

# Isolasi dan identifikasi rhizopus spp. dari tempe yang diproduksi secara tradisional dalam pembuatan tempe kedelai dengan beberapa usar rhizopus sp. asal Irian Jaya

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## Abstrak

### **SUMMARY**

This research was carried out to study the diversity of Rhizopus in Irian Jaya. Tempe samples were collected from regions in Irian Jaya. The aim of this research was to Isolate and Identify Rhizopus spp. from traditionally made tempe, to make usar from the Rhizopus sp. isolates, and to produce tempe from the chosen usar.

Isolation was done using direct plating method. Nineteen Rhizopus spp. isolates have been isolated from soybean tempe collected from several regions in Irian Jaya. Examination of their morphological characteristics, growth temperature, and spore ornamentation, showed that eighteen isolates belong to the Rh. microsporus group: two isolates were Rh. microsporus var. oligosporus, sixteen isolates were Rh. microsporus var. chinensis. One isolate was Rh. oryzae.

The isolates were examined for their ability to produce usar. Out of the nineteen isolates that were tested, only seven produced good usar (inoculum): six isolates from Rh. microsporus var. chinensis, and one of Rh. oryzae. The amount of spores before and after inoculum production were determined by Total Plate Count (TPC) method. The average of viable spores from all isolates before the inoculum production was ((2.5-3.2)x10<sup>4</sup> cell/ml), and after the inoculum production was ((1.2-1.8)x10<sup>4</sup> cell/ml). The usars (Inocula) from seven Isolates were examined to produce tempe. The Rh. oryzae inoculum produced better tempe than the Rh. microsporus var. chinensis Inoculum based on colour, texture, aroma and shelf-life.