Characterization of A locally developed Type I Stick Impression Compound

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ABSTRACT

Iraqi efforts have been carried out to find an alternative in many fields of our life, one of these fields was the dental materials.

The Iraqi Type I stick impression compound was within specification so close to the original usually manufactured by International Companies. This item underwent laboratory tests in order to evaluate it physically and thermally, and compare it with other stick compounds imported from Germany, Italy and U.K., which are compatible with the International specification.

These specifications include the visual inspection, reproduction of details, compatibility with stone, flow properties, thermal properties and biocompatibility.

The study proved that Iraqi Type I stick impression compound is glossier than other stick compounds from German (Harvard), Italy (Kerr), and British (Kemdent).

The reproduction of details appeared better than Kemdent type, it also has compatibility with stone better than Kerr and Kemdent stick compounds, the Iraqi stick compound has flow properties within the limit of A.D.A. specifications No. 3 , and in both temperatures 37^0C, 45^0C , the thermal diffusivity of Iraqi stick compound was faster than Kerr and Harvard types, the linear thermal expansion of Iraqi stick compound was slightly more than Kerr one but much less than Kemdent type , also it has higher rate of softening and hardening , finally , no toxic effect on the tissues were found out through the microscopic compares with other types of stick compounds.

The results proved that the Iraqi Type I stick impression compound is close in specifications to the other types of Type I stick impression compounds, and all were within the limit of American dental associations specification No. 3 for dental compound.