

## Abstract

In order to understand the status of stored BCG vaccines at local public health bureaus and chronic disease prevention centers, we choose the potency of vaccine as the mark of evaluation. The BCG vaccines were randomly sampled from forty health units, located at twenty three prefectures in Taiwan, which included seventeen district health centers, eighteen chronic disease prevention centers, four local public health bureaus and the third branch office of CDC. The sampled vaccines were packed in the suitable cold condition and then directly sent to Vaccine center, CDC Taiwan, the potency of all of sampled vaccines were compared with those of the same Lot number of BCG stock vaccines which kept in the Vaccine Center of CDC Taiwan.

The status of storage of vaccines is shown by the following the ratio of the residual values between the potency of samples and stock vaccine ( same Lot ) kept in Vaccine center. The residual value ( 0.91 ~1.1 ) means the status of storage was good, the residual value ( 0.70 ~ 0.90 ) means the status of storage was average, the residual value below 0.7 means the status of storage was bad.

The data show that the status of storage of BCG vaccines was in the good condition at 57.5% ( 23/40 ) of the sampled units, the condition in the average status were found at 35% ( 14/40 ) of them, we found 3 sampled units ( 7.5% )they stored the vaccines in the bad condition. The data give us potency of vaccines were affected by the wide range of storage temperature variation.

Although the potency of all selected BCG samples were higher than qualified potency( $1.5 \times 10^7$ cfu/mg)of Chinese Pharmacopoeia, there were 42.5%(17/40) of BCG vaccines that its potency were lower 10% than that of stock vaccines. In order to ensure the quality of BCG vaccines, we should have to reenforce the monitor system of cold-chain temperature to store BCG vaccines at the different prefectures in Taiwan.

**Keywords :** BCG ; potency ; residual value