

## RINGKASAN

Tempe merupakan makanan yang terbuat dari kacang kedelai yang difermentasi. Masyarakat luas menjadikan tempe sebagai sumber protein nabati.. Lewat proses fermentasi ini, biji kedelai mengalami proses penguraian menjadi senyawa sederhana sehingga mudah dicerna

Tempe adalah makanan yang populer di negara kita. Meskipun merupakan makanan yang sederhana, tetapi tempe mempunyai atau mengandung sumber protein nabati yang cukup tinggi. Tempe adalah makanan yang dibuat dari fermentasi terhadap biji kedelai atau beberapa bahan lain yang menggunakan beberapa jenis kapang Rhizopus, seperti Rhizopus oligosporus, Rh. oryzae, Rh. stolonifer (kapang roti), atau Rh. arrhizus, sehingga membentuk padatan kompak berwarna putih. Sediaan fermentasi ini secara umum dikenal sebagai ragi tempe. Warna putih pada tempe disebabkan adanya miselia jamur yang tumbuh pada permukaan biji kedelai. Tekstur kompak juga disebabkan oleh miselia jamur yang menghubungkan biji-biji kedelai tersebut.

Petai (*Parkia speciosa* Hassk.) merupakan tanaman tahunan tropika dari famili *Fabaceae*, subfamili *Mimosoideae*. Tanaman ini banyak ditemukan di beberapa negara di Asia Tenggara, seperti Indonesia, Malaysia, Thailand, dan India Utara. Biji petai kaya akan kandungan mineral, seperti kalsium, fosfor, potasium, magnesium, mangan, dan zat besi

Penelitian ini dilaksanakan di Laboratorium THP Fakultas Pertanian UISU. Penelitian menggunakan rancangan acak lengkap (RAL) faktorial dengan dua (2) ulangan. Faktor I: Konsentrasi Petai (P) yang terdiri atas empat taraf :  $P_1 = 10\%$ ,  $P_2 = 15\%$ ,  $P_3 = 20\%$ ,  $P_4 = 25\%$ . Faktor II : Konsentrasi Ragi (R) yang terdiri atas empat taraf :  $R_1 = 0,25\%$ ,  $R_2 = 0,50\%$ ,  $R_3 = 0,75\%$ ,  $R_4 = 1,00\%$ . Parameter yang diamati meliputi Kadar air, kadar Abu, kadar protein, tekstur, dan rasa. Hasil penelitian : Kadar air tertinggi 60,45% ( $P_2$ ), 60,47% ( $R_1$ ), kadar protein tertinggi 41,77% ( $P_1$ ), 41,82% ( $R_1$ ), kadar abu tertinggi 3,86% ( $P_4$ ), 3,86% ( $R_4$ ), tekstur tertinggi 3,34 ( $P_3$ ), 3,43 ( $R_4$ ), rasa tertinggi 3,49 ( $P_1$ ), 3,42 ( $R_1$ ). Untuk menghasilkan tempe petai yang baik digunakan konsentrasi petai 10% dan konsentrasi ragi sebanyak 1%.

*Kata Kunci : Kedelai, Petai, Ragi, Tempe*

## SUMMARY

Tempe is a food made from fermented soybeans. The public at large makes tempeh as a source of vegetable protein. Tempe is a fermented product that cannot last long. Through this fermentation process, soybean seeds undergo a process of decomposition into simple compounds so that they are easily digested

Tempe is a popular food in our country. Although it is a simple food, tempeh has or contains a high source of vegetable protein. Tempe is food made from fermented soybean seeds or some other material that uses several types of *Rhizopus* molds, such as *Rhizopus oligosporus*, *Rh. oryzae*, *Rh. stolonifer* (mold of bread), or *Rh. arrhizus*, thus forming a compact white solid. This fermentation preparation is commonly known as tempe yeast. The white color of tempeh is caused by the fungus mycelia that grow on the surface of soybean seeds. The compact texture is also caused by the fungus mize that connects the soybean seeds.

Petai (*Parkia speciosa* Hassk.) Is a tropical perennial plant from the Fabaceae family, subfamily Mimosoideae. This plant is found in several countries in Southeast Asia, such as Indonesia, Malaysia, Thailand, and North India. Petai seeds are rich in mineral content, such as calcium, phosphorus, potassium, magnesium, manganese, and zat besi.

This research was conducted at the THP Laboratory, Faculty of Agriculture, UISU. The study used a factorial completely randomized design (CRD) with two (2) replications. Factor I: Petai Concentration (P) consisting of four levels:  $P_1 = 10\%$ ,  $P_2 = 15\%$ ,  $P_3 = 20\%$ ,  $P_4 = 25\%$ . Factor II: Yeast Concentration (R) consisting of four levels:  $R_1 = 0.25\%$ ,  $R_2 = 0.50\%$ ,  $R_3 = 0.75\%$ ,  $R_4 = 1.00\%$ . The parameters observed included water content, ash content, protein content, texture, and taste. Results: The highest water content is 60.45% ( $P_2$ ), 60.47% ( $R_1$ ), the highest protein content is 41.77% ( $P_1$ ), 41.82% ( $R_1$ ), the highest ash content is 3.86% ( $P_4$ ), 3.86% ( $R_4$ ), highest texture 3.34 ( $P_3$ ), 3.43 ( $R_4$ ), highest taste 3.49 ( $P_1$ ), 3.42 ( $R_1$ ). To produce good tempeh bananas use 10% petai concentrations and 1% yeast concentration.

*Keywords: Soybean, Petai, Yeast, Tempe*