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## **Technical Note**

### **Shelf Life Of Methamphetamine Wipe Sampling Kits**

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Analytica Laboratories supplies sampling kits as part of its methamphetamine (and precursor compounds) testing service. Included in these kits are a cotton gauze swab which has had 3 mL of methanol added to it, in a sealed sample tube, as per NIOSH 9111.

Methanol evaporates easily. Therefore there is a risk that (over time) the amount of methanol on the swab in the sample tube will reduce to the point where it is no longer useful for sampling.

Analytica conducted a trial to check for the loss of methanol from sample tubes, to determine a shelf life for sample kits under various storage conditions.

#### **Trial Procedure**

5 replicate kits were stored at various temperatures and accurately weighed at regular intervals over a 65 day period. The temperatures used were:

- Refrigerated storage (4-6°C)
- Room temperature (20 +/- 2°C)
- Warm temperatures in an oven (35°C)
- Hot temperatures in an oven (50°C)

Methanol loss was calculated based on the change in weight of the tubes over time.

#### **Results**

Figures 1 to 4 show graphs of the loss of methanol over a 65 day period at the various temperatures chosen for storage.

Refrigerated samples were very stable, retaining practically all their methanol over the 65 day period. Arguably refrigerated sample kits will have a very long shelf life.

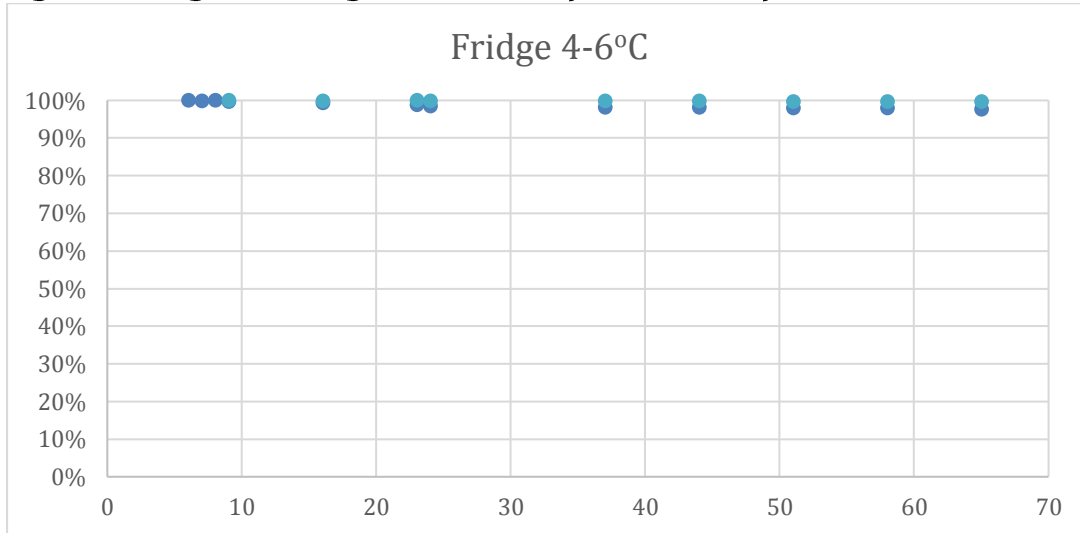
Room and warm temperature samples only lost 10% of their methanol over the 65 day period. The initial 3 mL of methanol added to the wipes is more than enough for sampling purposes, and a 10% loss of methanol would not significantly affect the wipe recovery efficiency.

There was a high loss of methanol from sample kits over the 65 day period of the trial at the hot temperature of 50°C, as expected. However, over a short period (the first 10 days) the loss was only 10% which in itself would not be a problem. From this we can conclude that short exposure of samples to high temperatures is unlikely to be an issue in terms of kit viability.

