CLAIMS

1. A fibrous product comprising:

a fibrous material~~,~~ that is at least one of a tissue paper material, a nonwoven material, and a mixed tissue paper and nonwoven material, and

a dry coating applied to the fibrous material that~~wherein said fibrous material~~ comprises at least one of lactic acid and~~/or~~ a salt thereof in an amount of from about 0.1 to about 15 g/m^2~~,~~;

~~such as from about 0.3 g to about 10 g/m^2, from about 0.3 to about 5 g/m^2, from about 0.5 to about 5 g/m^2, from about 1.0 to about 3.0 g/m^2, from about 1.0 to about 2.5 g/m^2, from about 1.0 to about 2.0 g/m^2, or from about 1.0 to about 1.5 g/m^2;~~

wherein the fibrous product is at least one of a hand towel, handkerchief, facial, dry wipe, napkin, washcloth, cleaning cloth, household towel, wiping tissue ~~or~~and toilet paper; ~~and~~

wherein the fibrous product has a pH of 3.0 to 3.5; and ~~is a tissue paper product, a nonwoven product or a mixed tissue paper and nonwoven product.~~

wherein said fibrous product has a flexibility increase of at least about 10% measured as a D-value, compared to an identical fibrous material without the dry coating, and the fibrous product has a softness increase defined by at least about 15% lower TS7-value, compared to the identical fibrous material without the dry coating.

2. The fibrous product according to claim 1, wherein ~~the~~a water activity of said fibrous product is from about 0.03 to about 0.85~~, such as from about 0.05 to about 0.85, from about 0.1 to about 0.85, from about 0.03 to about 0.75, from about 0.05 to about 0.75, from about 0.1 to about 0.75, from about 0.03 to about 0.65, from about 0.05 to about 0.65 or from about 0.1 to about 0.65~~.

3. The fibrous product according to claim 2, wherein the water activity of said fibrous product is from about 0.1 to about 0.65.

~~3.~~4. The fibrous product according to claim ~~1 or~~ 2,

wherein said salt of lactic acid is at least one of sodium lactate, potassium lactate and~~/or~~ calcium lactate~~.~~.

wherein said fibrous material further comprises one or more pH regulating substances,

wherein said at least one of the lactic acid and the salt thereof is provided to at least one of the outer surfaces of the fibrous product, and

wherein said fibrous product is either a multi-ply product or a one-ply product.

~~4. The fibrous product according to any one of the preceding claims, wherein said fibrous material comprising lactic acid and/or a salt thereof further comprises one or more pH regulating substances, such as NaOH or KOH.~~

~~5. The fibrous product according to any one of the preceding claims, wherein said fibrous product has a pH of from about 6.5 or less, such as a pH of from about 2.5 to about 6.5, from about 3.0 to about 6.0, from about 3.0 to about 5.5, from about 3.0 to about 5.0, from about 3.0 to about 4.5, from about 3.0 to about 4.0, or from about 3.0 to about 3.5.~~

~~6. The fibrous product according to any one of the preceding claims wherein said fibrous product has a flexibility increase of at least about 10% measured as a D-value, compared to the same fibrous material without lactic acid and/or a salt thereof.~~

~~7. The fibrous product according to any one of the preceding claims, wherein said lactic acid and/or a salt thereof is provided to at least one of the outer surfaces of the fibrous product.~~

5. The fibrous product according to claim 1, wherein said salt of lactic acid is at least one of sodium lactate, potassium lactate and calcium lactate.

6. The fibrous product according to claim 1, wherein said fibrous material further comprises one or more pH regulating substances.

7. The fibrous product according to claim 1, wherein said at least one of the lactic acid and the salt thereof is provided to at least one of the outer surfaces of the fibrous product.

8. The fibrous product according to ~~any one of the preceding claims~~claim 1, wherein said fibrous product is a multi-ply product.

9. The fibrous product according to ~~any one of claims 1-7~~claim 1, wherein said fibrous product is a one-ply product.

10. The fibrous product according to claim 1, wherein said fibrous material comprises at least one of the lactic acid and a salt thereof in an amount of from about 1.0 to about 1.5 g/m^2.

