FRACTAL ANALYSIS OF SOME RESTORATIVE NANO-FILLED COMPOSITE MATERIALS MICROSTRUCTURE

Questions

Regarding the present study:

- a. Two micro-hybrid composites resins were analyzed
- ☐ b. A micro-hybrid and a nano-composite resin were analyzed;
- ☐ c. Two restorative nano-composites were analyzed;
- ☐ d. Two macro-filled restorative composites were analyzed;

The restorative composites used in the present study have the following filler load:

- ☐ a. Silica and zirconia 30% vol.
- ☐ b. Borosilicate and zirconia 60% vol.
- ☐ c. Silica 60% vol.
- ☐ d. Silica and zirconia 60% vol.

Regarding the fractal analysis, the fractal dimension, D, has the following value:

- \Box a. D=1, for a highly irregular line;
- ☐ b. D=2, for a perfect smooth line;
- \Box c. D=3, for a perfect smooth surface;
- \Box d. D=2, for a highly irregular line.

Particle-matrix adhesion is not controlled by:

- ☐ a. The particle surface on which chemical bonds are formed with the functional groups of the matrix
- □ b. The particle surface roughness which extends the effective area for physical contact with the matrix.
- \Box c. Silane-coupling agent, which connects the inorganic fillers to the organic matrix
- ☐ d. The filler particle size.