

THE GEOCHEMICAL CYCLE OF
Se
IN THE TRIBUTARIES OF THE ORINOCO, VENEZUELA
AND
LAKES OF MASSACHUSETTS

Honors Thesis for the
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ABSTRACT

An initial study has been made of Se in freshwater with the view of utilizing this study to understand the geochemical cycle of Se and the controlling factors involved. Se is controlled by weathering in the Orinoco River basin, Venezuela, whereas in the Massachusetts lakes it appears to be controlled by atmospheric input and organisms. Se IV was found despite prediction that there would be none in freshwater. Seasonal variations of Se were seen in Massachusetts and the Orinoco.

The Apure, one of the major tributaries of the Orinoco, was found to have the highest level of total Se and Se IV. The major contribution of total Se to the Apure was seen to be coming from the north side (Portuguesa) approximately 81% whereas the flow of water into the Apure constitute only 43% of the total flow. The south side flow into the Apure constitute 57% of the total flow, but the total Se contribution is only 19%.