

# On Wiping the Interior Walls of 37-mm Closed-face Cassettes: an OSHA Perspective

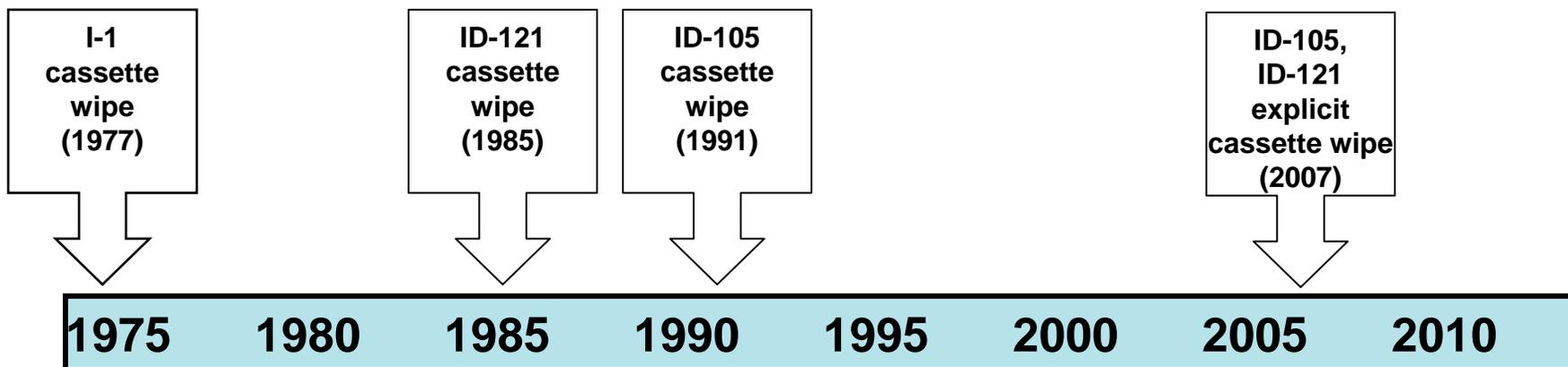
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Third International Symposium on  
Beryllium Particulates and Their Detection  
Albuquerque, NM  
November 17-19, 2008

# OSHA's Established Policy

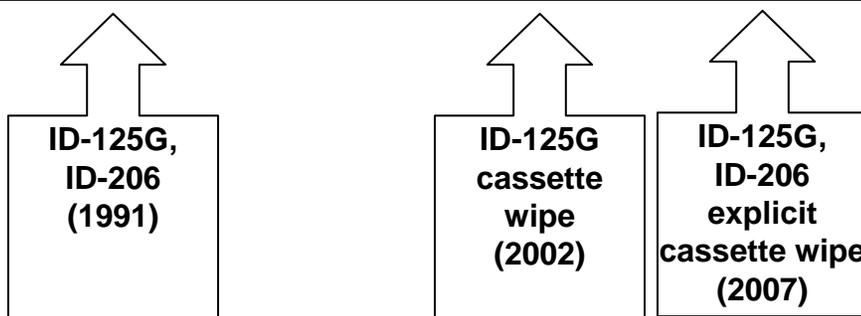
- **OSHA instructs Compliance Officers to sample with cassette inlet downwards**
- **OSHA considers any material that enters the cassette to be part of the sample**
- **Current methods posted on [osha.gov](https://www.osha.gov)**

