

Olive Oil-Based Oleogel as Fat Replacer in a Sponge Cake: A Comparative Study and Optimization

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Supplementary Data

$$\text{Equation (S1). } \textit{Hardness} = 2.11 * \left(\frac{(x_1 - 0.65)}{0.35} \right) - 11.28 * \left(\frac{x_2}{0.35} \right) + 3.14 * \left(\frac{x_3}{0.35} \right) + \left(\frac{(x_1 - 0.65)}{0.35} \right) * \left(\left(\frac{x_2}{0.35} \right) * 17.13 \right) + \left(\frac{(x_1 - 0.65)}{0.35} \right) * \left(\left(\frac{x_3}{0.35} \right) * 0.16 \right) + \left(\frac{x_2}{0.35} \right) * \left(\left(\frac{x_3}{0.35} \right) * 23.61 \right) + \left(\frac{(x_1 - 0.65)}{0.35} \right) * \left(\left(\frac{x_2}{0.35} \right) * \left(\left(\frac{x_3}{0.35} \right) * -23.61 \right) \right)$$

$$\text{Equation (S2). } a_w = 0.84 * \left(\frac{(x_1 - 0.65)}{0.35} \right) + 0.75 * \left(\frac{x_2}{0.35} \right) + 0.81 * \left(\frac{x_3}{0.35} \right) + \left(\frac{(x_1 - 0.65)}{0.35} \right) * \left(\left(\frac{x_2}{0.35} \right) * 0.12 \right) + \left(\frac{(x_1 - 0.65)}{0.35} \right) * \left(\left(\frac{x_3}{0.35} \right) * -0.11 \right) + \left(\frac{x_2}{0.35} \right) * \left(\left(\frac{x_3}{0.35} \right) * 0.08 \right) + \left(\frac{(x_1 - 0.65)}{0.35} \right) * \left(\left(\frac{x_2}{0.35} \right) * \left(\left(\frac{x_3}{0.35} \right) * 0.12 \right) \right)$$

$$\text{Equation (S3). } \textit{Porosity} = 74.67 * \left(\frac{(x_1 - 0.65)}{0.35} \right) - 132.57 * \left(\frac{x_2}{0.35} \right) + 75.74 * \left(\frac{x_3}{0.35} \right) + \left(\frac{(x_1 - 0.65)}{0.35} \right) * \left(\left(\frac{x_2}{0.35} \right) * 316.28 \right) + \left(\frac{(x_1 - 0.65)}{0.35} \right) * \left(\left(\frac{x_3}{0.35} \right) * 14.57 \right) + \left(\frac{x_2}{0.35} \right) * \left(\left(\frac{x_3}{0.35} \right) * 315.63 \right) + \left(\frac{(x_1 - 0.65)}{0.35} \right) * \left(\left(\frac{x_2}{0.35} \right) * \left(\left(\frac{x_3}{0.35} \right) * 17.48 \right) \right)$$

$$\text{Equation (S4). } \textit{Moistness} = 3.38 * \left(\frac{(x_1 - 0.65)}{0.35} \right) + 4.66 * \left(\frac{x_2}{0.35} \right) + 2.32 * \left(\frac{x_3}{0.35} \right) + \left(\frac{(x_1 - 0.65)}{0.35} \right) * \left(\left(\frac{x_2}{0.35} \right) * -2.92 \right) + \left(\frac{(x_1 - 0.65)}{0.35} \right) * \left(\left(\frac{x_3}{0.35} \right) * 0.48 \right) + \left(\frac{x_2}{0.35} \right) * \left(\left(\frac{x_3}{0.35} \right) * -4.58 \right) + \left(\frac{(x_1 - 0.65)}{0.35} \right) * \left(\left(\frac{x_2}{0.35} \right) * \left(\left(\frac{x_3}{0.35} \right) * -4.77 \right) \right)$$