

<p>MICOLOGIA Monitorização Ambiental ORAL</p> <p>NOTAS:</p>	<p align="center">YEARLY AND SEASONAL VARIATION IN INDOOR AND OUTDOOR FUNGUS PROPAGULES IN A HOSPITAL</p> <p>¹R. Tormo Molina, ¹S. Fernández Rodríguez, ²A. Gonzalo Garijo & ³I. Silva Palácios</p> <p>¹Universidad de Extremadura, Facultad de Ciencias, Badajoz, España ratormo@unex.es; santiferro@unex.es</p> <p>²Hospital Infanta Cristina, Departamento de Alergia, Badajoz, España magonzalog@telefonica.net</p> <p>³Universidad de Extremadura, Escuela de Ingenierías Agrarias, Badajoz, España. insilva@unex.es</p> <p>Indoor fungi presence in a hospital is an indicator of its air quality. The aim of the present work was to monitor the spatial and temporal variations in fungus propagules (spores and hyphae) for two years indoors and outdoors at a hospital.</p> <p>Sampling was from April-2007 to March-2009. A total of 60 samples were taken, weekly in spring and fortnightly the rest of the year. Five sampling sites were selected, one outdoors and four indoors (an isolated room and a ward on each of the ground and third floors). A personal volumetric sampler was used for 10 minutes in the morning with petrolatum white as adhesive to catch airborne propagules. Monthly values of rainfall, temperature, and relative humidity were compared with monthly propagule concentrations.</p> <p>The total average concentrations outdoors were 2502 propagules/m³ and indoors 1152 propagules/m³. More than 60 propagule types were identified. The most abundant (75%) were, in decreasing order: <i>Cladosporium cladosporioides</i>, <i>Ustilago</i>, <i>Cladosporium herbarum</i>, <i>Aspergillus-Penicillium</i>, <i>Leptosphaeria</i>, and hyphae. Between the two years, there were 19.2% and 25.6% increases in the indoor and outdoor concentrations, but without statistical significance. The indoor/outdoor ratio was 0.35. The season with the lowest concentrations both indoors and outdoors was winter, but the season with the highest concentrations was not the same in the two years either indoors or outdoors. There was a significant positive correlation between temperature and outdoor propagules of <i>Cladosporium</i>, hyphae, <i>Alternaria</i>, and <i>Ustilago</i>. For relative humidity, this correlation was negative. For indoor propagules, hyphae, <i>Alternaria</i>, and <i>Ustilago</i> were positively correlated with relative humidity on the third floor.</p> <p>There was a major decrease by a factor of about 3 from outdoors to indoors in propagule concentrations. Indoors, the bottom floor room was the site with the lowest concentrations of airborne propagules, while the levels in the two wards and the third floor room differed little from each other. The reduction from outdoors to indoors was by about a half for <i>Ustilago</i> and <i>Aspergillus-Penicillium</i>. Temperature and relative humidity influenced the outdoor presence of most fungi propagules, increasing and decreasing their amounts respectively, but indoors only relative humidity affected the concentrations and then only in some cases.</p>
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