



ChemWipe Cobalt Compounds Wipe for Surfaces (PN: 317)

Manual



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1. Application

The ChemWipe PN: 317 is a colorimetric surface wipe designed to provide real-time indication of the presence of trace amounts of Cobalt II compounds on surfaces. The unique design of the Cobalt ChemWipe provides a uniform color change formation enabling the user to quantify cobalt contamination using the cobalt color comparator (PN: 317-6000).

2. Specifications

2.1. Overall Specification


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| a. Weight: | 0.5g (0.02oz) |
| b. Dimensions: | 8.5mm (0.33in), Φ : 32mm (1¼" in) |
| c. Operating temperature: | 4°C to 60°C (39°F to 140°F) |
| d. Operating humidity: | 5% RH to 95%RH |
| e. Minimum detectable limit: | 0.5µg |
| f. Detection range (color comparator): | 0.5µg to 200µg |
| g. Color change: | Bright yellow to reddish-brown |
| h. Color stability: | 5 minutes |
| i. Storage temperature: | 4°C to 25°C, (39°F to 77°F) |
| j. Shelf life: | 1 year |

2.2. Cross interferences and limitations

Copper (Cu²⁺), iron (Fe³⁺) and Uranium (U²⁺) produce similar colors like cobalt. To detect cobalt in the presence of copper or iron use the Cobalt ChemWipe Supplement Reagents part number 317-2000, sold separately. No other interferences are known.

3. Operating Instructions

- Use gloves and protective glasses when handling cobalt.
- Ensure that the packaging pouch is intact.
- Open packaging pouch by tearing off the top part from one of the side notches.
- Remove wipe from the packaging pouch.

 **Caution: Avoid touching wipe media collection**

- Hold the ChemWipe from the half-moon shaped handle (Figure 1) and swipe the target surface (Figure 2). If you are dealing with rough or irregular surface, wet the bottom surface with 3 to 4 drops of water and swipe the target surface immediately as shown in Figure 2.
- Add 3 to 4 drops of developing solution 1
- Allow two minutes for color development. The formation of reddish-brown color on the ChemWipe indicates the presence of at least 0.5µg of cobalt.

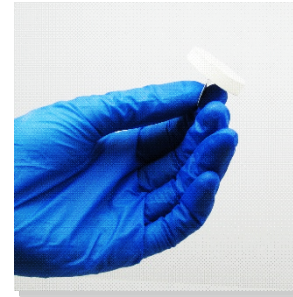
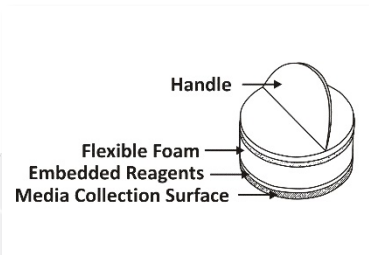


Figure 1

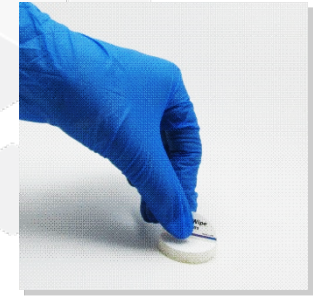


Figure 2

- Use the color comparator (Figure 3) to quantify the mass of cobalt collected on the wipe:
 - Insert the protective sleeve into the top left corner of the color comparator (Figure 4).
 - Place the wipe upside down on the protective sleeve (Figure 5).
 - Turn the bottom color wheel to match colors. The color formed on the wipe is directly proportional to the mass of cobalt collected on the wipe.
 - To compensate for any dark substance or dirt collected with the sample, turn the top gray scale wheel to achieve an exact color match.



Figure 3

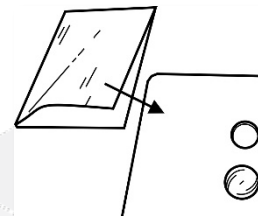


Figure 4

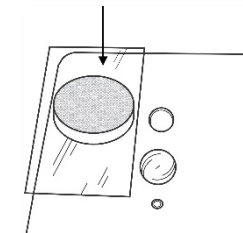


Figure 5