

$$\rho_{X_1 X_2}^2 < K_\alpha \left[\sqrt{\left(1 - \frac{1}{2N} \frac{\sigma_{y_1}^2}{\sigma_{X_2}^2}\right)} - \frac{1}{2N} \frac{\sigma_{y_1}^2 \sigma_{y_2}^2}{\sigma_{X_1}^2 \sigma_{X_2}^2} \right]$$

Where N is the number of animals included in the analysis, $\sigma_{X_1}^2$ and $\sigma_{X_2}^2$ are the observed variance of the traits and $\sigma_{y_1}^2$ and $\sigma_{y_2}^2$ are the variance of raw data.