

<https://academic.oup.com/fqs/article/3/2/81/5476054>

<https://www.tandfonline.com/doi/pdf/10.1080/10473289.1999.10463796>

<https://www.sciencedirect.com/science/article/pii/S0032063319300054>

<https://www.liebertpub.com/doi/full/10.1089/space.2019.0002>

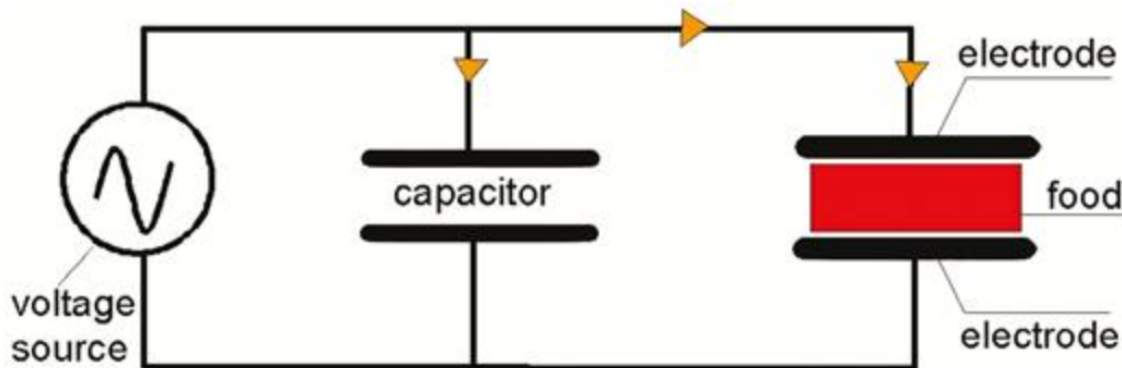
Heating time is given by the following equation (Orfeuil, 1987):

$$t_h = \frac{C_p \rho \Delta T}{E^2 \omega \epsilon''}, \quad (12)$$

$$P_v = E^2 \omega \epsilon'', \quad (13)$$

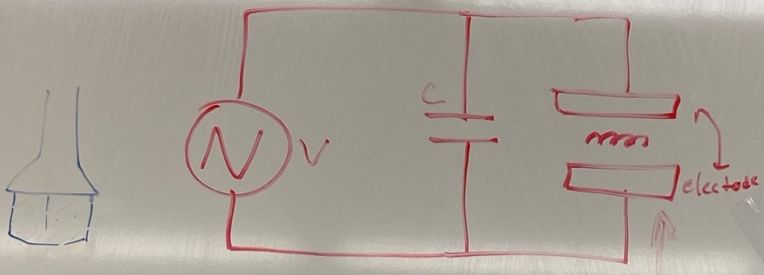
$$\omega = 2\pi f, \quad (14)$$

where P_v is the maximum power per volume (W/m^2), ω is the angular frequency (rad/s), ρ is the medium density (kg/m^3), C_p is the specific heat of medium ($\text{J}/\text{kg}\cdot^\circ\text{C}$), and t_h is the heating time.



The capacitance of the capacitor can be calculated by the following equation:

$$C = \frac{\epsilon \epsilon_0 A}{d},$$



alternating electric field