11. The fibrous product according to claim 1, wherein the dry coating applied to the fibrous material results in the at least one of lactic acid and a salt thereof to be applied in an amount of at least 0.1 g/m^2 and less than 1.0 g/m^2.

12. A method for improving a softness of a fibrous material comprised in a fibrous product as defined in claim 1, the method comprising:

(a) providing a fibrous material;

(b) providing a composition comprising at least one of lactic acid and a salt thereof to the fibrous material; and

(c) drying the fibrous material to a water activity of about 0.85 or less to provide a fibrous product having an improved softness.

~~10.~~13. A method for producing a fibrous product comprising a fibrous material wherein ~~said~~the fibrous material comprises at least one of lactic acid and~~/or~~ a salt thereof in an amount of from about 0.1 to about 15 g/m^2, ~~such as from about 0.3 g to about 10 g/m^2, from about 0.3 to about 5 g/m^2, from about 0.5 to about 5 g/m^2, from about 1.0 to about 3.0 g/m^2, from about 1.0 to about 2.5 g/m^2, from about 1.0 to about 2.0 g/m^2, or from about 1.0 to about 1.5 g/m^2, and~~ wherein ~~said~~the fibrous product has a water activity of about 0.85 or less, ~~said~~and the method ~~comprising the steps of~~ comprises:

(a) providing ~~a~~the fibrous material;

(b) providing a composition comprising at least one of lactic acid and~~/or~~ a salt thereof to ~~said~~the fibrous material~~, wherein said composition comprising lactic acid and/or a salt thereof~~; and

(c) drying ~~said~~the fibrous material provided with ~~said~~the composition comprising at least one of the lactic acid and~~/or a~~ the salt thereof to provide a fibrous product;

wherein the fibrous product is as defined in ~~any one of claims 1-9~~claim 1.

11.14. The method according to claim 1013, wherein saidthe composition comprising at least one of the lactic acid and/or a the salt thereof is provided to saidthe fibrous material by coating, such as by slot-dye coating, printing, roll coating or spraying.

12.15. The method according to claim 10 or 1113, wherein saidthe drying of saidthe fibrous material is performed by air drying or IR drying.

13.16. The method according to any one of claims 10-12claim 13, wherein in step (b) the composition comprising at least one of the lactic acid and/or a the salt thereof is provided to at least one of the outer surfaces of the fibrous product.

14.17. A fibrous product obtainable or obtained by the method of any one of claims 10-13, The method according to claim 13, wherein the fibrous productmaterial comprises a fibrous material, the fibrous material comprisingat least one of lactic acid and/or a salt thereof in an amount of from about 0.11.0 to about 151.5 g/m^2;.

wherein the fibrous product is a hand towel, handkerchief, facial, dry wipe, napkin, washcloth, cleaning cloth, household towel, wiping tissue or toilet paper; and

wherein the fibrous product is a tissue paper product, a nonwoven product or a mixed tissue paper and nonwoven product.

18. The method according to claim 13, wherein the dry coating applied to the fibrous material in step (b) results in the at least one of lactic acid and a salt thereof to be applied in an amount of at least 0.1 g/m^2 and less than 1.0 g/m^2.

15. Use of lactic acid and/or a salt thereof for improving the softness of a fibrous material comprised in a fibrous product as defined in any one of claims 1-9.

16. Use according to claim 15, wherein said fibrous material has a flexibility increase of at least about 10%, measured as a D-value, as compared to the same fibrous material without lactic acid and/or a salt thereof.

17. Use of a fibrous product as defined in any one of claims 1-9 for reducing the pH of the skin of a user of said fibrous product, such as by at least 0.5 pH units.

18. A method for improving the softness of a fibrous material comprised in a fibrous product as defined in any one of claims 1-9, said method comprising the steps of:

a) providing a fibrous material;

b) providing a composition comprising lactic acid and/or a salt thereof to said fibrous material; and

c) drying said fibrous material to a water activity of about 0.85 or less to provide a fibrous product having an improved softness.

19. The method according to claim 18, wherein said fibrous material has a flexibility increase of at least about 10%, measured as a D-value, as compared to the same fibrous material without lactic acid and/or a salt thereof.