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# IDENTIFICATION OF MEXICAN THERMOPHILIC AND THERMOTOLERANT FUNGAL ISOLATES

**J. CÓRDOVA[1], S. ROUSSOS[2], J. BARATTI[3], J. NUNGARAY[1] AND O. LOERA[4]**

[1] Departamento de Ingeniería Química, CUCEI, Universidad de Guadalajara, Blvd. Marcelino García Barragán y Calz. Olímpica, 44840 Guadalajara, Jalisco, Mexico.
[2] Laboratoire de Micologie, IRD-Université de Provence, 163 Av. de Luminy F13228, Marseille, France.
[3] Laboratoire de Biocatalyse et Chimie Fine, Faculté des Sciences de Luminy, case 901, 13288 Marseille cedex 9, France.
[4] Departamento de Biotecnología, Universidad Autónoma Metropolitana-Iztapalapa, Apartado Postal 55-535, 09340 Mexico, D.F.

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## ABSTRACT

**Forty-four fungal strains capable of growing at temperatures above 50 C were isolated from different samples of soil and coconut residues collected in Mexican tropical and subtropical regions. These thermophilic and thermotolerant fungal strains were identified by microscopical analysis using standard procedures. Three species were identified: *Rhizomucor pusillus* (Lindt)Schipper (19 strains), *Rhizopus microsporus* van Tieghem (6 strains), and *Aspergillus fumigatus* Fresenius (19 strains). Four strains identified as *Rhizopus microsporus* were ascribed to the variety *rhizopodiformis*; however, the other two strains showed new characteristics which require further analysis, such as a homothallic sexual reproduction. *Aspergillus fumigatus* was found in coconut residues as a common contaminant during the isolation of other thermophilic species. Strains were isolated from samples containing a high content of lipids (mainly from coconut coprah), and accordingly extracellular lipase biosynthesis was directly confirmed in Petri dishes for every strain.**

**Key words: Thermophilic fungi, isolation, taxonomy, lipases.**