DEHA Titrets® Kit

K-3925: 25 - 250 ppm

Sample Temperature

Sample temperatures that deviate significantly from 20°C (68°F) may introduce test result bias.

Test Procedure

1. Fill the sample cup to the 25 mL mark with the sample to be tested (fig. 1).
2. Add 5 drops of S-3905 Activator Solution (fig. 2). Stir to mix the contents of the cup.
3. Wait **2 minutes.** The sample will turn orange.
4. Slide the open end of the valve assembly over the tapered tip of the Titret so that it fits snugly to the white reference line (fig. 3).
5. Snap the tip of the ampoule at the black snap ring (fig. 4).
   NOTE: When the tip is snapped, the flexible tubing will remain in place on the neck of the ampoule.
6. Lift the control bar and insert the Titret assembly into the Titrettor (fig. 5).
   NOTE: The rigid sample pipe will extend approximately 1.5 inches beyond the body of the Titrettor.
7. Hold the Titrettor with the sample pipe in the sample. Press the control bar firmly, but briefly, to pull in a small amount of sample (fig. 6). The contents will turn **GREEN.**
   NOTE: NEVER press the control bar unless the sample pipe is in the sample.
8. Press the control bar again to draw another small amount of sample into the ampoule (fig. 6).

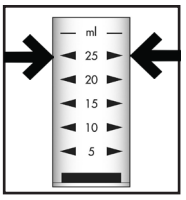

Figure 1

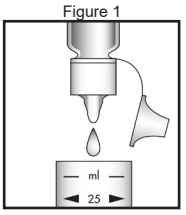

Figure 2

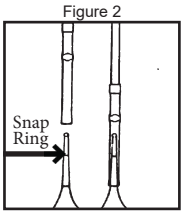

Figure 3

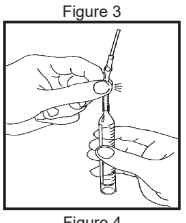
Figure 4

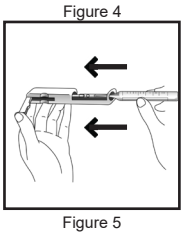
Figure 5

DEHA Titrets® Kit

K-3925: 25 - 250 ppm

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Test Procedure

1. Fill the sample cup to the 25 mL mark with the sample to be tested (fig. 1).
2. Add 5 drops of S-3905 Activator Solution (fig. 2). Stir to mix the contents of the cup.
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5. Snap the tip of the ampoule at the black snap ring (fig. 4).
   NOTE: When the tip is snapped, the flexible tubing will remain in place on the neck of the ampoule.
6. Lift the control bar and insert the Titret assembly into the Titrettor (fig. 5).
   NOTE: The rigid sample pipe will extend approximately 1.5 inches beyond the body of the Titrettor.
7. Hold the Titrettor with the sample pipe in the sample. Press the control bar firmly, but briefly, to pull in a small amount of sample (fig. 6). The contents will turn **GREEN.**
   NOTE: NEVER press the control bar unless the sample pipe is in the sample.
8. Press the control bar again to draw another small amount of sample into the ampoule (fig. 6).

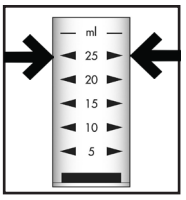
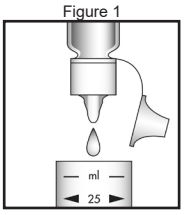


Figure 1



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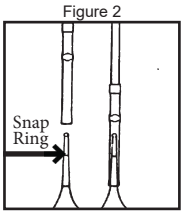

Figure 3

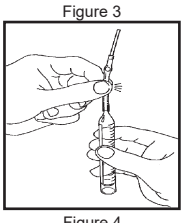
Figure 4

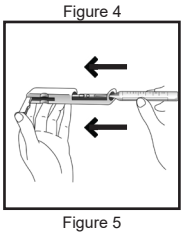
Figure 5

DEHA Titrets® Kit

K-3925: 25 - 250 ppm

Sample Temperature

Sample temperatures that deviate significantly from 20°C (68°F) may introduce test result bias.

Test Procedure

1. Fill the sample cup to the 25 mL mark with the sample to be tested (fig. 1).
2. Add 5 drops of S-3905 Activator Solution (fig. 2). Stir to mix the contents of the cup.
3. Wait **2 minutes.** The sample will turn orange.
4. Slide the open end of the valve assembly over the tapered tip of the Titret so that it fits snugly to the white reference line (fig. 3).
5. Snap the tip of the ampoule at the black snap ring (fig. 4).
   NOTE: When the tip is snapped, the flexible tubing will remain in place on the neck of the ampoule.
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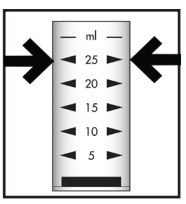
7. Hold the Titrettor with the sample pipe in the sample. Press the control bar firmly, but briefly, to pull in a small amount of sample (fig. 6). The contents will turn **GREEN.**
   NOTE: NEVER press the control bar unless the sample pipe is in the sample.
8. Press the control bar again to draw another small amount of sample into the ampoule (fig. 6).



