# Mathematical modeling on bacterial isolates for different concentrations of hexavelant chromium

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Microorganisms are the most abundant and diverse living beings on the planet, within this group, are the bacteria. There are several factors controlling abundance and bacterial growth such that the deficient or excessive concentration of certain elements such as heavy metals (HM), the most essential for bacterial growth. However, high concentrations of these metals can be highly toxic. One of the HM with the greatest impact on the environment is Chromium, which is commonly found in the form of chromates, dichromate, oxides and sulfates; In this sense, hexavalent chromium (Cr (VI)) is a highly toxic agent, which can be reduced by the environment to less toxic forms (Cr (III)), but when the metal levels exceed the capacity of reduction can become a pollutant, directly affecting the abundance and normal growth of bacteria associated with environments contaminated with this metal. The effect of different concentrations of Cr(VI) on the bacteria population growth of wild type, isolated from the effluents contaminated with this metal is not completely known. In this context, the present study focuses on evaluating the effect of different concentrations of chromium in the bacteria population isolated from wastewater in order to generate indicative data that establish the response of the bacteria population in relation to chromium concentrations.

## References

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