

**PENENTUAN UMUR SIMPAN DAN VIABILITAS SUPLEMEN  
PROBIOTIK MULTISTRAIN MENGGUNAKAN METODE  
*ACCELERATED SHELF LIFE TESTING***

**Abstrak**

**Oleh :**

**VIANNISA ALIFIA**

**20/460680/TP/12890**

**ABSTRAK**

Probiotik menurut (FAO/WHO, 2002) yakni mikroorganisme hidup yang apabila dikonsumsi dalam jumlah yang cukup memberikan manfaat kesehatan bagi inangnya. PUI PT Probiotik mengembangkan produk suplemen probiotik *multistrain* “VIPILAC Plus” menggunakan 3 strain bakteri lokal, yakni *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13, *Lactiplantibacillus plantarum* subsp. *plantarum* FNCC-0250, dan *Lacticaseibacillus paracasei* subsp. *paracasei* GMRMP-001. Produk ini dikemas secara kapsul dan dimasukkan ke dalam botol. Pada prosesnya, diperlukan penelitian lebih lanjut untuk mengetahui penurunan viabilitas sel probiotik selama penyimpanan untuk menduga umur simpan Produk Suplemen Probiotik. Penentuan umur simpan dilakukan dengan metode *Accelerated Shelf Life Testing* (ASLT) pada variasi suhu penyimpanan 4°C, 10°C selama 35 hari dan pada suhu 30°C, 37°C selama 15 hari. Hasil penelitian menunjukkan bahwa penyimpanan produk suplemen bubuk probiotik *multistrain* “VIPILAC Plus” pada suhu dingin 4°C memperpanjang umur simpan selama 6-7 bulan.

Kata Kunci : suplemen probiotik, umur simpan, Metode ASLT, *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13, *Lactiplantibacillus plantarum* subsp. *plantarum* FNCC-0250, dan *Lacticaseibacillus paracasei* subsp. *paracasei* GMRMP-001.

## ESTIMATED SHELF LIFE AND VIABILITY OF MULTISTRAIN PROBIOTIC SUPPLEMENT USING ACCELERATED SHELF LIFE TESTING METHOD

### Abstract

By:

**VIANNISA ALIFIA**

**20/460680/TP/12890**

According to (FAO/WHO, 2002), probiotics are live microorganisms which, when consumed in sufficient quantities, provide health benefits. PUI PT Probiotics developed the multistrain probiotic supplement product "VIPILAC Plus" using 3 local bacterial strains, *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13, *Lactiplantibacillus plantarum* subsp. *plantarum* FNCC-0250, dan *Lacticaseibacillus paracasei* subsp. *paracasei* GMRMP-001. This product is packaged in capsules and put in bottles. In the process, further research is needed to determine the decrease in probiotic cell viability during storage to suspect the shelf life of Probiotic Supplement Products. Determination of shelf life was carried out using the Accelerated Shelf Life Testing (ASLT) method at varying storage temperatures of 4°C, 10°C for 35 days and at temperatures of 30°C, 37°C for 15 days. The research results showed that storing the multistrain probiotic powder supplement product "VIPILAC Plus" at a cold temperature of 4°C extended the shelf life for 6-7 weeks.

Keyword : Suplemen probiotics, Shelf life, ASLT Method, *Lactiplantibacillus plantarum* subsp. *plantarum* Dad-13, *Lactiplantibacillus plantarum* subsp. *plantarum* FNCC-0250, dan *Lacticaseibacillus paracasei* subsp. *paracasei* GMRMP-001.