

**Pengaruh Lama Perendaman dan Konsentrasi Asam Sitrat terhadap Tampilan Fisik dan Mutu Fisiologis Benih Mentimun (*Cucumis sativus* L.).**  
*(The Influence of Soaking Duration and Citric Acid Concentration on the Physical Appearance and Physiological Quality of Cucumber Seeds (*Cucumis sativus* L.)).* Supervised by Ir. Dwi Rahmawati, S.P., M.P. IPM.

**Riska Agustyani**  
*Study Program of Seed Production Technique*  
*Departement of Agricultural Production*  
Program Studi Teknik Produksi Benih  
Jurusan Produksi Pertanian

#### **ABSTRACT**

*The physical and physiological quality of seeds is a benchmark for determining the quality of a seed in the competitive arena of seed producers because each seed company has its own standards to determine whether the seed is suitable or not. Efforts to overcome the problem of the physical appearance of cucumber seeds use citric acid to improve the physical appearance of the seeds without damaging their physiological quality. The research was carried out from August to November 2023 at PT. East West Seed Indonesia address is Jalan Basuki Rachmad No. 019, Muktisari Village, Tegal Besar, Jember. The research was carried out using a factorial completely randomized design (CRD) consisting of two factors. The first factor is the soaking time (L), which consists of 5 minutes (L1), 10 minutes (L2) and 15 minutes (L3). The second factor is the concentration of citric acid (K), which consists of 1.5% (K1), 2% (K2) and 2.5% (K3). The results showed that the interaction between soaking time and citric acid concentration showed a very significantly different effect on the color brightness level parameters, the best treatment was the notation lightness L1K1 (76.58%), redness L1K1 (4.07%), yellowness L1K2 (23, 33%), color difference (1%). The parameters of growth speed and vigor index showed very significant different effects, the best treatment L2K1 growth speed was 24.73% and the vigor index of the best treatment L2K1 was 98.67%. The germination parameter showed a significantly different effect on the L2K1 treatment of 100%.*

**Key words :** *Citric Acid, Cucumber seeds*

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## **ABSTRAK**

Kualitas fisik dan fisiologis benih menjadi tolok ukur untuk menentukan mutu suatu benih di kancah persaingan produsen benih karena setiap perusahaan benih memiliki standar masing – masing untuk menentukan layak atau tidaknya benih tersebut. Upaya mengatasi permasalahan tampilan fisik benih mentimun menggunakan *citric acid* untuk memperbaiki tampilan fisik benih tanpa merusak mutu fisiologisnya. Penelitian dilaksanakan bulan Agustus hingga November 2023 di PT. East West Seed Indonesia alamat di Jalan Basuki Rachmad No. 019, Desa Muktisari, Tegal Besar, Jember. Penelitian dilaksanakan menggunakan Rancangan Acak Lengkap (RAL) Faktorial yang terdiri dari dua faktor. Faktor pertama yaitu lama perendaman (L), yang terdiri dari 5 menit (L1), 10 menit (L2) dan 15 menit (L3). Faktor kedua yaitu konsentrasi asam sitrat (K), yang terdiri dari 1,5% (K1), 2% (K2) dan 2,5% (K3). Hasil penelitian menunjukkan bahwa interaksi antara lama perendaman dan konsentrasi asam sitrat menunjukkan pengaruh berbeda sangat nyata terhadap parameter tingkat kecerahan warna, perlakuan terbaik pada notasi *lightness* L1K1 (76,58%), *redness* L1K1 (4,07%), *yellowness* L1K2 (23,33%), *color difference* (1%). Parameter kecepatan tumbuh dan indeks vigor menunjukkan pengaruh berbeda sangat nyata, perlakuan terbaik kecepatan tumbuh L2K1 sebesar 24,73% dan indeks vigor perlakuan terbaik L2K1 sebesar 98,67%. Parameter daya berkecambah menunjukkan pengaruh berbeda nyata pada perlakuan L2K1 sebesar 100%.

**Kata Kunci :** Asam sitrat, Benih Mentimun