

# RPR 12B. URINALYSIS VERIFICATION ASSAY

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

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 water) and count again to determine the true efficiency. 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 Count time: \_\_\_\_\_ minutes

**If not counted for the minimum time required for the critical nuclide and the elapsed time, the assay will not be valid.**

Activity added to sample for efficiency determination: \_\_\_\_\_ Inventory No. \_\_\_\_\_

Concentration: \_\_\_\_\_ dpm/mL Volume added: \_\_\_\_\_ mL Activity: \_\_\_\_\_ dpm

Total counts obtained from samples: \_\_\_\_\_ Untreated Spiked

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

Tap water samples: \_\_\_\_\_

## Efficiency in counts/dis:

$$\frac{(\text{Spiked urine sample counts}) - (\text{Untreated urine sample counts})}{(\text{Count time, min}) \times (\text{Spike activity, dpm})}$$

= \_\_\_\_\_ counts/dis

## Concentration in dpm/mL:

$$\frac{(\text{Untreated urine sample counts}) - (\text{Untreated water sample counts})}{(\text{Sample volume, mL}) \times (\text{Count time, min}) \times (\text{Efficiency, counts/dis})}$$

= \_\_\_\_\_ 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: \_\_\_\_\_

RSO verification of assay data: \_\_\_\_\_ (Analyst or RSO)

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