

26. The method according to claim 22 wherein the water-swella-
ble, water-insoluble carboxymethyl cellulose retains
at least about 70 percent of the initial Absorbency Under
Load value after aging for about 60 days at about 24° C. and
at least about 30 percent relative humidity.

27. A method for producing a water-swella-
ble, water-insoluble carboxyalkyl polysaccharide, the method compris-
ing the following steps:

forming a homogeneous mixture comprising a water-
soluble carboxyalkyl polysaccharide and water,
wherein the water-soluble carboxyalkyl polysaccharide
dissolves into the water;

recovering said carboxyalkyl polysaccharide from said
mixture; and

heat-treating said recovered carboxyalkyl polysaccharide
at a temperature between about 200° C. and about 250°
C. for an amount of time between about 50 to about 90
seconds, wherein said heat-treating is effective to
crosslink said carboxyalkyl polysaccharide to render
said carboxyalkyl polysaccharide water swella-
ble and water insoluble, wherein the water-swella-
ble, water-insoluble carboxyalkyl polysaccharide exhibits an initial
Absorbency Under Load value of at least 17 and
retains at least about 50 percent of the initial Absorb-
ency Under Load value after aging for about 60 days
at about 24° C. and at least about 30 percent relative
humidity.

28. The method according to claim 27 wherein the car-
boxyalkyl polysaccharide is prepared from a polysaccharide
selected from the group consisting of cellulose, starch, guar,
carrageenan, agar, gellan gum, chitin, chitosan, and mixtures
thereof.

29. The method according to claim 28 wherein the car-
boxyalkyl polysaccharide is a carboxymethyl polysaccha-
ride.

30. The method according to claim 29 wherein the car-
boxymethyl polysaccharide is carboxymethyl cellulose.

31. The method according to claim 27 wherein the car-
boxyalkyl polysaccharide is a carboxyalkyl cellulose.

32. The method according to claim 27 wherein said
carboxyalkyl polysaccharide is recovered by evaporative
drying.

33. The method according to claim 27 wherein said
mixture, comprising said water-soluble carboxyalkyl
polysaccharide and water has a pH between about 5 to about
9.

34. The method according to claim 27 wherein the water-
swella-ble, water-insoluble carboxyalkyl polysaccharide
exhibits an initial Absorbency Under Load value of at least
about 20.

35. The method according to claim 27 wherein the water-
swella-ble, water-insoluble carboxyalkyl polysaccharide
retains at least about 70 percent of the initial Absorbency
Under Load value after aging for about 60 days at about 24°
C. and at least about 30 percent relative humidity.

36. The method according to claim 27 wherein the water-
swella-ble, water-insoluble carboxyalkyl polysaccharide
retains at least about 50 percent of the initial Absorbency
Under Load value after aging for about 60 days at about 24°
C. and at about 100 percent relative humidity.

37. A method for producing a water-swella-
ble, water-insoluble carboxyalkyl polysaccharide, the method compris-
ing the following steps:

forming a homogeneous mixture comprising a water-
soluble carboxyalkyl polysaccharide and water,
wherein the water-soluble carboxyalkyl polysaccharide
dissolves into the water;

adding to the homogeneous mixture a solution comprising
a crosslinking agent, comprising an aluminum ion,
dissolved in water; and

recovering said carboxyalkyl polysaccharide and said
crosslinking agent from said mixture, wherein the
water-swella-ble, water-insoluble carboxyalkyl polysac-
charide exhibits an initial Absorbency Under Load
value of at least 8 and retains at least about 50 percent
of the initial Absorbency Under Load value after aging
for about 60 days at about 24° C. and at least about 30
percent relative humidity.

38. The method according to claim 37 wherein the car-
boxyalkyl polysaccharide is prepared from a polysaccharide
selected from the group consisting of cellulose, starch, guar,
carrageenan, agar, gellan gum, chitin, chitosan, and mixtures
thereof.

39. The method according to claim 37 wherein the car-
boxyalkyl polysaccharide is a carboxyalkyl cellulose.

40. The method according to claim 37 wherein the car-
boxyalkyl polysaccharide is a carboxymethyl polysaccha-
ride.

41. The method according to claim 40 wherein the car-
boxymethyl polysaccharide is carboxymethyl cellulose.

42. The method according to claim 37 wherein said
carboxyalkyl polysaccharide and said crosslinking agent are
recovered by evaporative drying.

43. The method according to claim 37 wherein the water-
swella-ble, water-insoluble carboxyalkyl polysaccharide
exhibits an initial Absorbency Under Load value of at least
about 20.

44. The method according to claim 37 wherein the water-
swella-ble, water-insoluble carboxyalkyl polysaccharide
retains at least about 70 percent of the initial Absorbency
Under Load value after aging for about 60 days at about 24°
C. and at least about 30 percent relative humidity.

45. The method according to claim 37 wherein the water-
swella-ble, water-insoluble carboxyalkyl polysaccharide
retains at least about 50 percent of the initial Absorbency
Under Load value after aging for about 60 days at about 24°
C. and at about 100 percent relative humidity.

46. A method for producing a water-swella-ble, water-
insoluble carboxyalkyl polysaccharide comprising:

a. preparing a reaction dispersion comprising a solvent
and a polysaccharide comprising an original crystalline
structure;

b. adding a carboxyalkylating reagent to the reaction
dispersion at conditions effective to allow the carboxy-
alkylating reagent to react with the polysaccharide to
prepare a water-insoluble, water-dispersible carboxy-
alkyl polysaccharide, wherein the carboxyalkyl
polysaccharide comprises an amount of the original
crystalline structure of the polysaccharide and a non-
crystalline structure;

c. recovering the water-insoluble, water-dispersible car-
boxyalkyl polysaccharide from the reaction dispersion;

d. preparing a mixture comprising the recovered water-
insoluble, water-dispersible carboxyalkyl polysaccha-
ride and water, wherein the carboxyalkyl polysaccha-
ride is dispersed in the water and the non-crystalline
structure of the carboxyalkyl polysaccharide dissolves
into the water; and

e. recovering the carboxyalkyl polysaccharide from the
mixture, wherein the carboxyalkyl polysaccharide
comprises an amount of the original crystalline struc-
ture of the polysaccharide to be effective to result in a
water-swella-ble, water-insoluble carboxyalkyl polysac-