Tc-HA formation was found as 50 to 70 %, and it distributed to both in the precipitate and in the solution. The percentage of the Tc-HA precipitate drastically changed at the HA concentration of 0.1 meq/L and it coincided that Sn-HA precipitation rapidly occurred, just like coprecipitation.

In the case of inhomogeneous coprecipitation, a following equation was known as the Doerner-Hoskins law [5] ,

$$\log \frac{a}{a-x} = D \log \frac{b}{b-y} \quad (1)$$

where a and b are the initial quantities for the microcomponent or macrocomponent, respectively, x and y are the quantity crystallized for micro and macrocomponent, respectively, and D is a constant. The macroscopic amount of HA precipitate was calculated as the difference between the concentration of humic acid in the supernatant and that in the initial solution, and the logarithmic ratio of the initial quantity to the residual one in the solution for the microcomponent (^{95m}Tc-HA) and the macrocomponent (HA) was plotted in Fig.3. The data lie along the line with a slope of unity, suggesting that the coprecipitation proceeds almost homogeneously.

These results suggest that technetium in a tracer amount migrates as the soluble Tc-HA complexes even in the reductive condition, such as in the deep groundwater, in the presence of humic acid.

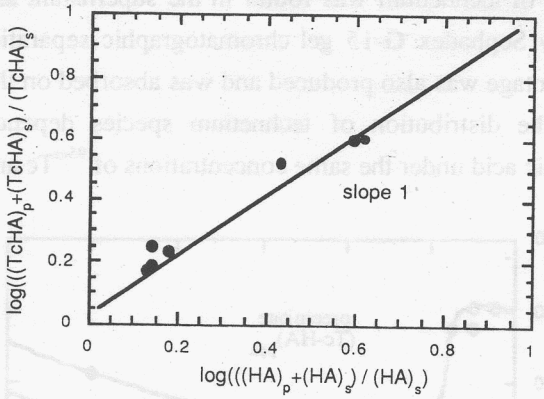

Fig.3. Logarithmic distribution of TcHA and HA between the precipitate and the solution. Subspricts, S and P, denote the solution and the precipitate, respectively.

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