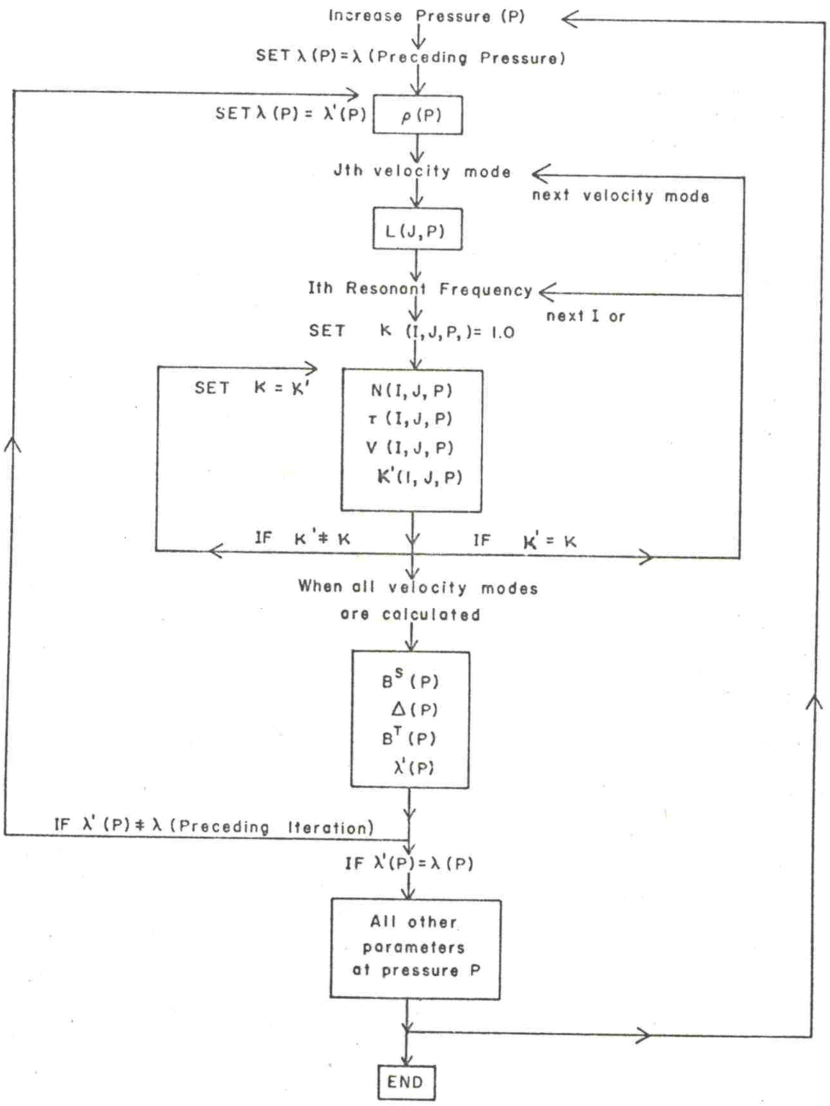

FIG. 1. A flow chart of the iterative procedure to estimate the variation in the elastic constant of a cubic solid with pressure when the elastic wave velocities are obtained from the measurement of the resonant frequencies of a standing wave as a function of pressure at a temperature.

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