

**STERILIZATION PROTOCOL of SEED CULTURE FOR  
BOTH of *Solanum lycopersicum* AND *Capsicum annuum***

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## ABSTRACT

### STERILIZATION PROTOCOL OF SEED CULTURE FOR BOTH of *Solanum lycopersicum* AND *Capsicum annuum*

Tomato (*Solanum lycopersicum*) is a freshly vegetable used all over the world. *Solanum lycopersicum* is belongs to the family of Solanaceae and chilli is a fruits or berries of plants belonging to the genus *Capsicum*. In this research study, sterilization can be defined as the removal of all microorganisms and other pathogens from an object or surface by treating it with chemicals or subjecting it to high heat or radiation. The different sterilization chemical were used which were commercial soap, Clorox, ethanol, Tween-20 and sanitizer. The protocol which approaching zero contamination were the protocol 1 using commercial soap, Clorox and ethanol. In this protocol, the chemical were contributing zero contamination it the present of commercial soap. The present of commercial soap as sterilization chemical because the chemical substance of chloroxylenol and aromatic compound (derived from the phenol. This chemical substance that was killed the bacteria and fungus present in seed culture. The objectives of this research study were to determine the optimum sterilization protocol for both seed culture by using five different sterilization protocols and to investigate the effect of sterilization protocol in both seed culture germination in one month duration. In this research, the protocol 1 has 6 step of sterilization, protocol 2 have 4 steps of sterilization, protocol 3 and 4 have 2 step sterilization and protocol 5 have 6 step of sterilization. In this research study, the technique was applied in sterilization protocol such as soaking, dipping and washing the seed culture. This finding showed, the protocol 1 that was possibility for zero contamination determine through the lack number of contamination in culture plant. Besides, protocol 3 has showed higher number of contamination because the seed only washed with 70% ethanol mixed with a few drops of Tween-20. The uses of commercial soap in sterilization protocol 1 also showed successful effect to the seed germination.