

## ABSTRAK

**NURUL HIDAYAH NST.** Teknik Induksi Kalus Manggis (*Garcinia mangostana* L.) Untuk Pengembangan Buku Kultur Jaringan Berbasis Riset. Tesis. Program Pascasarjana Universitas Negeri Medan. 2019.

Buku yang dikembangkan merupakan buku referensi berbasis riset Induksi Kalus Manggis (*Garcinia mangostana* L.). Penelitian ini bertujuan untuk menghasilkan buku referensi berbasis riset yang layak digunakan sebagai salah satu sumber buku penunjang dalam pembelajaran kultur jaringan bagi mahasiswa S1 jurusan Biologi Universitas Negeri Medan. Pengembangan buku referensi ini menggunakan model pengembangan Thiagarajan (1974), yang terdiri atas empat tahap (*4-D models*), yaitu tahap *define* (pendefinisian), tahap *design* (perancangan), tahap *development* (pengembangan) dan tahap *disseminate* (penyebaran). Namun pada penelitian ini hanya dibatasi pada sampai pada tahap *development* (pengembangan). Model pengembangan ini berorientasi pada produk. Data diperoleh dengan cara melakukan analisis kebutuhan, perancangan produk, pembuatan produk, validasi produk dan uji coba produk. Instrumen yang digunakan untuk mengumpulkan data penelitian menggunakan instrumen validasi kelayakan produk dan angket responden. Data dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwa (1) penilaian dua orang dosen ahli materi berdasarkan kelayakan isi, kelayakan penyajian dan keterbacaan diperoleh skor rata-rata persentase sebesar 89% dengan kategori sangat baik, (2) penilaian oleh dua orang dosen ahli desain instruksional berdasarkan kelayakan isi dan kelayakan penyajian diperoleh skor rata-rata persentase sebesar 98% dengan kategori sangat baik, (3) penilaian oleh satu orang dosen ahli desain *layout* buku berdasarkan ukuran buku, desain sampul buku, desain isi buku, kaidah penulisan dan kelayakan penyajian buku diperoleh skor rata-rata persentase sebesar 91% dengan kategori sangat baik, (4) penilaian oleh satu orang dosen pengampu matakuliah kultur jaringan diperoleh skor rata-rata persentase sebesar 91% dengan kategori sangat baik dan (5) penilaian oleh mahasiswa termasuk kategori sangat baik yang terdiri dari uji coba perorangan diperoleh 95%, uji coba kelompok kecil diperoleh 93% dan uji coba kelompok lapangan diperoleh 89%. Dapat disimpulkan bahwa buku referensi berbasis riset yang dikembangkan telah layak menurut dosen ahli materi, desain instruksional, desain *layout* buku, dosen pengampu matakuliah kultur jaringan dan mahasiswa sehingga buku referensi berbasis riset pada topik induksi kalus manggis (*Garcinia mangostana* L.) dapat digunakan sebagai salah satu sumber buku penunjang dalam pembelajaran kultur jaringan bagi mahasiswa.

Kata kunci : Riset, induksi kalus manggis (*Garcinia mangostana* L.), pengembangan, buku referensi

## ABSTRACT

**NURUL HIDAYAH NST.** Technique Callus Induction of Mangosteen (*Garcinia mangostana* L.) for Development of Tissue Culture Books Based on Research. Thesis. Postgraduate Program of Medan State University. 2019.

The developed book were a reference book based on research on Callus Induction of Mangosteen (*Garcinia mangostana* L.). This study aims to produce a reference book based on research were a worthy of being used as a source of supporting books in tissue culture learning for students college of undergraduate in Biology, Universitas Negeri Medan. The development of this reference book used the Thiagarajan (1974) development model, which consists of four stages (*4-D models*), namely *define*, *design*, *development* and *disseminate*. However, this study was conducted only until the phase of development. This development model was a product oriented. Data is obtained by conducting a needs analysis, product design, product manufacture, product validation and product trials. The instrument used to collect research data is used the feasibility product validation instruments and questionnaires respondent. Data were analyzed descriptively. The results showed that: (1) the assessment of two expert lecturers of material based on content feasibility, feasibility of presentation and readability was obtained by an average score of 89% with a very good category, (2) the assessment of two instructional design expert lecturers based on content eligibility and the feasibility of presentation was obtained by an average score of 98% with a very good category, (3) the assessment of one book layout design expert lecturer based on book size, book cover design, book content design, writing rules and the feasibility of presenting books. average percentage of 91% with very good category, (4) the assessment of one lecturer of tissue culture obtained an average score of 91% with very good categories and (5) the assessment of biology students college was entirely included with very good categories consisting of individual trial obtained the average score of 95%, small group trials obtained the average score of 93% and field group trial were obtained the average score of 89%. It can be concluded that the reference book based on research developed was appropriate according to the expert lecturers of material, instructional design, book layout design, lecturer in tissue culture subjects and students college so that the reference book based on research on the callus induction of mangosteen (*Garcinia mangostana* L.) can be used used as a supporting books in tissue culture learning students college.

*Keywords: Research, callus induction of mangosteen (Garcinia mangostana L.), development, reference book*