



## Aislamiento y selección de bacterias con capacidad de degradar celulosa y almidón [

2011

text (article)

Analítica

The intention of isolating and selecting autochthonous bacterial strains with potential to degradation of cellulose and starch; five different environments were chosen (organic area, AO; conventional area, AQ; Forest, BM; sugarcane area, RC and Compost, C) which were located on plates-traps containing modified nutrient agar, and soil samples taken from those sites. Plates-traps were collected at 24 hours and taken to laboratory for sampling of visible colonies. Soil samples were serially diluted. In both cases, it was plated by exhaustion and purifying to obtain a strain collection of 93 strains (71 from soil samples and 22 traps). All agar seeded in carboxy methyl cellulose (CMC) to determine the cellulolytic activity by revealing them with congo red from the hydrolysis halo. Amylolytic activity was assessed by placing the strains in an environment whose only energy source was starch as revealed with Lugol's iodine solution. AO-19 strain isolated from the organic area made the largest halo cellulose degradation 12.33 IU/mm while BM-1 strain isolated from the forest obtained 9.33 IU/mm diameter of starch hydrolysis halo. AO-19 strain has potential to be considered in obtaining bacterial bio preparations or composting organic fibrous material

The intention of isolating and selecting autochthonous bacterial strains with potential to degradation of cellulose and starch; five different environments were chosen (organic area, AO; conventional area, AQ; Forest, BM; sugarcane area, RC and Compost, C) which were located on plates-traps containing modified nutrient agar, and soil samples taken from those sites. Plates-traps were collected at 24 hours and taken to laboratory for sampling of visible colonies. Soil samples were serially diluted. In both cases, it was plated by exhaustion and purifying to obtain a strain collection of 93 strains (71 from soil samples and 22 traps). All agar seeded in carboxy methyl cellulose (CMC) to determine the cellulolytic activity by revealing them with congo red from the hydrolysis halo. Amylolytic activity was assessed by placing the strains in an environment whose only energy source was starch as revealed with Lugol's iodine solution. AO-19 strain isolated from the organic area made the largest halo cellulose degradation 12.33 IU/mm while BM-1 strain isolated from the forest obtained 9.33 IU/mm diameter of starch hydrolysis halo. AO-19 strain has potential to be considered in obtaining bacterial bio preparations or composting organic fibrous material

<https://rebiunoda.pro.baratznet.cloud:28443/OpacDiscovery/public/catalog/detail/b2FpOmNlbGVicmF0aW9uOmVzLmJhcmF0ei5yZW4vMzQ5NTI0OTg>

**Título:** Aislamiento y selección de bacterias con capacidad de degradar celulosa y almidón [electronic resource]

**Editorial:** 2011

**Documento fuente:** Revista ESPAMCIENCIA, ISSN 1390-8103, Vol. 2, Nº. 2, 2011 (Ejemplar dedicado a: REVISTA ESPAMCIENCIA 2011), pags. 61-68

**Nota general:** application/pdf

**Restricciones de acceso:** Open access content. Open access content star

**Condiciones de uso y reproducción:** LICENCIA DE USO: Los documentos a texto completo incluidos en Dialnet son de acceso libre y propiedad de sus autores y/o editores. Por tanto, cualquier acto de reproducción, distribución, comunicación pública y/o transformación total o parcial requiere el consentimiento expreso y escrito de aquéllos. Cualquier enlace al texto completo de estos documentos deberá hacerse a través de la URL oficial de éstos en Dialnet. Más información: <https://dialnet.unirioja.es/info/derechosOAI> | INTELLECTUAL PROPERTY RIGHTS STATEMENT: Full text documents hosted by Dialnet are protected by copyright and/or related rights. This digital object is accessible without charge, but its use is subject to the licensing conditions set by its authors or editors. Unless expressly stated otherwise in the licensing conditions, you are free to linking, browsing, printing and making a copy for your own personal purposes. All other acts of reproduction and communication to the public are subject to the licensing conditions expressed by editors and authors and require consent from them. Any link to this document should be made using its official URL in Dialnet. More info: <https://dialnet.unirioja.es/info/derechosOAI>

**Lengua:** Spanish

**Enlace a fuente de información:** Revista ESPAMCIENCIA, ISSN 1390-8103, Vol. 2, Nº. 2, 2011 (Ejemplar dedicado a: REVISTA ESPAMCIENCIA 2011), pags. 61-68

---

## Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- [informa@baratz.es](mailto:informa@baratz.es)