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**Originality statement:** The author claim that the submitted manuscript is original and has not been published elsewhere. The manuscript is not being considered for publication by any other journal and will not be submitted for publication elsewhere while in the reviewing process in this journal.

**Presentation:**

Dear Editor,

The modeling of flotation processes is a complex process due to the large number of variables involved and the lack of knowledge of the impact of operational parameters on the response (s), and given this problem, machine learning algorithms emerge as an alternative interesting when modeling dynamic processes.

In this work, I developed a model based in artificial neural networks for represent the concentration of RCS circuit based on the main variables that comprise it , and through an analysis of global sensitivity, its study the importance of the individual and group performance of the stages, identifying that stages, variables and/or operational parameters that have a greater impact on performance.

**Conflict of interest statement:** The author declares no conflict of interest.

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