

$$E_a = mC_p \frac{dT}{dt} \quad \text{Equation 1}$$

Where:  $E_a$  is the acoustic energy per unit of time (Power),  $m$  is the mass of the sample,  $C_p$  is the specific heat of the sample and  $\frac{dT}{dt}$  is the temperature variation over a given time.

$$\text{Degradation (\%)} = 100 - \left( \frac{FM * 100}{IM} \right) \quad \text{Equation 2}$$

Where: FM is final dry mass, and IM is initial dry mass.

$$\text{Relative activity (\%)} = \left( \frac{\text{Final activity} - \text{Initial activity}}{\text{Initial activity}} \right) * 100 \quad \text{Equation 3}$$

Where: Final activity is enzyme extract activity after exposure to reaction systems, and Initial activity is activity of crude enzyme extract before exposure to reaction systems.