# Uji Stabilitas Fisik, Kimia dan Biologik Terhadap Formulasi Terbaru Liposom Tetra Eter Lipid (EPC-TEL 2,5) Sebagai Pembawa Obat (*Drug Carrier*)

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**The Physical, Chemical, and the Biological stability test on Liposome EPC-TEL 2.5 as the newest drug delivery systems (drug carrier), in vitro and in vivo.** This experiment is carried out in order to improve the stability of the Liposome EPC-TEL 2.5 physically, chemically, and biologically. As a new formula, this liposome that has contained phosphatidylcholine from egg yolk=EPC and Tetra-ether Lipid (TEL) from membrane of *Sulfolobus acidocaldarius* or *Thermoplasma acidophilum* had never been tested on their stability. The stability of liposome to carry the drug into the targeted cells or organs is required for determining the therapeutic dose of the drugs. Physically, the test was done by measuring the amount and diameter of liposome after incubating at 4º C, at room temperature, and 37º C. Chemically, the test was also done using the same parameters after introduction of chemical solution of NaCl, $CaCl_2$; $MgCl_2$ at the pH of 5; 7; 9. The measurements was carried out on day 1; 7; and month 1; 2; and 3. Biologically, liposome EPC-TEL 2.5 was injected Intra-Peritoneally to mice to detect the degradation of TEL in their liver, at the minute of 0; 30 ; 60 ; the hour of 2; 4; and 8. The results of these tests were shown that liposome EPC-TEL 2.5 was stable until the last month of 1 at 4º C and 37º C on physical stability test; more stable at the chemical solution of NaCl and $CaCl_2$ at the pH of 5 and 7 until two months; and TEL was degradable in liver of mice.

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