



Chemical Stability of 70% Alcohol after Opened the Bottle

Chedsada Noppawinyoowong^{1*}, Chayanid Somchaithawatwong², Janya Srisangchun², Sarin Tadtong², Amornrat Viriyaroj²

¹*Manufacturing Pharmacy Unit, Srinagarind Hospital, Khonkaen University, Khonkaen.*

²*Faculty of Pharmacy, Srinakharinwirot University, Nakornnayok.*

**Correspondence author*

Background and Objectives: Due to the volatility of alcohol, the concentration remaining of 70% alcohol after opened is suspected. To ensure that the solution is appropriate for use, it is necessary to test the stability of the prepared product after opened and an expiry date can be judged.

Methods: This chemical stability study was an experimental design and conducted at Faculty of Pharmacy, Srinakharinwirot University. By using gas chromatography, the samples were analyzed for remaining concentrations of 70% alcohol in forceps jars (I) for 7 days period, in cotton jars (II) for 7 days period, in opened bottles (III) for 60 days period and in unopened bottles (IV) for 360 days period, at room temperature and ambient temperature.

Results: The initial concentrations remaining of (II), (III) and (IV), at room temperature and ambient temperature, on the studying days were greater than 90 percent. Except, the initial concentrations remaining of (I) at room temperature on day 7 and at ambient temperature on days 3 and 7, were less than 90 percent.

Conclusions: 70% alcohol was stable at least for 7 days in cotton jars, at least for 60 days in opened bottles and at least for 360 days in unopened bottles when stored at either room temperature or ambient temperature. While 70% alcohol in forceps jars was stable at least for 3 days when stored at room temperature and at least for 2 days when stored at ambient temperature.

Keywords: chemical stability, 70% alcohol

