Evaluation of the Effectiveness of Select Spill Control Products for Formalin Spills

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Agenda

1. Background
2. Methodology & Products Evaluated
3. Results of Effectiveness on Simulated Spills
1. Background
1. Background

Use in Healthcare

- Formaldehyde:
  - MW: 30.03
  - Vapour Pressure: 1.3 mm Hg (@ 20°C)
  - Vapour Density: 1.08 (air = 1)

- Formalin is a methanol-stabilized water solution which can contain varying levels of formaldehyde

- Commonly 10% or 37% formaldehyde solutions
1. Background

Use in Healthcare

- In healthcare, generally used to fix tissue
- Found in:
  - Anatomical Pathology / Histology
  - Morgue
  - Operating Room
1. Background

Potential Health Effects

- Sensitizer
- Carcinogen
  - ACGIH A2, Suspected Human Carcinogen
  - IARC Group 1, Confirmed Human Carcinogen
- Eye and URT Irritant
  - 0.1 – 25 ppm

- ACGIH Ceiling Limit of 0.3 ppm
2. Methodology & Products Evaluated
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Products Evaluated

- Fan Pads - Large
- Pig Mats
- Fan Pads - Small
- Vytac
- Polyform
2. Methodology & Products Evaluated

Quantitative Assessment

- Required:
  - Dedicated area to allow for multiple trials under set conditions
  - Segregated, negative pressure room
  - Environmental conditions approximating normal conditions
3. Results of Effectiveness on Simulated Spills
Formalin Spill Cleanup Products: 100 mL Spill

- Measured Average
- Large Fan Pads
- Pig Mat
Formalin Spill Cleanup Products: 100 mL Spill

Measured Average
Large Fan Pads
Pig Mat
Small Fan Pad
Formalin Spill Cleanup Products: 100 mL Spill

Time (min)

Concentration (ppm)

-Measured Average
-Large Fan Pads
-Pig Mat
-Small Fan Pad
-Vytac
-Polyform
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Questions?