

***EFFECT OF EXTRACTION METHOD AND SEED LOCATION IN THE FRUIT  
ON VIABILITY AND SEED VIGOR OF BITTER MELON (*Momordica charantia*  
L.) SEED***

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**ABSTRACT**

Bitter melon plants can be cultivated using seeds, the problem faced in breeding bitter melon plants using seeds is the length of the germination process because bitter melon seeds contain mucus on the surface of the seeds that inhibit germination (inhibitor substances) and also have a very hard, thick skin, and resistance to water abrasion. Therefore, it is necessary to remove the inhibitors from the seeds by extraction using quicklime, water, and scouring ash. In addition, another factor that affects the germination of bitter melon seeds is the location of the seeds in the fruit, which affects the viability of the seeds and the amount of food reserves contained therein. This study aims to determine the effect of a combination of extraction methods and the location of seeds in the fruit on the viability and vigour of bitter melon seeds. This study used RAK consisting of 6 treatments, namely A = extraction using water and the location of seeds in the middle of the fruit, B = extraction using water and the location of seeds at the base of the fruit, C = extraction using 1 kg of rubbed ash and the location of seeds in the middle of the fruit, D = extraction using 1 kg of rubbed ash and the location of seeds at the base of the fruit, E = extraction using 2.5% concentration of quicklime soaked for 20 minutes and the location of seeds in the middle of the fruit, F = extraction using quicklime concentration soaked for 20 minutes and the location of seeds at the base of the fruit. Parameters observed included germination, germination speed, wet weight of plumula and radicle, dry weight of plumula and radicle, normal sprouts, abnormal sprouts, and non-sprouting seeds. The results showed that the combination of extraction method and seed location had an effect on germination, germination speed, normal sprouts, wet weight of radicle and plumula, dry weight of radicle and plumula, and non-sprouting seeds. The best combination of extraction method and seed location uses quicklime and seed location in the centre of the fruit.

**Keywords :** Seed extraction, seed location, seed mucous membrane, seed viability and vigor.