Wzory na ćwiczenia z Biofizyki Medycznej – Protetyka słuchu

$h \cdot \nu = E_{kp} + m_{0p} \cdot c^2 + E_{ke} + m_{0e} \cdot c^2$		$I = I_0 \cdot e^{-\mu \cdot d}$	$\mu_m = \frac{\mu}{\rho}$
$d_{1/2} = \frac{\ln(2)}{\mu} \approx \frac{0{,}693}{\mu}$	$a = a_0 \cdot \mathrm{e}^{-\mu \cdot d}$	$\ln(a) = \ln(a_0) - \mu \cdot d$	$LET = \frac{\Delta E}{\Delta l}$

$w = \frac{Q_p}{V_{O_2}}$	$RQ = \frac{V_{CO_2}}{V_{O_2}}$	$P = i^2 \times R$	$v = \frac{\Delta V}{t}$	$P = v \times w$
$\log\{Q\} = 5{,}44 + 0{,}756 \times \log\{m\} \pm 0{,}05$			$P = \frac{Q}{t}$	
$R = \frac{1}{S_D};\ D = D_1 + D_2 - d \cdot D_1 \cdot D_2;\ D_{kom} = \frac{1}{L};\ R = D - D_{kom}$				

$R = \frac{U}{I} = \frac{1}{G}$	$\kappa = \frac{1}{\rho}$	$R = \rho \cdot \frac{\ell}{S} = \frac{1}{G}$	$\varepsilon_r = \frac{C}{C_0}$	$C = \varepsilon_0 \cdot \varepsilon_r \cdot \frac{S}{d}$
$P = \frac{q}{S}$	$\vec{P} = \frac{\sum_i \vec{p}_i}{V}$	$\tau = \frac{4 \cdot \pi \cdot \eta \cdot r^3}{k \cdot T}$	$K = \frac{R_{10^4}}{R_{10^6}}$	$\Phi = \frac{V_{krwinek}}{V_{krwinek+osocza}}$
$\frac{\frac{\kappa}{\kappa_o} - 1}{\frac{\kappa}{\kappa_o} + 2} = \Phi \cdot \frac{\frac{\kappa_k}{\kappa_o} - 1}{\frac{\kappa_k}{\kappa_o} + 2}$		$\Phi = \frac{2 \cdot (\kappa_o - \kappa)}{\kappa + 2 \cdot \kappa_o}$	$\kappa = \frac{C}{R}$	$X_C = \frac{1}{\omega \cdot C}$

$E = E_{el} + E_{osc} + E_{rot}$	$h \times \nu = E_2 - E_1 = \Delta E_{el} + \Delta E_{osc} + \Delta E_{ro}$	$P = P_0 \cdot e^{-k \cdot d}$	$k = a_\lambda \cdot c$
$P = P_0 \cdot e^{-a_\lambda \cdot c \cdot d}$	$\tau = \frac{P}{P_0}$	$\tau = e^{-a_\lambda \cdot c \cdot d}$	$A = -\log(\tau)$
$\frac{dn}{dt} = -D \cdot S \cdot \frac{dc}{dx}$	$D = \frac{k \cdot T}{6 \cdot \pi \cdot r \cdot \eta}$	$\overline{\Delta x^2} = 2 \cdot D \cdot t$	$P = \frac{D}{\mathrm{d}x}$
$\frac{dn}{dt} = P \cdot S \cdot (c_1 - c_2)$	$c_2 = \frac{c_0}{2} \cdot (1 - e^{-C \cdot D \cdot t})$	$C = \frac{2 \cdot A}{V \cdot dx}$	$\ln\left(\frac{c_0}{c_0 - 2 \cdot c_2}\right) = C \cdot D \cdot t$
$c = c_0 \cdot e^{-\kappa_D \cdot t}$	$\kappa_E = \frac{\ln 2}{t_{1/2}} \approx \frac{0{,}693}{t_{1/2}}$	$\pi = f \cdot c_m \cdot R \cdot T$	

$J_v = \frac{1}{S} \cdot \frac{dV}{dt}$	$J_v = L_v \cdot \Delta p \quad (dla\ \Delta c = 0)$	$W_s = \frac{\Delta p}{\Delta \pi}$
$\vec{F} = q \cdot \vec{v} \times \vec{B}$	$M_m = I \cdot S$	$\vec{B} = \mu_0 \cdot \vec{H}$
$Q = i \cdot t$	$i = \frac{a}{t} + b$	$\alpha = \frac{wartość\ progowa\ akomodacji\ (w\ mA)}{reobaza\ (w\ mA)}$