CLAIMS

1. Microwave disinfection device (2) configured to destroy/inactivate SARS-CoV-2 and H1N1 viruses and including a microwave irradiation section (22) and a control section (23) configured to control the operation of the microwave irradiation section (22) so as to:

• irradiate microwave signals that have an incident electric field amplitude not higher than 6 V/m and frequencies that are included in the 8-10 GHz band and are spaced from each other by a step comprised between 10 MHz to 100 MHz;

• irradiate the microwave signals at each individual frequency for a time interval comprised between 50 ms and 1 s; and

• irradiate the microwave signals with duty cycle comprised between 5% and 50%.

2. The microwave disinfection device of Claim 1, wherein the microwave irradiation section (22) includes smart antennas (221) and is configured to irradiate the microwave signals by means of said smart antennas (221), which are configured to irradiate a predefined microwave beam shaped so that the microwave signals are irradiated in a predefined volume of space near or around the microwave disinfection device (2).

3. The microwave disinfection device of Claim 2, realized in the form of, or configured to be integrated into, a device that is portable or wearable (20,3,6) by a user (4,7); wherein the predefined irradiated microwave beam in use by the smart antennas (221) is shaped so that the microwave signals are not radiated towards the user's body (4,7).

4. The microwave disinfection device according to any one of Claims 1-3, also comprising a power supply section (21) that includes a rechargeable battery.

5. The microwave disinfection device according to any one of Claims 1-4,configured to be integrated in an electronic device or transport vehicle.