CLAIMS

1. Use of zinc molybdate ($ZnMoO_4$) as an antimicrobial agent, wherein $ZnMnO_4$ is in the form of particles having a triclinic crystal structure and an average grain size in the range from 0.1 µm to less than 1.0 µm.

2. Use according to claim 1, wherein the average grain size of $ZnMoO_4$ is in the range from 0.15 µm to less than 1.0 µm, preferably in the range from 0.20 µm to less than 1.0 µm.

3. Use according to either claim 1 or claim 2, wherein $ZnMoO_4$ is used in combination with MoO_3, preferably orthorhombic MoO_3.

4. Antimicrobially active composite material, comprising $ZnMoO_4$ in the form of particles having a triclinic crystal structure and an average grain size in the range from 0.1 µm to less than 1.0 µm, and at least one further material.

5. Antimicrobially active composite material according to claim 4, further comprising MoO_3 having a preferably orthorhombic crystal structure, which is present in a mixture or as a mixed crystal with the triclinic $ZnMoO_4$.

6. Antimicrobially active composite material according to either claim 4 or claim 5, further comprising at least one hydrophilicising and/or hygroscopic agent which is arranged at least in the region of the surface of the composite material.

7. Composite material according to claim 6,
characterised in that

the $ZnMoO_4$ is at least partially coated and/or agglomerated with the hydrophilicising and/or hygroscopic agent.

8. Composite material according to either claim 6 or claim 7, the hydrophilicising and/or hygroscopic agent comprising SiO_2, in particular silica gel or pyrogenic silicon dioxide.

9. Composite material according to any of claims 4 to 8,
characterised in that
the mass content of $ZnMoO_4$ based on the total mass of the composite material is 0.1% to 80%, in particular 1.5% to 30% and preferably 1.8% to 5.0%.

10. Composite material according to any of claims 4 - 9,
characterised in that
the further material comprises at least one organic polymer and/or silicone.

11. Composite material according to any of claims 4 - 10,
characterised in that
it is designed as a layer composite, fibre composite, particle composite, or penetration composite.

12. Use of an antimicrobially active composite material according to any of claims 4 - 11 for the production of an antimicrobially active product.

13. Method for producing an antimicrobially active composite material according to any of claims 4 - 11,
characterised in that
$ZnMoO_4$ is bonded to at least one further material.

14. Method according to claim 13,

characterised in that

the $ZnMoO_4$ is produced by ultrasound-assisted reaction of one or more water-soluble molybdates with one or more zinc (II) salts in aqueous solution.

15. Method according to claim 13,

characterised in that

an aqueous solution of sodium molybdate dihydrate is reacted at room temperature with an aqueous solution of zinc chloride by the action of ultrasound at a frequency of more than 15 kHz, in particular 20 - 30 kHz.

16. Method according to any of claims 13 - 15,

characterised in that

at least one hydrophilicising and/or hygroscopic agent is arranged at least in the region of the surface of the composite material.

17. Method according to claim 16,

characterised in that

$ZnMoO_4$ is at least partially coated and/or agglomerated with the hydrophilicising and/or hygroscopic agent.