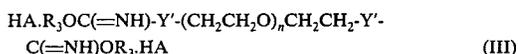


one or more halogen atoms and nitro and carboxyl groups; and X is halo or azido group or a thio or oxy residue which forms an activated ester with the parent  $\alpha,\omega$ -dicarboxylic acid.

4. A process according to claim 2 wherein the activated esters of formula I are the esters formed with acidic alcohols selected from the group consisting of o- and p-nitrophenol, 2,4-dinitrophenol, N-hydroxysuccinimide, N-hydroxyphthalimide, 2- and 4-thiopyridine, 8-hydroxyquinoline and 1-hydroxybenzotriazole.

5. A process according to claim 2 wherein the activated esters are formed with alcohols selected from the group consisting of N-hydroxysuccinimide, 1-hydroxybenzotriazole, 8-hydroxyquinoline and 2- and 4-thiopyridine.

6. A process according to claim 1 wherein the proteins to be cross-linked are reacted with a cross-linking agent selected from the group consisting of diacid salts of diimido alkyl ester derivatives of poly(ethylene oxide) having the general formula III



wherein n and Y' are as defined in formula II, R<sub>3</sub> is an alkyl residue and HA is an acid.

7. A process according to claim 1 wherein the proteins to be cross-linked are reacted with said activated esters of di and poly-carboxylic acids wherein the acids and the alcohol moieties thereof are water soluble, and wherein the alcohols forming the activated esters are selected from the group consisting of N-hydroxysuccinimide, 1-hydroxybenzotriazole, 8-hydroxyquinoline and 2- and 4-thiopyridine.

8. A process according to claim 7 wherein said acids are selected from the group consisting of tartaric acid, citric acid, malic acid, dimethoxysuccinic acid and trimethoxyglutaric acid.

9. A process according to claim 1 wherein said protein is an enzyme.

10. A process according to claim 9 wherein said enzyme is selected from the group consisting of oxido reductases, hydrolases and isomerases.

11. A process according to claim 1 wherein said cross-linking agent is a di-N-hydroxysuccinimide ester of D-tartaric acid.

12. A process according to claim 1 wherein said cross-linking agent is a di-N-hydroxysuccinimide ester of poly(ethylene oxide) disuccinate.

13. A process according to claim 1 wherein said cross-linking agent is a di-N-hydroxysuccinimide ester of poly(ethylene oxide) diglycolate.

14. A process for the cross-linking of proteins as claimed in claim 1 wherein a solid support material is impregnated with an enzyme solution and then suspended in a solution containing the cross-linking agent.

15. A process according to claim 14 wherein said solid support material is particles adapted for packing in a column.

16. A process according to claim 1 wherein a solution containing said protein is passed through a membrane and said membrane is immersed in a solution of the cross-linking agent.

17. A process according to claim 1 wherein a gelatine membrane is immersed in a solution containing said cross-linking agent.

18. A process for the cross-linking of proteins as claimed in claim 1 wherein an enzyme solution is pressed through the pores of a membrane, and thereafter the enzyme loaded membrane is immersed into a solution of the cross-linking agent.

19. A cross-linked protein produced in accordance with the process of claim 1.

20. A cross-linked protein produced in accordance with the process of claim 2.

21. A cross-linked protein produced in accordance with the process of claim 3.

22. A cross-linked protein produced in accordance with the process of claim 4.

23. A cross-linked protein produced in accordance with the process of claim 5.

24. A cross-linked protein produced in accordance with the process of claim 6.

25. A cross-linked protein produced in accordance with the process of claim 7.

26. A cross linked protein produced in accordance with the process of claim 8.

27. A cross-linked protein produced in accordance with the process of claim 9.

28. A cross-linked protein produced in accordance with the process of claim 10.

29. A cross-linked protein produced in accordance with the process of claim 11.

30. A cross-linked protein produced in accordance with the process of claim 12.

31. A cross-linked protein produced in accordance with the process of claim 13.

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