WHAT IS CLAIMED IS:

1. A method for optimizing continuous chromatography in a system of continuous production of a biologic product, comprising (i) taking an optical density (OD) measurement of an eluate from a chromatography column; (ii) applying a mathematical formula to the OD measurement, wherein the mathematical formula is **Equation 1:**

$$Titer = \frac{k_{col}}{2\varepsilon_m V_l}\left(\sum_{i=0}^{n} Q_i D_i + \sum_{i=0}^{n} Q_{i+1} D_{i+1}\right)$$

and (iii) adjusting the continuous load volume of the chromatography column to achieve the optimization.

2. The method of claim 1, wherein the biologic product is a protein.

3. The method of claim 1, wherein the biologic product is a monoclonal antibody.

4. A method for optimizing continuous chromatography in a system of continuous production of a biologic product, comprising (i) taking an optical density (OD) measurement of an eluate from a chromatography column; (ii) applying a mathematical formula to the OD measurement, wherein the mathematical formula is **Equation 42:**

$$m = \frac{n\sum x_i y_i - (\sum x_i)(\sum y_i)}{n\sum {x_i}^2 - (\sum x_i)^2}$$

$$b = \frac{\sum y_i - m\sum x_i}{n}$$

; and (iii) adjusting the continuous load of the chromatography column to achieve the optimization.

5. The method of claim 4, wherein the biologic product is a protein.

6. The method of claim 4, wherein the biologic product is a monoclonal antibody.

7. The method of any one of claims 1-6, wherein the method does not utilize high performance liquid chromatography.

8. The method of any one of claims 1-7, wherein the optimization comprises maintaining load density to remain within a predetermined, target load density or target load density range.

9. The method of claim 8, wherein the predetermined, target load density is less than about 100 g/L.

~~9.~~10. The method of claim 8, wherein the predetermined, target load density is less than about 65 g/L.

~~10. The Method of claim 1, wherein said method is computer implemented.~~

~~12.~~11. The method of claim 8, wherein the system permits processing up to 6 g/L/day of the biologic product.

~~13.~~12. A method of manufacturing a biologic product of interest comprising the steps of:

(I) cultivating a eukaryotic cell expressing the biologic product of interest in cell culture;

(II) harvesting the biologic product of interest from the cell culture in the form of a fluid feed comprising biologic product of interest and one or more impurities or buffer components;

(III) capturing or purifying the biologic product of interest, wherein said capturing or purifying comprises ~~comprising~~ continuous chromatography of the fluid feed comprising biologic product of interest and one or more impurities or buffer components; and

(IV) optionally formulating the biologic product of interest into a pharmaceutically acceptable formulation suitable for administration; and

wherein the method further comprises:

(i) taking an optical density (OD) measurement of an eluate from a chromatography column; (ii) applying a mathematical formula to the OD measurement, wherein the mathematical formula is **Equation 1:**

$$Titer = \frac{k_{col}}{2\varepsilon_m V_l}\left(\sum_{i=0}^{n} Q_i D_i + \sum_{i=0}^{n} Q_{i+1} D_{i+1}\right)$$

; and (iii) adjusting the continuous load of the chromatography column to achieve the optimization.

~~14.~~13. The method of claim 12, wherein the biologic product of interest is a recombinant protein.

~~15.~~14. The method of claim 12 or claim 13, wherein the step of cultivating a eukaryotic cell expressing the biologic product of interest in cell culture occurs in a fed-batch cell culture.

~~16.~~15. The method of claim 12 or claim 13, wherein the step of cultivating a eukaryotic cell expressing the biologic product of interest in cell culture occurs in a continuous cell culture.

~~17.~~16. A method of manufacturing a biologic product of interest comprising the steps of:

(I) cultivating a eukaryotic cell expressing the biologic product of interest in cell culture;

(II) harvesting the biologic product of interest from the cell culture in the form of a fluid feed comprising biologic product of interest and one or more impurities or buffer components;

(III) capturing or purifying the biologic product of interest, wherein said capturing or purifying comprises ~~comprising~~ continuous chromatography of the fluid feed comprising biologic product of interest and one or more impurities or buffer components; and

(IV) optionally formulating the biologic product of interest into a pharmaceutically acceptable formulation suitable for administration; and

wherein the method further comprises:

(i) taking an optical density (OD) measurement of an eluate from a chromatography column; (ii) applying a mathematical formula to the OD measurement, wherein the mathematical formula is **Equation 2:**

$$m = \frac{n\sum x_i y_i - (\sum x_i)(\sum y_i)}{n\sum x_i^2 - (\sum x_i)^2}$$

$$b = \frac{\sum y_i - m\sum x_i}{n}$$

; and (iii) adjusting the continuous load of the chromatography column to achieve the optimization.

17. The method of claim 16, wherein the biologic product of interest is a recombinant protein.

18. The method of claim 16 or claim 17, wherein the step of cultivating a eukaryotic cell expressing the biologic product of interest in cell culture occurs in a fed-batch cell culture.

19. The method of claim 16 or claim 17, wherein the step of cultivating a eukaryotic cell expressing the biologic product of interest in cell culture occurs in a continuous cell culture.

20. The ~~Method~~ method of ~~claim 4~~any one of claims 1-19, wherein said method is computer implemented.

~~21. The Method of claim 12, wherein the method is computer implemented.~~

~~22. The Method of claim 16, wherein the method is computer implemented.~~

~~23. The method of claim 8, where the predetermined, target load density is less than about 100 g/L.~~