

TEKNIK ISOLASI UNTUK MENGHITUNG VIABILITAS SEL PULPA GIGI SULUNG

(ISOLATION TECHNIQUE FOR CALCULATING THE VIABILITY OF DENTAL PULP CELLS FROM DECIDUOUS TEETH)

ABSTRACT

Background: To isolate high quality human postnatal stem cells from accessible resources is an important goal from stem-cell research. In this study we found that dental pulp tissue from deciduous teeth contains multipotent stem cell (Stem Cell from Human Exfoliated Deciduous Teeth or SHED). The use of SHED is still relatively new in Indonesia. The limitations of tools, materials, and infrastructure cause the need of the modification of isolation technique used to calculate cell viability. **Objective:** To determine the isolation technique for calculating the viability of dental pulp cells from deciduous teeth. **Methods:** First, the extraction of deciduous teeth was conducted under local anesthesia for orthodontic purposes. Second, teeth extracted were cut horizontally by using fissure bur that had been sterilized, and then their pulp tissue was taken carefully. Third, the pulp cells were isolated and cultured in optimum condition. When the cells reached 80 % confluent, the cells were removed from the bottom of the dish to be tested their cell viability by using trypan blue staining. At the final stage, the calculation of viable and non-viable cells was conducted under a light microscope with a hemocytometer chamber at 100x magnification. **Results:** There were more than 50% viable cells during cell culture. **Conclusion:** The cells obtained from the dental pulp tissues of deciduous teeth have good cell viability.

Keyword: deciduous dental pulp cell, SHED, cell isolation, cell viability.