Contamination Monitoring

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| --- | --- | --- |
| **Instrument make/model** | **Detector type** | **Detector area** |
|  |  |  |
| **Efficiency for radionuclide** | **Last calibration date** | **MDA (Bq/cm2)** |
|  |  |  |

**All values obtained by using the following equations**

Instrument’s minimum detectable activity:



$LLD (cpm)=\frac{3+4.65×\sqrt{Background Counts×Counting Time}}{Counting Time}$

$$MDA (Bq/cm^{2})=\frac{LLD (cpm)}{Detector Efficiency×Detector Area×60 s}$$

**When NET counts (surface - background) are GREATER than LLD:**

$A (Bq/cm^{2})=\frac{Net Counts (cpm)}{Detector Efficiency×Detector Area×60 s}$

$$UN (Bq/cm^{2})=\frac{\sqrt{\frac{(Counts×Counting Time)}{(Counting Time)^{2}}+\frac{(Background Counts×Counting Time)}{(Counting Time)^{2}}}}{(Detector Efficiency×Detector Area×60 s)}$$

Counting time is taken as 1 minute

1. For direct monitoring (no wiping):

**0.3 Bq/cm2** contamination limit is equivalent to: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CPM above Background**

1. For indirect monitoring (counting a wipe):

**0.3 Bq/cm2** contamination limit is equivalent to: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CPM above Background wipe**

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| **Wipe (Y/N)** | **Monitoring Results (CPM)** | **Monitoring Location (see map)** | **Contamination Status1,2(Clean or Contaminated)** | **Date (mm/dd/yy)** | **Performed by** |
| **Background** | **Surface** |
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| **Wipe (Y/N)** | **Monitoring Results (CPM)** | **Monitoring Location (see map)** | **Contamination Status1,2(Clean or Contaminated)** | **Date (mm/dd/yy)** | **Performed by** |
| **Background** | **Surface** |
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