

## Chromium Removal of Batik Wastewater using *Aspergillus* sp. and *Penicillium* sp.

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| <b>Publons ID</b>   | (not set)   |
| <b>Wos ID</b>       | WOS:000656158000022   |
| <b>Doi</b>          | 10.1088/1755-1315/593/1/012022  |
| <b>Title</b>        | Chromium Removal of Batik Wastewater using <i>Aspergillus</i> sp. and <i>Penicillium</i> sp.  |
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| <b>Publish Date</b> | 2020  |
| <b>Journal Name</b> | SOUTH-EAST ASIAN+ CONFERENCE ON BIODIVERSITY AND BIOTECHNOLOGY 2018   |
| <b>Citation</b>     |   |
| <b>Abstract</b>     | <p>Indigosol red is one of batik dye used in Indonesia's batik industry. This industrial activity produces wastewater. Based on wastewater quality standards, it is explained that chromium (Cr) is one of the parameters in the standard of textile waste quality. Several selected fungi are potential to decolorize and remove heavy metal chromium from batik wastewater. Some fungal strains, such as <i>Aspergillus</i> sp. and <i>Penicillium</i> sp., isolated from batik wastewater, have been elaborated in this study, with <i>Phanerochaeta chrysoporium</i> as comparative isolate. This research reports the value of Cr in several batik wastewater in Banyumas Regency, and also discussed the role of these fungal removals of heavy metals from batik wastewater. The effect of the incubation period and the amount of biomass on the removal were also studied. Analysis of Cr content from wastewater sample ranged &lt;0.12-1.01 mg/L. The results showed that the fungi were able to remove the Cr of batik wastewater. The range of values of Cr reduction varies from 83 to 86%. The most effective fungi to decolorize and remove chromium was <i>Penicillium</i> sp. in 5 day incubation time, with the largest biomass of 0.64 g. <i>Penicillium</i> sp. can be used as chromium removal.</p> |
| <b>Publish Type</b> | Book in series  |
| <b>Publish Year</b> | 2020  |
| <b>Page Begin</b>   | (not set)   |
| <b>Page End</b>     | (not set)   |
| <b>Issn</b>         | 1755-1307   |
| <b>Eissn</b>        |   |
| <b>Url</b>          | <a href="https://www.webofscience.com/wos/woscc/full-record/WOS:000656158000022">https://www.webofscience.com/wos/woscc/full-record/WOS:000656158000022</a>   |
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