

May 21, 2009

## RPR 12B URINALYSIS VERIFICATION ASSAY

Name: \_\_\_\_\_ Soc. Sec. No. \_\_\_\_\_

Sample collection date: \_\_\_\_\_ Date counted: \_\_\_\_\_

### **Instructions:**

1. Complete the "Screening Assay" procedure.
2. Add a known activity of the nuclide of greatest concern to each sample (urine and distilled water) and count again to determine the true efficiency. (NOTE: The volume of the spike must be small enough so that it does not change the original counting characteristics of the sample.) If the appropriate nuclide is not available in a solution of known concentration from which a spike can be obtained, discuss the requirement with the RSO.
3. Calculate the counting efficiency and convert the final results to disintegrations per minute per milliliter of sample (dpm/ml).

**Assay Data:** Instrument used: \_\_\_\_\_ Sample: \_\_\_\_\_ ml Fluor: \_\_\_\_\_ ml

Counting time: \_\_\_\_\_ minutes

Activity added to sample for efficiency determination:

Source Inventory No. \_\_\_\_\_ Concentration: \_\_\_\_\_ dpm/ml Volume added: \_\_\_\_\_ ml

Activity: \_\_\_\_\_ dpm

Total count rate (cpm) obtained from samples: Untreated      Spiked

Urine samples: \_\_\_\_\_

Distilled water samples: \_\_\_\_\_

### **Efficiency in counts/disintegration:**

$$= \frac{(\text{Spiked urine sample (cpm)}) - (\text{Untreated urine sample (cpm)})}{(\text{Spike activity (dpm)})} = \text{_____ cpm}$$

### **Concentration in dpm/ml:**

$$= \frac{(\text{Untreated urine sample (cpm)}) - (\text{Untreated distilled water sample (cpm)})}{(\text{Sample volume (ml)}) \times (\text{Efficiency (cpm/dis)})}$$

= \_\_\_\_\_ dpm/ml      Less than investigation level?    Yes    No

If less than the investigation level, complete the signatures and mail the form to the RSO. If the result exceeds the investigation level, confer with the RSO to determine appropriate follow-up assays.

### **Signatures:**

Counted by: \_\_\_\_\_ Responsible User: \_\_\_\_\_