CLAIMS

1. A hypodermic needle destruction device comprising a main body housing a power source and a controller, the main body having a recess for receiving, in use, a sub-housing containing a needle destruction module, and latching device for releasably retaining the sub-housing, and hence the needle destruction module at least partially within the recess.

2. The hypodermic needle destruction device of claim 1, wherein the controller comprises a control circuit and/or a microprocessor.

3. The hypodermic needle destruction device of claim 1 or claim 2, wherein the controller is adapted, in use, for controlling the needle destruction module.

4. The hypodermic needle destruction device of any preceding claim, further comprising a sensor for detecting the presence of a hypodermic needle within the needle destruction module.

5. The hypodermic needle destruction device of any preceding claim, wherein the needle destruction module comprises:

a clamping electrode arranged to clamp a hypodermic needle inserted therein at, or near to, the hypodermic needle's hub;

a containment tube into whose bore the hypodermic needle is receivable;

a tip electrode located within the containment tube and being arranged to slide axially therewithin to contact a tip of the needle and apply an axially compressive stress to the needle towards its hub; and

a power module adapted, when the clamping and tip electrodes contact the needle, to pass an electric current through the needle thereby heating and/or softening and/or

melting the needle such that the said axial stress axially compresses and blunts the needle whilst the containment tube inhibits or prevents bowing or breaking-up of the needle under the application of the said compressive stress.

6. The hypodermic needle destruction device of claim 5, wherein the power module is a DC power source.

7. The hypodermic needle destruction device of claim 5, wherein the power module is an AC power source.

8. The hypodermic needle destruction device of claim 5, 6 or 7, wherein the controller comprises a voltage and/or current sensor connected to the clamping and tip electrodes, and wherein the controller is adapted, in use, to control the voltage across and/or the current between, clamping and tip electrodes.

9. The hypodermic needle destruction device of any of claims 5 to 8, wherein the tip electrode is driven for axial movement by a motor and lead screw, the speed and direction of the motor being controlled by the controller so as to maintain the tip electrode in electrical contact with the needle tip during the heating and/or softening and/or melting thereof.

10. The hypodermic needle destruction device of any of claims 5 to 9, wherein the containment tube is equipped with a heating device adapted, in use, to pre-heat the containment tube prior to the application of the current and/or the axial compressive stress.

11. The hypodermic needle destruction device of any preceding claim , wherein the latching device comprises a push-button operated latching device.

12. The hypodermic needle destruction device of any preceding claim , wherein the latching device comprises an electronically unlockable latching device.

13. The hypodermic needle destruction device of claim 12, wherein the electronically unlockable latching device comprises an RFID reader adapted, in use, to receive an unlocking code from an RFID tag of an unlocking key.

14. The hypodermic needle destruction device of any preceding claim, wherein the power source comprises a rechargeable battery.

15. The hypodermic needle destruction device of any preceding claim, wherein the power source comprises a supercapacitor.

16. The hypodermic needle destruction device of any preceding claim, further comprising power input module and a charge controller for charging the rechargeable battery or supercapacitor.

17. The hypodermic needle destruction device of claim 16, wherein the power input module comprises an induction coil.

18. The hypodermic needle destruction device of any preceding claim, wherein the controller further comprises a data logging module for logging any one or more of the group comprising:

    a unique ID of the hypodermic needle destruction device;

    a unique ID of the needle destruction module;

a total number of uses of the hypodermic needle destruction device; a total number of uses of the needle destruction module;

a number of successful uses of the needle destruction module; a number of unsuccessful uses of the needle destruction module;

the date of each use of the needle destruction module;

the time of each use of the needle destruction module;

a current profile associated with each use of the needle destruction module; and

a voltage profile associated with each use of the needle destruction module.

19. The hypodermic needle destruction device of claim 18, wherein the controller further comprises an input-output module for exporting data from the data logging module to an external database.

20. The hypodermic needle destruction device of claim 18 or claim 19, wherein the controller further comprises an encryption module for encrypting data stored by the data logging module.

21. The hypodermic needle destruction device of any preceding claim, further comprising a docking station for receiving the main body portion, the docking station comprising any one or more of:

a power output module that is complementary with the power input module of the hypodermic needle destruction device;

an input-output module for receiving exported data from the data logging module;

an input-output module for exporting data to the controller; and

an internet or network interface for connecting to an external database.