CLAIMS:

1. An apparatus (200) for processing a phlebotomy needle (12),

the phlebotomy needle (12) comprising:

a double-ended needle having a first end (14) terminating in a first tip, and a second end (16) terminating in a second tip; and

a hub (18) affixed to the needle (12) at a location between the first tip and the second tip,

the apparatus comprising:

a clamping electrode (52) for contacting and clamping one end of the needle (12) between the hub (18) and the tip;

a tip electrode (54) for contacting the needle (12) at its tip;

means for applying a voltage (58) between the clamping electrode (52) and the tip electrode (54), such that an electric current passes through the end of the needle (12) between the clamping electrode (52) and the tip electrode (54), which current results, in use, in resistive/Ohmic heating, which heats and softens or melts the tip of the needle (12); and

means for applying an axial force (56) to the tip electrode (54) towards the hub (18) and substantially parallel to an axis (250) of the needle (12) so as to compress and blunt the tip of the needle (12);

the apparatus being characterised by:

means for selectively orienting (72) the needle (12) in a first and a second position:

the first position being a position in which the clamping electrode (52) clamps the first end (14) of the needle (12) between the hub (18) and the first tip and in which the tip electrode (54) contacts the first tip; and

the second position being a position in which the clamping electrode (52) clamps the second end (16) of the needle (12) between the hub (18) and the second tip and in which the tip electrode (54) contacts the second tip.

2. The apparatus (200) of claim 1, wherein the means for selectively orienting (72) the needle (12) comprises a turntable (212) adapted to connect to the hub (18) and to rotate through substantially 180-degrees about a point lying substantially on the axis (250) of the needle (12).

3. The apparatus (200) of claim 2, wherein the turntable (212) comprises a main body with a through bore (214) whose axis is substantially coaxial with the axis of the needle, the through bore (214) being adapted to connect to the hub (18) of the needle (12)~~.~~,

~~4. The apparatus of claim 3, wherein~~ the through bore (214) ~~is~~being internally screw-threaded to screw-threadingly engage with an external screw thread of the hub (18).

~~5. The apparatus of any of claims 2 to 4, wherein the turntable is mounted on a linear slide, which permits the needle to be displaced along a locus that is substantially coaxial with the axis of the needle.~~

~~6. The apparatus of claim 5, wherein the turntable is displaced on the linear slide by a linear actuator or a pulley arrangement.~~

~~7.~~4. The apparatus (200) of ~~any preceding~~ claim 2 or claim 3, wherein the phlebotomy needle (12) further comprises a main body (36) affixed to the hub (18), and wherein the apparatus further comprises a cradle (210) for supporting the main body (36), the cradle (210) being arranged to support the main body (36) such that the axis (250) of the needle (12) is substantially aligned with a centre of the tip electrode (54)~~.~~, any one or more of the turntable (212),

~~8. The apparatus of claim 7, wherein~~ the cradle (210) and the tip electrode (54) is mounted on a linear slide (202), which permits the needle (12) to be displaced along a locus that is substantially coaxial with the axis (250) of the needle (12).

~~9. The apparatus of claim 8, wherein the cradle is displaced on the linear slide by a linear actuator or a pulley arrangement.~~

~~10. The apparatus of any of claims 7 to 9, wherein the turntable and cradle are displaced on the linear slide by the same linear actuator or a pulley arrangement.~~

~~11. The apparatus of any preceding claim, wherein the tip electrode is mounted on a linear slide, which permits the tip electrode to be displaced along a locus that is substantially coaxial with the axis of the needle.~~

~~12. The apparatus of claim 11, wherein the tip electrode is displaced on the linear slide by a linear actuator or a pulley arrangement.~~

~~13. The apparatus of any of claims 5 to 12, wherein any two or more of the turntable, the cradle and the tip electrode are mounted on the same linear slide.~~

~~14.~~5. The apparatus (200) of any preceding claim, further comprising a hub grip (216) interposed between the means for selectively orienting the needle and the tip electrode (54), the hub grip (216) being substantially coaxial with the axis (250) of the needle (12), and being adapted to frictionally engage the hub (18).

