

CLAIMS

- 1.- A method for manufacturing an antibody or fragment thereof comprising:
- expressing said antibody or fragment thereof in a host cell
 - recovering a mixture containing the antibody or fragment thereof, host cell debris, and impurities; and
 - purifying said antibody or fragment thereof from the mixture wherein said purification comprises:
 - activated carbon filtration, followed by
 - protein A chromatography
2. A method according to claim 1 wherein said purification comprises at least one further chromatography step.
3. A method according to claim 2 wherein said further chromatography steps comprise cation exchange chromatography and/or anion exchange chromatography.
4. A method according to any preceding claim wherein the recovered antibody or fragment thereof comprises native disulfide bonds.
5. A method according any preceding claim, wherein the recovered antibody or fragment thereof comprises native inter-chain disulfide bonds.
6. A method according to any preceding claim wherein said host cell is a mammalian host cell and the mixture containing the antibody is the cell culture supernatant.
7. A method according to claim 6 wherein said purification process additionally comprises depth filtration of the cell culture supernatant prior to activated carbon filtration.
8. A method according to claim 7 wherein depth filtration and activated carbon filtration are operated in-line.
- 9 A method for the prevention of disulfide bond reduction during purification of an antibody or fragment thereof expressed in a host cell comprising:
- activated carbon filtration step, followed by
 - protein A chromatography
10. A method for purifying an antibody or fragment thereof from a liquid mixture containing contaminants comprising:
- filtering said liquid mixture with an activated carbon filter, followed by
 - protein A chromatography.

11. A method according to claim 10 wherein said recovered antibody or fragment thereof comprises native disulfide bonds.
12. A method according to claim 11 wherein the recovered protein comprises native inter-chain disulfide bonds.
- 5 13. A method according to any of the preceding claims wherein the antibody or fragment recovered from the protein A chromatography comprises less than 10%, less than 5%, less than 4%, less than 3%, less than 2% or less than 1% antibody reduction related impurities.
- 10 14. A method according to any of the preceding claims wherein the antibody or fragment recovered from the protein A chromatography comprises less antibody reduction related impurities than the antibody or fragment recovered from the same process without an activated carbon filtration step.
15. A method for decreasing the amount of reducing agents during purification of an antibody or antibody fragment thereof comprising:
- activated carbon filtration, followed by
 - 15 – protein A chromatography.