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 comprises at least one of lactic acid and a salt thereof in an amount of from about 0.1 to about 15 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 and toilet paper;

wherein the fibrous product has a pH of 3.0 to 3.5; and

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 a water activity of said fibrous product is from about 0.03 to about 0.85.

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.

4. The fibrous product according to claim 2,

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

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 claim 1, wherein said fibrous product is a multi-ply product.

9. The fibrous product according to 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.

13. A method for producing a fibrous product comprising a fibrous material wherein the fibrous material comprises at least one of lactic acid and a salt thereof in an amount of from about 0.1 to about 15 g/m^2, wherein the fibrous product has a water activity of about 0.85 or less, and the method comprises:

(a) providing the 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 provided with the composition comprising at least one of the lactic acid and the salt thereof to provide a fibrous product;

wherein the fibrous product is as defined in claim 1.

14. The method according to claim 13, wherein the composition comprising at least one of the lactic acid and the salt thereof is provided to the fibrous material by coating.

15. The method according to claim 13, wherein the drying of the fibrous material is performed by air drying or IR drying.

16. The method according to claim 13, wherein in step (b) the composition comprising at least one of the lactic acid and the salt thereof is provided to at least one of outer surfaces of the fibrous product.

17. The method according to claim 13, wherein the fibrous material comprises at least one of lactic acid and a salt thereof in an amount of from about 1.0 to about 1.5 g/m^2.

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.