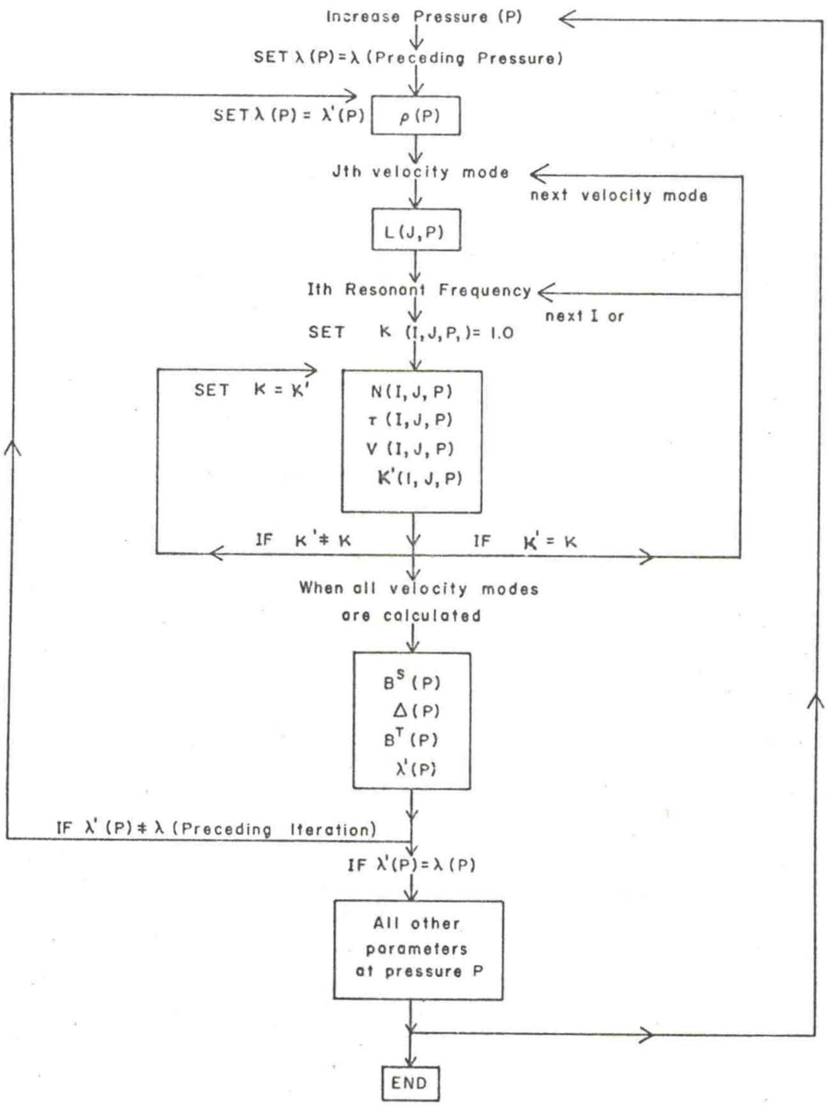

FIG. 1. A flow chart of the iterative procedure to estimate the variation in the elastic constant of a cubic solid with pressure when the elastic wave velocities are obtained from the measurement of the resonant frequencies of a standing wave as a function of pressure at a temperature.

one at the level of pressure and the other on the Ith null frequency of the Jth mode. We set $\lambda(P)=\lambda$ (Preceding Pressure) and $K(I, J, P)=1$ and estimate $N(I, J, P)$ and $\tau(I, J, P)$ and $K(I, J, P)$. If the value of $K(I, J, P)$ thus obtained agrees with the previously assigned value we compute $N(I, J, P)$ for the $(I+1)$th frequency. If this value of $K(I, J, P)$ does not agree with the previously assigned value these values of $N(I, J, P)$ and $\tau(I, J, P)$ are corrected by setting $K(I, J, P)$ equal to the value obtained last, and iterating all over again. This is repeated till two consecutive estimates of $K(I, J, P)$ are the same. A similar computation is performed for all the velocity modes. By interpolation, from these $\tau(I, J, P)$'s one obtains values corresponding to $F(R, J, P)$, each of which is called $\tau(J, P)$. These $\tau(J, P)$'s in turn are used to obtain $V(J, P)$ which together with $\rho(P)$ yield an estimate of $B^S(P)$, $\Delta(P)$, $B^T(P)$, and finally $\lambda(P)$. If the value of $\lambda(P)$ thus obtained agrees with the previously assigned value,

TABLE I. The pressure derivative of the adiabatic and isothermal bulk moduli of NaCl and KCl as obtained by Bartels and Schuele (B and S), as obtained in the present work (D) from the data of Bartels and Schuele.

	Bulk modulus	
	B and *S*	*D*
NaCl		
295°K		
Adiabatic	5.27	5.33
Isothermal	5.35	5.38
195°K		
Adiabatic	5.13	5.18
Isothermal	5.20	5.23
KCl		
295°K		
Adiabatic	5.34	5.36
Isothermal	5.41	5.44
195°K		
Adiabatic	5.34	5.36
Isothermal	5.41	5.43