Claims

1. An antimicrobial air-permeable ~~substrate~~ non-woven material with a density in the range ~~5~~ 10 gsm to ~~500~~ 50 gsm comprising a dry powder with a maximum particle size of 500 µm in the amount of at least 20 % w/w;

   wherein the dry powder comprises sodium chloride (NaCl) with a maximum particle size of not more than 110µm, and

   wherein the dry powder is impregnated into the non-woven material so that it resides in the void spaces between fibres of the non-woven material.

~~2. The antimicrobial air-permeable substrate according to claim 1 wherein the substrate is a fibrous material such as a non-woven material.~~

~~3.~~2. The antimicrobial air-permeable ~~substrate~~ non-woven material according to claim 1 ~~or claim 2~~ wherein the ~~substrate~~ non-woven material comprises polypropylene fibres.

~~4.~~3. The antimicrobial air-permeable ~~substrate~~ non-woven material according to ~~any preceding~~ claim 2 wherein the ~~substrate comprises~~ polypropylene fibres that have been carded and/or thermo-bonded to create ~~a~~ the non-woven ~~fabric~~material.

~~5.~~4. The antimicrobial air-permeable ~~substrate~~ non-woven material according to any preceding claim wherein the dry powder further comprises sodium bicarbonate ($NaHCO_3$) ~~is a salt, for example NaCl~~.

~~6. The antimicrobial air-permeable substrate according to any preceding claim wherein the dry powder is a blend of two or more dry powders.~~

~~7. The antimicrobial air-permeable substrate according to claim 6 wherein the blend of two or more dry powders is a blend of NaCl and $NaHCO_3$.~~

~~8.~~5. The antimicrobial air-permeable ~~substrate~~ non-woven material according to claim ~~7~~ 4 wherein the ratio of $NaHCO_3$ to NaCl does not exceed 1:9.

~~9.~~6. The antimicrobial air-permeable ~~substrate~~non-woven material according to any preceding claim wherein the ~~substrate~~ non-woven material is joined to or collocated next to at least one layer of a substrate that does not have the dry powder.

~~10.~~7. The antimicrobial air-permeable ~~substrate~~ non-woven material according to any preceding claim wherein the ~~substrate is a~~ non-woven material ~~with~~ has a density in the range 15 to 30 gsm~~, the maximum particle size is not more than 110 µm~~ and the NaCl ~~dry powder~~ is present in the amount of at least 30 % w/w.

~~11.~~8. The antimicrobial air-permeable ~~substrate~~ non-woven material according to any preceding claim wherein the substrate has undergone particle encasement.

~~12.~~9. The antimicrobial air-permeable ~~substrate~~ non-woven material according to any preceding claim wherein the substrate comprises compartments.

~~13.~~10. The antimicrobial air-permeable ~~substrate~~ non-woven material according to claim ~~12~~ 9 wherein the compartments are hexagonal.

~~14.~~11. A multi-layered material comprising at least one layer of the ~~substrate~~ non-woven material according to any preceding claim.

12. Use of the antimicrobial air-permeable ~~substrate~~ non-woven material according to one of claims 1 to ~~13~~ 10 or the multi-layered material according to claim ~~14~~ 11 to kill, denature or otherwise deactivate a microorganism.

~~15.~~13. A facemask comprising at least one layer of the antimicrobial air-permeable non-woven material according to any one of claims 1 to 10.