

Correction

Correction: Tham, P.E., et al. Recovery of Protein from Dairy Milk Waste Product Using Alcohol–Salt Liquid Biphase Flotation. *Processes* 2019, 7, 875

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We were not aware of some errors made in the proofreading phase; therefore, we wish to make the following corrections to the mathematical equations in the text.

- (1) The bar at some units are placed on the bottom instead of the top, the correct representation for the following equations should be: Flux \bar{J} is defined as the number of bubbles passing through an area A per unit time. Assuming no diffusion, i.e., only convection,

$$\bar{J} = \sigma \bar{s} \quad (2)$$

where σ and \bar{s} are the density and velocity of the bubbles respectively. Putting Equation (2) into (1) gives

$$\frac{\partial \sigma}{\partial t} = -\nabla \cdot \bar{J} \quad (3)$$

The bubbles are assumed to move into the region R , resulting in a negative $\nabla \cdot \bar{J}$, and the negative sign is to make it positive. To solve Equation (16), Laplace transform is applied to Equation (16), giving

$$\begin{aligned} f(z) \bar{\sigma}_z(z, s) + s \bar{\sigma}(z, s) - \sigma(z, 0) + F(z) \bar{\sigma}(z, s) &= 0 \\ f(z) \bar{\sigma}_z(z, s) + [s + F(z)] \bar{\sigma}(z, s) - \sigma(z, 0) &= 0 \end{aligned} \quad (17)$$

Since $\sigma(z, 0) = 0$, Equation (17) becomes

$$f(z) \bar{\sigma}_z(z, s) + [s + F(z)] \bar{\sigma}(z, s) = 0 \quad (18)$$

To solve Equation (18), we divide Equation (18) by $f(z)$ to give

$$\bar{\sigma}_z(z, s) + \frac{s + F(z)}{f(z)} \bar{\sigma}(z, s) = 0 \quad (19)$$

Multiplying Equation (19) with integrating factor $e^{\int \frac{s+F(z)}{f(z)} dz}$ yields

$$\frac{d}{dz} \left[e^{q(z,s)} \bar{\sigma}(z,s) \right] = 0 \quad (20)$$

Integrating Equation (20) gives

$$\bar{\sigma}_z(z,s) = C e^{Q(z,s)} \quad (22)$$

- (2) The cylindrical coordinates \varnothing should have the terms as followed: $\varnothing = \tan^{-1} \frac{y}{x}$.
- (3) There is an additional 'ln' term in both the equations which should not be present. The correct equations are as shown below:

$$q(z,s) = \frac{9sv}{8\rho g \alpha^2} \left(\frac{\rho^2 g^2 z^3}{3} - \rho g z^2 P_{ex} + (P_{ex})^2 z \right) + \ln \left| \frac{8\rho g \alpha^2}{9v(\rho g z - P_{ex})^2} \right| \quad (21)$$

Transforming Equation (22) from the s domain back to the t domain yields

$$L^{-1}\{\bar{\sigma}_z(z,s)\} = \sigma_z(z,t) = \delta \left[t - \frac{9v}{8\rho g \alpha^2} \left(\rho g z^2 P_{ex} - (P_{ex})^2 z - \frac{\rho^2 g^2 z^3}{3} \right) - \ln \left| \frac{8\rho g \alpha^2}{9v(\rho g z - P_{ex})^2} \right| \right] \quad (23)$$

where L is the Laplace transform.

Reference

1. Tham, P.E.; Ng, Y.J.; Sankaran, R.; Khoo, K.S.; Chew, K.W.; Yap, Y.J.; Malahubban, M.; Aziz Zakry, F.A.; Show, P.L. Recovery of Protein from Dairy Milk Waste Product Using Alcohol-Salt Liquid Biphase Flotation. *Processes* **2019**, *7*, 875. [CrossRef]



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