause an allergic response in three educational institutions placed in different location of Iasi City, Romania. Areas monitored were two lecture halls and one laboratory from the university campus, one classroom from a primary school and one from high school. Air samples from all location were taken using the Koch sedimentation method, which suppose that Petri dishes which contained potato-dextrose-agar (PDA) and peptone-glucose-agar (PGA) media in three different compositions (classic, with rose-bengal and with streptomycin) are exposed to room air for a 5-min period. Samples were collected from April to May 2009. A total of 333 microfungal colonies were counted on 90 plates. Identification of these showed 11 genera and 10 colonies of indeterminate spores from the indoor air samples. The identification of the fungi was made according to their microscopic properties and through references. The results showed that in all three locations were differences in the distribution of fungal genera, but Penicillium, Cladosporium and Aspergillus were the most prevalent fungal genera (43.8, 22.2 and 18.0% of the total, respectively). Indoor concentration of fungal spores in the university laboratory and high school classroom were found to be higher as the international standards and has potential to develop adverse health effects to the occupants.