Nowadays, various investigations have been carried out to improve filling materials and methods for the successful treatment of the deciduous teeth. The present work has been performed for examining the validity of sandwich technique for deciduous teeth, since in vivo works related to sandwich technique is generally limited. Class II cavities were prepared on 212 primary molars of the patients in the 6-9 year age group. Cavities in that group were divided into four subgroups and were restored by open and dosed sandwich techniques, glass ionomer cement, and composite resin. The patients were recalled for controls of their restorations after three, six, nine and twelve months, revaluations were made by using the United States Public Health Service (USPHS) criteria. The data were evaluated by chi-square analysis, it luis been found the success order of the restorations among groups was as follows. Closed sandwich, composite resin, open sandwich, and glass ionomer cement. We concluded that sandwich and composite restorations could successfully apply to the class II cavities of primary molars.

Key Words: Sandwich technique