THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method of producing a purified antibody, antibody fragment, or Fe fusion protein, using an affinity chromatography (AC) matrix to which the antibody, antibody fragment, or Fe fusion protein is bound, the method comprising:
   (a) loading a mixture comprising the antibody, antibody fragment, or Fe fusion protein onto the AC matrix; and
   (b) washing the AC matrix with one or more wash solutions, wherein at least one wash solution comprises both (i) argmme, or an arginine derivative, and (ii) a halogen salt, prior to elution of the antibody, antibody fragment, or Fe fusion protein from the AC matrix.

2. A method of producing a purified antibody, antibody fragment, or Fe fusion protein using an affinity chromatography (AC) matrix to which the antibody, antibody fragment, or Fe fusion protein is bound, the method comprising:
   (a) loading a mixture comprising the antibody, antibody fragment, or Fe fusion protein onto the AC matrix; and
   (b) washing the AC matrix with one or more wash solutions comprising (i) arginine, or an arginine derivative, and (ii) a halogen salt, wherein the arginine, or the arginine derivative, and the halogen salt are in different wash solutions, and wherein the pH of at least one of the wash solutions is greater than 8.0, prior to elution of the antibody, antibody fragment, or Fe fusion protein from the AC matrix.

3. The method of claim 1 or claim 2, wherein the AC matrix is a Protein A column.

4. The method of any one of claims 1-3, wherein the wash removes impurities from the AC matrix.

5. A method of producing a purified antibody, or antibody fragment, using a

Protein A column, the method comprising

a} loading a mixture comprising the antibody, or antibody fragment, onto the Protein A column;

b) washing the Protein A column with a wash solution comprising (i) arginine or an arginine derivative, at a concentration in a range of 0.05-0.85 M, and (ii) sodium chloride, at a concentration in a range of 0.1-2.0 M, wherein the wash removes impurities from the Protein A column; and

c) eluting the antibody, or antibody fragment, from the Protein A column.

6. The method of any one of claims 1-5, wherein the argmme ts at a concentration of or about 0.25 M.

7. The method of any one of claims 1-5, wherein the arginine is arginine-HCL

8. The method of any one of claims 1-4, wherein the halogen salt ts at a concentration of or about 1 M.

9. The method of any one of claims 1 and 3-5, wherein the pH of the wash is greater than 8.0.

10. The method of any one of claims 1-4, wherein the halogen salt is sodium chloride (NaCl).

11. The method of any one of claims 1-5, wherein the pH of the wash is in a range of about 8.5-9.5.

12. The method of any one of claims 1-5, wherein the pH ofthe wash is 9.0

13. The method of any one of claims 4-12, wherein the impurities comprise high molecular weight (HMW) species.

14. The method of any one of claims 4-12, wherein the impurities comprise host cell proteins (HCPs).

15. A purified antibody produced by the method of any one of claims 1 to 14.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method of producing a purified antibody, antibody fragment, or Fc fusion protein, using an affinity chromatography (AC) matrix to which the antibody, antibody fragment, or Fc fusion protein is bound, the method comprising:
   (a) loading a mixture comprising the antibody, antibody fragment, or Fc fusion protein onto the AC matrix; and
   (b) washing the AC matrix with one or more wash solutions, wherein at least one wash solution comprises both (i) arginine, or an arginine derivative, and (ii) a halogen salt, prior to elution of the antibody, antibody fragment, or Fc fusion protein from the AC matrix.

2. A method of producing a purified antibody, antibody fragment, or Fc fusion protein using an affinity chromatography (AC) matrix to which the antibody, antibody fragment, or Fc fusion protein is bound, the method comprising:
   (a) loading a mixture comprising the antibody, antibody fragment, or Fc fusion protein onto the AC matrix; and
   (b) washing the AC matrix with one or more wash solutions comprising (i) arginine, or an arginine derivative, and (ii) a halogen salt, wherein the arginine, or the arginine derivative, and the halogen salt are in different wash solutions, and wherein the pH of at least one of the wash solutions is greater than 8.0, prior to elution of the antibody, antibody fragment, or Fc fusion protein from the AC matrix.

3. The method of claim 1 or claim 2, wherein the AC matrix is a Protein A column.

4. The method of any one of claims 1-3, wherein the wash removes impurities from the AC matrix.

5. A method of producing a purified antibody, or antibody fragment, using a

Protein A column, the method comprising

a) loading a mixture comprising the antibody, or antibody fragment, onto the Protein A column;

b) washing the Protein A column with a wash solution comprising (i) arginine or an arginine derivative, at a concentration in a range of 0.05-0.85 M, and (ii) sodium chloride, at a concentration in a range of 0.1-2.0 M, wherein the wash removes impurities from the Protein A column; and

c) eluting the antibody, or antibody fragment, from the Protein A column.

6. The method of any one of claims 1-5, wherein the arginine is at a concentration of or about 0.25 M.

7. The method of any one of claims 1-5, wherein the arginine is arginine-HCl.

8. The method of any one of claims 1-4, wherein the halogen salt is at a concentration of or about 1 M.

9. The method of any one of claims 1 and 3-5, wherein the pH of the wash is greater than 8.0.

10. The method of any one of claims 1-4, wherein the halogen salt is sodium chloride (NaCl).

11. The method of any one of claims 1-5, wherein the pH of the wash is in a range of about 8.5-9.5.

12. The method of any one of claims 1-5, wherein the pH of the wash is 9.0

13. The method of any one of claims 4-12, wherein the impurities comprise high molecular weight (HMW) species.

14. The method of any one of claims 4-12, wherein the impurities comprise host cell proteins (HCPs).