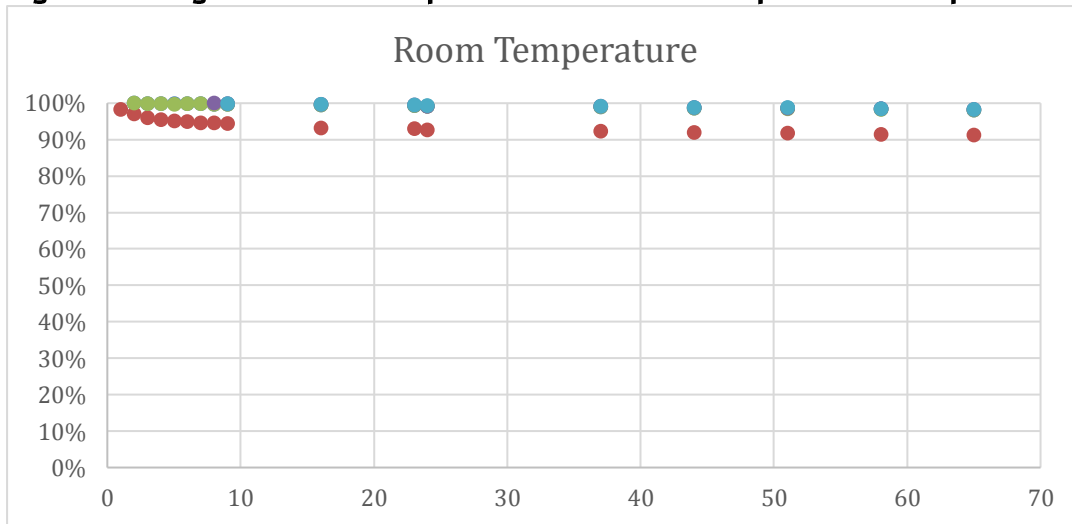
#### **Conclusion:**

Based on the kit stability data we recommend that the kits are stored at ambient temperature, and under those conditions are viable for a minimum of 65 days. If refrigerated, the kit viability will be substantially longer.

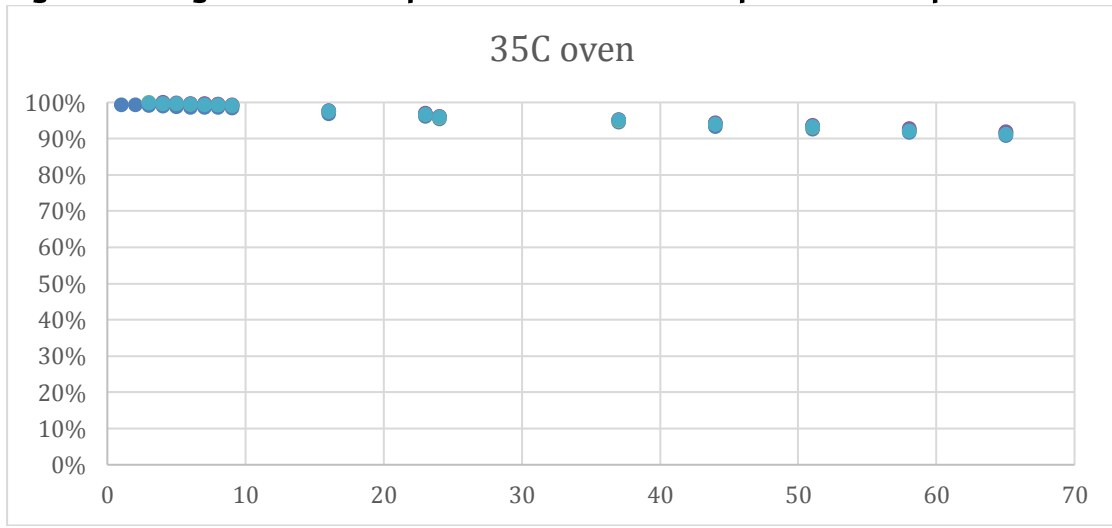
**Figure 1: Weight Of Refrigerated Methamphetamine Wipe Kits.**



**Figure 2: Weight of Room Temperature Stored Methamphetamine Wipe Kits.**



**Figure 3: Weight Of 35°C Temperature Stored Methamphetamine Wipe Kits.**



**Figure 4: Weight Of 50°C Temperature Stored Methamphetamine Wipe Kits.**

