

12. A method for irradiating plural specimens each with a beam of radiation, the method comprising the steps of:

- providing an integrating sphere having plural apertures including at least first and second aperture and providing a radiation source in radiative communication with the interior of said integrating sphere,
- communicating radiation from said integrating sphere through said apertures, said radiation comprising first and second radiation beams communicated respectively from said first and second apertures, said radiation beams having a substantially uniform radiance from beam to beam, each of said radiation beams having a width and a substantially uniform radiance over said width;
- providing at least two specimens;
- placing a first specimen in radiative communication with said integrating sphere through said first aperture;
- placing a second specimen in radiative communication with said integrating sphere through said second aperture; and
- irradiating said first specimen with at least a portion of said radiation communicated through said first aperture;
- irradiating said second specimen with at least a portion of said radiation communicated through said second aperture; and,
- measuring a change in at least one property of the specimens;
- wherein said first specimen is disposed in a first specimen holder, said first specimen holder being disposed externally with respect to said integrating sphere and comprising a chamber substantially enclosing said first specimen, said integrating sphere radiatively communicating with said first specimen holder through a conduit external to said integrating sphere; and
- wherein said second specimen is disposed in a second specimen holder, said second specimen holder being disposed externally with respect to said integrating sphere and comprising a chamber substantially enclosing said second specimen, said integrating sphere radiatively communicating with said second specimen holder through a conduit external to said integrating sphere,

the method further comprising the steps of providing a first environmental condition in said first specimen holder and providing a second environmental condition in said second specimen holder, said second environmental condition differing from said first environmental condition.

13. A method according to claim 12, wherein the humidity in said first specimen holder differs from the humidity in said second specimen holder.

14. A method according to claim 12, wherein the temperature in said first specimen holder differs from the temperature in said second specimen holder.

15. A method according to claim 12, wherein a first mechanical load is applied to said first specimen and a second load mechanical load selected from the group consisting of no mechanical load, a mechanical load greater than said first mechanical load, and a mechanical load less than said first mechanical load is applied to said second specimen.

16. A method for irradiating plural specimens each with a beam of radiation, the method comprising the steps of:

- providing an integrating sphere having plural apertures including at least first and second aperture and provid-

- ing a radiation source in radiative communication with the interior of said integrating sphere,
- communicating radiation from said integrating sphere through said apertures said radiation comprising first and second radiation beams communicated respectively from said first and second apertures, said radiation beams having a substantially uniform radiance from beam to beam, each of said radiation beams having a width and a substantially uniform radiance over said width;
- providing at least two specimens;
- placing a first specimen in radiative communication with said integrating sphere through said first aperture;
- placing a second specimen in radiative communication with said integrating sphere through said second aperture;
- irradiating said first specimen with at least a portion of said radiation communicated through said first aperture;
- irradiating said second specimen with at least a portion of said radiation communicated through said second aperture; and,
- measuring a change in at least one property of the specimens;
- wherein said first specimen is disposed in a first specimen holder, said first specimen holder being disposed externally with respect to said integrating sphere and comprising a chamber substantially enclosing said first specimen, said integrating sphere radiatively communicating with said first specimen holder through a conduit external to said integrating sphere;
- wherein said second specimen is disposed in a second specimen holder, said second specimen holder being disposed externally with respect to said integrating sphere and comprising a chamber substantially enclosing said second specimen, said integrating sphere radiatively communicating with said second specimen holder through a conduit external to said integrating sphere; and
- wherein at least one of the said conduits comprises a fiber optic connection.

17. Apparatus comprising:

- an integrating sphere having first and second apertures;
- a radiation source in radiative communication with the interior of said integrating sphere, whereby beams of radiation each having a width and a substantially uniform radiance over said width are communicated from said integrating sphere through said first and second apertures; and
- first and second specimen holders, said first specimen holder disposed externally with respect to said integrating sphere and said integrating sphere radiatively communicating with said first specimen holder through said first aperture, said second specimen holder disposed externally with respect to said integrating sphere and said integrating sphere radiatively communicating with said second specimen holder through said second aperture;
- wherein each of said first and second apertures comprises a substantially enclosed chamber, the apparatus further including means for varying an environmental condition in at least one of said first and second specimen holders.

18. Apparatus according to either of claim 17, including: a first conduit connected to said integrating sphere at said first aperture and a second conduit connected to said