# Cassette Wiping in OSHA Metal Methods

## AA Methods



## ICP Methods



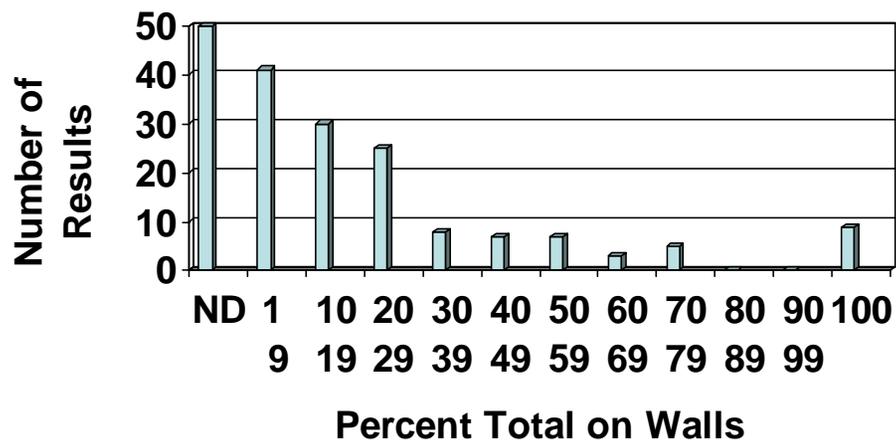
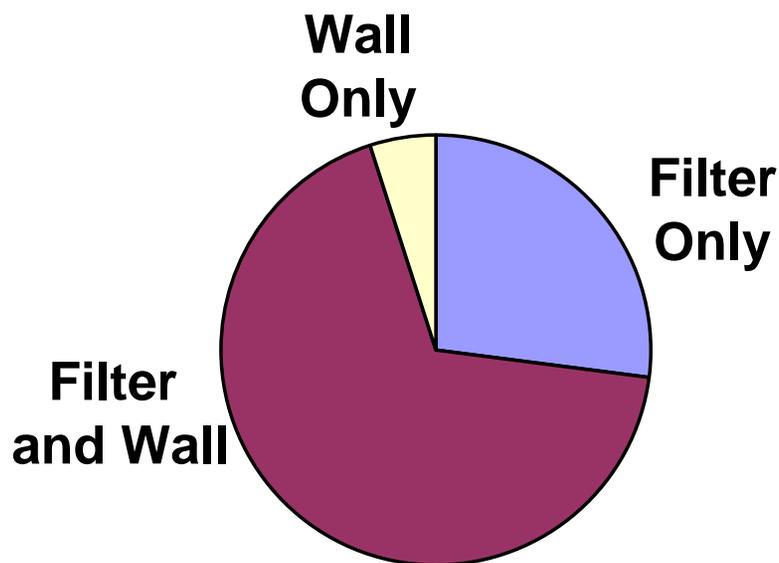
# Purpose of OSHA's Cassette Wiping Policy

- **OSHA cassette wiping policy originally intended to help account for visible particles of loose dust**
- **2004 OSHA AIHce poster presentation concluded that even invisible material on walls can be a significant fraction of total**

# OSHA's Cassette Wiping Study

- **Study included 40 random compliance samples analyzed by 13-element ICP/AES**
- **Sample results**
  - ✓ **520 results were possible**
  - ✓ **335 results were none detected**
  - ✓ **185 results were positive**

# Distribution of the 185 Positive Results



# Cassette Wiping at SLTC

- **Smear Tabs or Ghost Wipe section used to wipe cassettes for AA, ICP, and ICP/MS samples (nitric acid or sulfuric acid digestion)**
- **Ghost Wipes not used for solder analytes (hydrochloric acid digestion)**
- **Wipes added to beaker with sample filter and any rinse solution**

# To Rinse or to Wipe; That is the Question

- **Simple cassette rinsing not effective by itself**
- **Wiping more effective**
- **Single wipe effective as shown by second wipe**

# Overall Conclusions

- **OSHA concluded that ignoring wall deposits could underestimate worker exposures**
- **Increased accuracy of measurement outweighs increased analytical costs**
- **OSHA policy consistent with guidance in NIOSH MAM**

# Undecided?

**...you don't need a weatherman to  
know which way the wind blows...**

**Robert Zimmerman**

The image features the OSHA logo prominently in the center. The logo consists of a stylized 'O' with a blue and grey circular design inside, followed by the letters 'S', 'H', and 'A' in a white, serif font with a slight shadow effect. The background is a close-up, slightly blurred view of the American flag, showing the stars and stripes in shades of red, white, and blue.

# OSHA

adds value to business,  
work and life.