

La susceptibilidad corresponde con:

$$\chi = \frac{\partial P}{\partial E} = \frac{Z_0}{\beta V^N} \frac{\partial^2}{\partial E^2} \left(\frac{\sinh(\beta E \mu)}{\beta E \mu} \right)^N \quad (1)$$

$$\frac{\partial^2}{\partial E^2} \left(\frac{\sinh(\beta E \mu)}{\beta E \mu} \right)^N = \frac{N \left(\frac{\sinh(E \beta \mu)}{E \beta \mu} \right)^N}{E^2 (\cosh(2E \beta \mu) - 1)} \left(E^2 N \beta^2 \mu^2 \cosh(2E \beta \mu) + E^2 N \beta^2 \mu^2 - 2E^2 \beta^2 \mu^2 - 2EN \beta \mu \sinh(2E \beta \mu) + N \cosh(2E \beta \mu) - N + \cosh(2E \beta \mu) - 1 \right) \quad (2)$$



