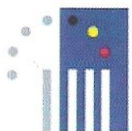


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**HARMONISATION & VALIDATION OF
METHODS**

**THE WAY FORWARD FOR EUROPEAN CULTURE
COLLECTIONS**



BELGIAN SCIENCE POLICY



**BELGIAN CO-ORDINATED
COLLECTIONS OF MICRO-ORGANISMS**

ENVIRONMENTAL AND INDUSTRIAL APPLICATION CRITERIA TO ESTABLISH THE MICROBIAL CULTURE COLLECTION OF THE CATHOLIC UNIVERSITY OF PERNAMBUCO (UCP)

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Poster 3

The culture collection of the Catholic University of Pernambuco (UCP) was established in the late of 2000 with the introduction of pure culture techniques of isolation bacteria and fungi. The collection holds nowadays 2,338 strains in this database system. The filamentous fungi of the Mucoralean order, the *Candida* yeasts, and the bacteria *Bacillus* genus, *Chromobacterium violaceum* and *Serratia marcescens* from contaminated area of petrol, mangrove sediments, contaminated effluents, river, and sewage sludge are the main microbial groups preserved in the collection. The primary function of this collection is collect, maintain and distribute microbial strains. Microbial UCP culture collection distributes strains ordered by microbiologists involved in teaching and research activities, assays control and biotechnology processes. The collection supports also research linked to the scientific initiation programme for students, master and PhD students, which is a means to collect new microorganisms from extreme environments with biotechnological potential for environmental or industrial exploitation. All strains are preserved by periodic transfer subculture and keep under refrigeration as described in literature. Slants under mineral oil at room temperature, culture in sterile water, spores on pearls of silica and refrigeration, and freeze-drying are other current preserve methods used in the collection. Other function of the UCP culture collection is used the strains for production molecules of high added inputs such as enzymes, co-enzyme Q, biosurfactants, inorganic polyphosphates, and the co-polymers chitin and chitosan interesting to environment or industrial areas. In addition, the polymers produced have potential to removal heavy metals, sorption of reactive azo dye, biodegradation or biotransformation of Polycyclic Hydrocarbon Aromatic-HAPS. Finally, strains are tested to culture media development looking for low-cost ingredients, such as crude oil, industrial residue, agroindustrial regional oil. Industrial by-products and other residues are also under investigation for cost-effectiveness of production of high added value special molecules since the manipulation of the levels of a limiting nutrient may be critical to trigger or optimize the production of a desired product used in environmental or industrial areas.

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