~~15.~~6. The apparatus (200) of claim ~~14~~5 ~~when dependent on any of claims 7 to 13~~, wherein the main body (36) is detachable from the hub (18) by gripping the hub (18) in the hub grip (216), and by linearly displacing the cradle (210) relative to the hub grip (216) so as to slide or shear the main body (36) off the hub (18).

~~16.~~7. The apparatus (200) of claim ~~14~~8 ~~when dependent on any of claims 7 to 13~~, wherein the hub grip (216) further comprises means (222) for rotating the hub grip (216) about the axis (250) of the needle (12), and wherein the main body (36) is detachable from the hub (18) by gripping the hub (18) in the hub grip (216), by rotating the hub grip (216), and optionally by linearly displacing the cradle (210) so as to unscrew the main body (36) from the hub (18).

~~17. The apparatus of any of claims 7 to 16, further comprising means for inverting the cradle to release the main body therefrom.~~

~~18.~~8. The apparatus (200) of any preceding claim, wherein an end of the needle (12) comprises a cover (22), and wherein the cover (22) is detachable from the needle (12) by the steps of: displacing the needle (12) such that the cover (22) is positioned between the clamping electrodes (52); moving the clamping electrodes (52) towards one another so as to grip the cover (22) therebetween; and linear displacement of the needle (12) away from the clamping electrodes (52) so as to slide or shear the cover (22) from the needle (12).

~~19.~~9. The apparatus (200) of claim ~~18~~12, further comprising the steps of: moving the clamping electrodes (52) apart; and moving the tip electrode (54) so as to remove the cover (22) from between the clamping electrodes (52).

~~20.~~10. The apparatus (200) of any preceding claim, further comprising a tube (400) for receiving a tip of the needle (12) and within which the tip electrode (54) is arranged to slide~~.~~.

~~21.The apparatus of claim 20, wherein~~ the tube (400) ~~is~~being configured to support the needle (12) and prevent or inhibit bowing/bucking thereof during axial compression (56) of the needle (12)~~.~~

~~22.The apparatus of claim 20 or claim 21, wherein the tube is configured to~~ by containing the needle (12) as it is melted or softened, and thus prevent discrete droplets of molten needle forming.

~~23. The apparatus of any of claims 20, 21 or 22, wherein the tube is manufactured of a refractory material.~~

~~24. The apparatus of any of claims 20 to 23, wherein the tube is manufactured of quartz.~~

~~25.~~11. The apparatus (200) of ~~any of~~ claim~~s 20 to 24~~ 14, further comprising a thermostatically-controlled heating coil (402) surrounding the tube (400) for pre-heating the tube (400) prior to melting the needle (12).

~~26.~~12. The apparatus (200) of ~~any of~~ claim~~s 20 to 25~~ 14 or claim 15, further comprising an induction coil (402) surrounding the tube (400) for pre-heating and/or heating or melting the needle (12).

~~27.~~13. The apparatus (200) of any preceding claim, wherein the clamping electrode (52) comprises a pair of opposing metal jaws which move towards each other so as to clamp a portion of the needle (12) therebetween.

~~28. The apparatus of any preceding claim, wherein the clamping electrode clamps the needle at any one or more of the positions from the group comprising: within 10mm of the hub; within 5mm of the hub; within 2mm of the hub; within 1mm of the hub; and more than 1mm from the hub.~~

~~29.~~14. The apparatus (200) of any preceding claim, wherein the tip electrode (54) comprises a concave surface for centralising the tip of the needle (12) therewith.

~~30.~~15. The apparatus (200) of any preceding claim, wherein the means for applying a voltage comprises any one or more of the group comprising: a DC power supply; an AC power supply; and an RF power supply~~.~~,

~~31. The apparatus of claim 30, wherein~~ the AC, DC or RF power supply is adapted to apply a pulsed voltage between the clamping (52) and tip (54) electrodes~~.~~, and optionally

~~32. The apparatus of claim 30, or claim 31,~~ wherein the AC, DC or RF power supply is adapted to alternately apply a voltage: between the first clamping and first tip electrodes; and between the second clamping and second tip electrodes.

~~33. The apparatus of any preceding claim, wherein the Ohmic heating is sufficient to cause sterilisation of the tip of the needle.~~

~~34. The apparatus of any preceding claim, further comprising a plurality of waste stream apertures into which different components of the phlebotomy needle can be deposited after disassembly therefrom.~~