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¹ P. W. Levy, Phys. Rev. **72**, 352 (1947).

² J. M. Cork, Phys. Rev. **72**, 581 (1947).

Electromagnetic Separation of Bromine and Chlorine Isotopes

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THE usual method of separating stable isotopes in the calutron is by collecting a beam of singly ionized particles in a chemical uncombined form such as Ag^+ , Sn^+ ,

etc. Bromine has been collected here using NaBr charge material and collecting the NaBr^+ particles. An analysis of the received material indicated 91.41 ± 0.5 percent Br^{81} and 8.59 ± 0.5 percent Br^{79} collected in the mass 104 position, while 90.54 ± 1 percent Br^{79} and 9.46 ± 1 percent Br^{81} appeared in the mass 102 position.* This method has greatly simplified the collection of isotopes of elements which are gaseous at room temperature and which are not chemically inert. A scan of the mass spectrum indicated that the NaBr^+ was the strongest beam received, comprising approximately 30 percent of the bromine ions in the total beam. Chlorine has been separated in a similar manner, using CuCl charge material and collecting the CuCl^+ particles in the mass 98 and 102 positions.

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* Isotope analyses by the mass spectrometer laboratory, R. F. Hibbs in charge.