

CLAIMS:

1. A method for certifying and verifying gemstones, including the steps of:
capturing at least one image of an inclusion in a gemstone;
storing the image in a first database; and
5 displaying the image on a certification document for presenting to a consumer, wherein the image is of sufficient magnification to allow the consumer to compare the image on the document to the gemstone viewed through an optical device to verify if the gemstone matches the image.
2. The method of claim 1, further including identifying the location of the
10 inclusion using an x, y, z axis and displaying the location on the document.
3. The method of claim 1, further including displaying the magnification level on the document.
4. The method of claim 1, wherein the magnification level range is between 10 times to 100 times.
- 15 5. The method of claim 1, further including displaying on the document physical identification data comprising one or more of the gemstone's appearance, shape, size, weight, measurements, colour, refractive index, specific gravity and absorption spectrum.
- 20 6. The method of claim 1, further including storing the document in a second database, wherein the second database is accessible by a consumer via a smartphone application or online web application for displaying the stored document on the consumer's smartphone or computer in real-time.
7. The method of claim 6, wherein the first and second databases comprise one database.

8. The method of claim 1, wherein the inclusion includes one or more of solid, liquid or gas inclusions, zones of crystal growth, striation, healed fractures, hollow growth tubes, needle-shaped crystals, twin-planes, internal fissures, cleavages, stress cracks, doubling effect, bubbles, cleavage fault, curved striae, dark ball like inclusions, feather, fingerprint, flash effect, halo inclusions, internal growth patterns, liquid filled or healing feathers, needle or feather inclusions, rain inclusions, swirl marks, three-phase inclusions, tube inclusions, twinning planes, colour zone and two-phase inclusions.
9. A system for certifying and verifying gemstones, including:
10 an optical device for capturing at least one image of an inclusion in a gemstone;
a first database for storing the image; and
a processor for processing the image for displaying on a certification document for presenting to a consumer, wherein the image is of sufficient
15 magnification to allow the consumer to compare the image on the document to the gemstone viewed through an optical device to verify if the gemstone matches the image.
10. The system of claim 9, further including the processor identifying the location of the inclusion using an x, y, z axis and displaying the location on the
20 document.
11. The system of claim 9, further including the processor displaying the magnification level on the document.
12. The system of claim 9, wherein the optical device captures the image at a magnification level of between 10 times to 100 times.
- 25 13. The system of claim 9, further including the processor displaying on the document physical identification data comprising one or more of the gemstone's

appearance, shape, size, weight, measurements, colour, refractive index, specific gravity and absorption spectrum.

14. The system of claim 9, further including a second database for storing the document, wherein the second database is accessible by a consumer via a
5 smartphone application or online web application for displaying the stored document on the consumer's smartphone or computer in real-time.

15. The system of claim 14, where in the first and second databases comprise one database.

16. The system of claim 9, wherein the inclusion includes one or more of solid,
10 liquid or gas inclusions, zones of crystal growth, striation, healed fractures, hollow growth tubes, needle-shaped crystals, twin-planes, internal fissures, cleavages, stress cracks, doubling effect, bubbles, cleavage fault, curved striae, dark ball like inclusions, feather, fingerprint, flash effect, halo inclusions, internal growth patterns, liquid filled or healing feathers, needle or feather inclusions, rain
15 inclusions, swirl marks, three-phase inclusions, tube inclusions, twinning planes, colour zone and two-phase inclusions.

17. A document certifying gemstones produced by the method of claim 1.

18. A document certifying gemstones produced by the system of claim 9.

19. A document certifying gemstones comprising at least one image of at least
20 one inclusion in a gemstone, wherein the image is of sufficient magnification to allow a consumer to compare the image on the document to the gemstone viewed through an optical device to verify if the gemstone matches the image.

20. A software product for carrying out the steps of the method of claim 1.