



## **Statistical models to predict color and turbidity after the treatment of raw water with acetylated starch**

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**Abstract:** Statistical models could help to estimate future behavior of a system based on observational data. A statistical analysis was carried out to develop statistical models capable of predicting color and turbidity data after coagulation-flocculation treatment of raw water with acetylated starch obtained from the species topechopelipita plantain clone (*Musa ABB*). For this, the coagulant capacity of low (LAS) and high acetylated starch (HAS) to remove color and turbidity has been evaluated at concentration of 0 mg/L, 50 mg/L, 100 mg/L, 150 mg/L and 200 mg/L. The data were analyzed through STATGRAPHICS Centurion Version 16.1.03 and models which describe regression of color and turbidity values with respect to acetylated starch and its concentration were obtained. It was observed that the higher percentages of acetylating and starch concentrations, the lower the color and turbidity parameters, presenting an increase of these variables in very high concentrations, which was due to a saturation of the system.

**Keywords:** acetylation, coagulation-flocculation, *Musa ABB*, statistical model.