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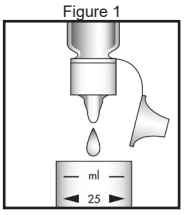

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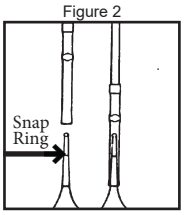

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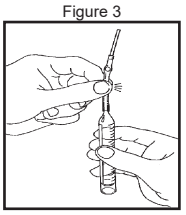
Figure 4

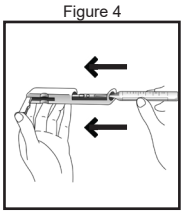
Figure 5

DEHA Titrets® Kit

K-3925: 25 - 250 ppm

Sample Temperature

Sample temperatures that deviate significantly from 20°C (68°F) may introduce test result bias.

Test Procedure

1. Fill the sample cup to the 25 mL mark with the sample to be tested (fig. 1).
2. Add 5 drops of S-3905 Activator Solution (fig. 2). Stir to mix the contents of the cup.
3. Wait **2 minutes.** The sample will turn orange.
4. Slide the open end of the valve assembly over the tapered tip of the Titret so that it fits snugly to the white reference line (fig. 3).
5. Snap the tip of the ampoule at the black snap ring (fig. 4).
   NOTE: When the tip is snapped, the flexible tubing will remain in place on the neck of the ampoule.
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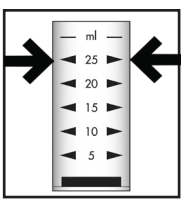

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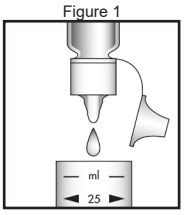

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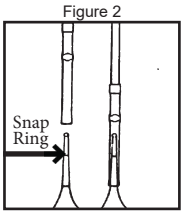

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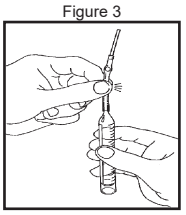
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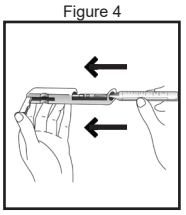
Figure 5

9. Rock the entire assembly to mix the contents of the ampoule. Watch for a color change from **GREEN through BLUE to BROWNISH-ORANGE.**
10. Repeat Steps # 8 and 9 until a permanent color change occurs.
11. When the color of the liquid in the ampoule changes to **BROWNISH-ORANGE,** remove the ampoule from the Titrettor. Hold the ampoule, **tip pointed upward**, and read the scale opposite the liquid level (fig. 7).
12. Multiply scale unit by 25 for test results in ppm (mg/Liter) DEHA.

Figure 6

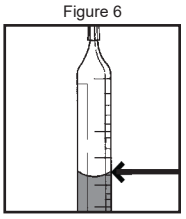

Figure 7

Interpretation of Test Results

If the contents of the ampoule do not turn **GREEN** in Step # 7, the DEHA concentration in the sample is above the test range. If the ampoule fills completely and the contents do not turn **BROWNISH-ORANGE**, the DEHA concentration is below the test range.

Test Method

The DEHA Titrets®[1] method employs a ceric sulfate titrant and a ferroin endpoint indicator.[2] The sample is treated with an excess of ferric iron. DEHA (N,N-Diethylhydroxylamine) reacts quantitatively with ferric iron by reducing it to the ferrous state. The resulting ferrous iron is titrated with the ceric sulfate titrant.

1. Titrets is a registered trademark of AquaPhoenix Scientific, LLC U.S. Patent No. 4,332,769
2. Developed by CHEMetrics, LLC

Safety Information

Read SDS before performing this test procedure. Wear safety glasses and protective gloves.

Feb. 25, Rev. 9

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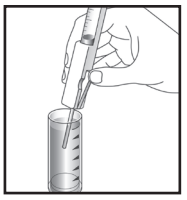

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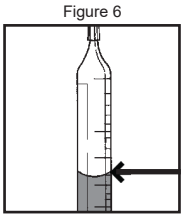

Figure 7

Interpretation of Test Results

If the contents of the ampoule do not turn **GREEN** in Step # 7, the DEHA concentration in the sample is above the test range. If the ampoule fills completely and the contents do not turn **BROWNISH-ORANGE**, the DEHA concentration is below the test range.

Test Method

The DEHA Titrets®[1] method employs a ceric sulfate titrant and a ferroin endpoint indicator.[2] The sample is treated with an excess of ferric iron. DEHA (N,N-Diethylhydroxylamine) reacts quantitatively with ferric iron by reducing it to the ferrous state. The resulting ferrous iron is titrated with the ceric sulfate titrant.

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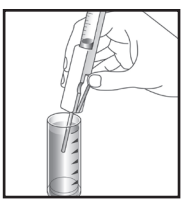
12. Multiply scale unit by 25 for test results in ppm (mg/Liter) DEHA.



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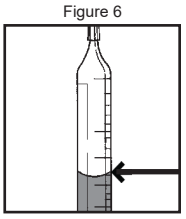

Figure 7

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If the contents of the ampoule do not turn **GREEN** in Step # 7, the DEHA concentration in the sample is above the test range. If the ampoule fills completely and the contents do not turn **BROWNISH-ORANGE**, the DEHA concentration is below the test range.

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12. Multiply scale unit by 25 for test results in ppm (mg/Liter) DEHA.

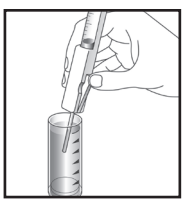
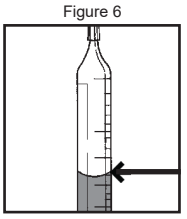


Figure 6



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